Interethnic Marriage: The Relationships between Education, Race, and Immigrant Generation

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This paper examines the effect of education on intermarriage and specifically, whether the mechanisms through which education affects intermarriage differ by race and immigrant generation. We consider three main paths through which education affects marriage choice. First, educated people may be better able to adapt to different customs and cultures making them more likely to marry natives. Second, educated immigrants may be more likely to move out of their ethnic enclaves because, for example, they have wider geographic labor markets, again making them more likely to meet and so marry natives. Lastly, if spouse-searchers value similarities in education as well as ethnicity, then an increase in education may lead to more or less endogamy depending on their ethnic group's education distribution in the city in which they live. Using 2000 U.S. Census data, we find evidence for all three effects for the population in general. However, assortative matching on education seems to be relatively more important for the native born, for the foreign born that arrived at a fairly young age, and for racial groups that are very education-oriented. We present a number of robustness checks and discuss policy implications.

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1 Introduction

There is a large literature on whether today's immigrants to the U.S. are assimilating at the same speed and through the same processes as immigrants in the past. Because the racial and educational composition of the newest wave of immigration differs so much from the native population, changes in immigration laws and policies may be warranted (see Lazear, 2005). Much of the assimilation literature either directly or implicitly points to the role of social integration in the economic assimilation of immigrants. Traditionally, social scientists have measured this social integration with residential segregation (Duncan and Lieberson, 1959; Lazear, 1999). One of the main forces behind the interest in residential segregation is its impact on social interaction between groups and in particular, its impact on intermarriage.

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However, a growing number of papers consider a different measure of assimilation: *interethnic marriage*. This paper examines the effect of education on intermarriage and specifically, whether the mechanisms through which education affects intermarriage differ by race and immigrant generation.

In a series of papers Borjas (1992, 1995, 1998, 2006) presents evidence of the role of ethnic capital, or the average skill level in an ethnic group, in explaining the productivity of workers in the next generation. He finds that although part of this human capital externality is simply a proxy for the average human capital in the neighborhoods in which the children of immigrants grow up, ethnic capital also has its own independent effect (Borjas, 1995). Children growing up in the same neighborhood may have different outcomes depending on their ethnic group simply because they are more exposed to people who share their ethnic background.

As suggested by Borjas' work, immigrants make choices with whom to associate. Since these choices could potentially depend on their levels of human capital, it is important to examine how education affects ethnic attachment. If, for example, immigrants with high education levels do not associate with co-ethnics, then they will not be affected by the ethnic externality and their human capital will not contribute to the externality. It may also be that the relationship between education and ethnic attachment depends on the skill level of the person's ethnic group as well as his race and immigrant generation.

This paper measures a person's ethnic attachment by looking at whom he decides to marry. Certainly, people living in ethnic enclaves have many fellow ethnics in their social circles and so are more likely to marry someone with the same ancestry even just by chance. At the same time, the ethnic preferences of people living far from an enclave yet remaining closely attached to their ethnic group, can be captured by their marriage to someone of the same ethnicity. In fact, because communication and transportation costs have decreased so much in the past century, the ethnic composition of one's neighborhood may have become relatively less important in predicting the ethnic composition of one's social circle. Surely, marriage to someone from the same country of origin is not only a result of having many fellow ethnics in one's social circle, but also a cause. Regardless, it is certainly a measure of ethnic attachment and it is this ethnic attachment which is argued to be so important for assimilation.

According to sociologists intermarriage with the majority population is the final step in the immigrant assimilation process. Sociologists have been studying intermarriage for a long time (see among others, Fu, 2001; Kalmijn, 1991, 1993, 1998; Lee and Edmonston, 2005; Lewis and Oppenheimer 2000; Lichter *et al*., 1992; Lichter *et al*. 2007, Liebrson and Waters (1988); Model and Fisher, 2001; Pagnini and Morgan, 1990; Qian, 1997; Qian and Lichter, 2001; Qian *et al*., 2001). A growing number of economists have also started considering the causes and consequences of ethnic intermarriage. Bisin and Verdier (2000) present a theoretical analysis of the role of an ethnic group's share of the population on intermarriage decisions while Furtado (2006) examines the mechanisms through which education affects intermarriage. Meng and Gregory's (2001) paper on the

causal effects of intermarriage on earnings of immigrants in Australia led to similar analyses for the U.S. (see Kantaravic 2004) and for France (see Meng and Meurs, 2006). Using various identification strategies, Furtado (2007), van Ours and Veenman (2007) and Celikaksoy *et al*. (2006) as well as Skyt Nielsen *et al*., (2007) examine the effects of intermarriage on education levels of immigrants or their children in the U.S., in the Netherlands, and in Denmark, respectively. Another paper (see Duncan and Trejo, 2006) uses the negative relationship between human capital and intermarriage rates for Mexican Americans along with the finding that children with intermarried parents are less likely to be identified as Mexican. This suggests that observed measures of intergenerational progress for Mexican Americans may be biased. Card *et al*., (2000) use intermarriage rates as a measure of intergenerational assimilation rates of immigrants. Bodenhorn (2006) finds that light complexion blacks (mulattoes) are disproportionately intermarried as opposed to getting married to dark complexion darks. He finds that mulatto homogamous households in the mid-nineteenth century had between 30 and 90 percent more wealth than households where one spouse was black. Angrist (2002) uses changes in immigration policy in the U.S. as a source of exogenous variation to explain the high endogamy rates for second-generation immigrants in the U.S.

Adapted from Wong's (2003) explanations for the scarcity of black-white interracial marriages, Furtado (2006) presents three mechanisms through which education could affect marriage choice: the *cultural adaptability effect*, the *enclave effect*, and the *assortative matching effect*. The cultural adaptability effect suggests that educated people are better able to adapt to different customs and cultures. Since immigrants with more human capital have a better "technology" for adapting to the host society, they are more likely to marry natives. The enclave effect suggests that educated immigrants are more likely to move out of their ethnic enclaves because, for example, they have larger geographic labor markets. They are, therefore, less likely to meet potential spouses of their own ethnicity and so, naturally, less likely to marry them. Lastly, the assortative matching effect posits that marriage surplus increases when education levels of husband and wife are similar. This implies that given a costly search process, educated immigrants may be willing to substitute similarities in ethnicity for similarities in education. Furtado (2006) develops a model of assortative matching which predicts that an increase in education for immigrants in highly educated ethnic groups should actually decrease the likelihood of intermarriage while the opposite is true for immigrants in low education ethnicities. By the cultural adaptability mechanism, however, education always increases the probability of intermarriage.

Using 1970 U.S. Census data, Furtado (2006) finds that, controlling for the enclave effect, assortative matching is more important than cultural adaptability in explaining marriage choices of second-generation immigrants. This conclusion may not be applicable today since the composition of immigrants has changed so much since then. First, immigrants and their children make up a larger proportion of the U.S. population. Moreover, they have a very different racial composition. In 1970, the great majority of immigrants were from Europe. Today, while a little over half of the foreign born in the U.S. are from Latin America and a quarter are Asian (Current Population Survey (CPS), 2003), only about 13 percent of the U.S. population is Hispanic and 3.6 percent is Asian

(Census 2000). Also, newer cohorts of immigrants have very different levels of education than natives. Although they are just as likely as natives to have a bachelor's degree or above, immigrants are much less likely to have a high school diploma and are significantly less likely to have graduated the 9th grade (CPS, 2003).

A direct comparison between second-generation immigrants in 1970 and 2000 is not possible because 1970 was the last year the Census asked for parents' country of birth. However, this paper tests whether the conclusions drawn for second-generation immigrants in 1970 apply to immigrants that arrived in the U.S., both young and old, and the native-born that list some ancestry in the 2000 Census. Moreover, this paper adds race to the study of intermarriage. Even though they are becoming more frequent, interracial marriages are still relatively rare. Preferences for marriage within one's race may change the relative importance of the cultural adaptability and assortative matching effects.

Using 2000 U.S. Census data, we find that even after controlling for the enclave effect, there is evidence for both, cultural adaptability and assortative matching effects. As one may expect, the cultural adaptability effect is relatively more important for immigrants that are less attached to the U.S., as measured by their age at arrival. Assortative matching is relatively more important for the native-born than the foreign-born. There are also significant differences by race in the relative importance of education in endogamy. Our results are consistent with the hypothesis that relative to low education racial groups, groups that place a high value on education tend to prefer similarities in education with their spouses rather than similarities in ethnicity.

The remainder of the paper is organized as follows. Section 2 describes the relevant literature and explains the methods used in the paper. The data and descriptive statistics are presented in Section 3. Section 4 discusses the empirical results, while Section 5 presents a number of robustness checks. Section 6 concludes.

2 Methods

As discussed in the introduction, there are three mechanisms through which education could affect marriage decisions. By cultural adaptability, education makes people more accepting of differences in others, and so regardless of their ethnic group, more education decreases the probability of marrying within their ethnicity. By the enclave effect, an increase in education results in moving away from ethnic enclaves and so the proportion of people living within close geographic proximity decreases. Thus, we can control for the enclave effect if we have information on the size of the ethnic group living in a person's city. By the assortative matching effect, an increase in education will lead to an increase in endogamy for people living in cities where the average education in their ethnic groups is above the average in the general population. For people in low education groups, an increase in education will lead to a decrease in endogamy. To capture all of these ideas, we use the following empirical specification:

$$y^*_{ijk} = \beta_0 + \beta_1 h_{ijk} + \beta_2 h_{ijk}(\bar{h}_{jk} - \bar{h}_{ak}) + \beta_3 p_{jk} + \beta_4 X_{ijk} + \gamma_j + \varepsilon_{ijk}$$

We do not observe y^*_{ijk}, but rather y_{ijk}, which takes on values of 0 and 1 according to $y_{ijk} = \begin{cases} 1, \textit{if int ramarried} \\ 0, \textit{otherwise} \end{cases}$. We also assume $\varepsilon_{ijk} \sim N(0, \sigma^2)$.

In this model, *y* is a dichotomous indicator equal to one if man *i* in ethnicity *j* in geographical area *k* is married within his ethnicity and zero otherwise, and *h* measures years of schooling. Average schooling in ethnic group *j* in city *k* is denoted $\bar{h}_{jk}$ while $\bar{h}_{ak}$ measures the average schooling of population in city *k*. Ethnic group size is denoted p while *X* is a vector of characteristics which capture tastes for marrying within ethnicity, including age, language ability, and whether the couple lives in a center city. If education affects endogamy through the cultural adaptability mechanism, then we expect that β_1 is negative. If education affects endogamy through the assortative matching mechanism, then we expect that β_2 is positive. Although we do not have a direct measure for the enclave effect, we control for it by including *p* in the specification.
The vector of controls cannot capture all of the possible attributes correlated with both education and preferences for endogamy. For a variety of reasons, some ethnic groups may have fewer cultural differences with the average American and so it may be easier for them to share a household with an American. Also, some ethnic groups have a long history of immigration to the US (for example, Mexicans) while others had a big wave of immigration at a certain time and then immigration stopped rather suddenly (for example, Italians). This history of immigration from a certain country could affect its social institutions in the U.S. Social institutions such as festivals and social clubs may make finding an acceptable ethnic spouse easier. In order to capture all of these effects, ethnic group fixed effects, denoted γ, are included in the model.

The relative importance of the different mechanisms linking education to endogamy rates could differ by immigrant generation. One would expect that with more attachment to the U.S., similarities in education with a potential spouse would become relatively more important than similarities in ethnic traits. To test this hypothesis, we run the model on several different samples: the foreign born who arrived in the U.S. as adults (age 18 and above), foreign born who arrived in the U.S. younger than age five, foreign born who arrived between the ages of 14 and 16, and the native born that associate themselves with an ancestry.

There could also be racial differences in the mechanisms through which education affects endogamy decisions. Immigrants from racial groups that place a high value on educational attainment may prefer similarities in education with their spouses to similarities in ancestry. Since Asians, typically have higher levels of education than Hispanics, we may expect that β_2 is relatively larger than β_1 for Asians than for Hispanics.

3 The Data

The analysis uses the 5 percent public use sample of the 2000 U.S. Census as reported by the Integrated Public Use Microdata Series (IPUMS) (Ruggles *et al*., 2004).[3] This data set is particularly well suited for our purposes because it allows us to get reasonably accurate counts of the number of immigrants from a specific country of origin living within close geographic proximity.

The racial categories are based on self-responses in census questionnaires.

The initial sample is restricted to ancestry groups with more than 1,000 observations[4] and to married males with a spouse present living in a metropolitan area. We drop married men with spouses away from home. In order to limit the possibility of reverse causality between education and endogamy, only those over the age of 25 and not enrolled in school are used in the analysis. People over the age of 65 are also eliminated from the sample because marriage market conditions may have changed substantially from the time they were making marriage decisions. Only immigrant groups from non-English speaking countries are considered in the analysis.

A marriage is considered endogamous if spouses share a common ancestry. We examine individuals that are legally married and not cohabiting as Census data deal only with marriage.[5] Census respondents could write in as many as two ancestries. Our dependent variable takes the value of one if the first ancestry of the husband is the same as the first ancestry listed by the wife and zero otherwise. In the 2000 Census, education is measured in academic qualifications and not in years of schooling. We construct years of schooling by mapping educational qualifications into the average number of years it takes for people to complete them following Chiswick and DebBurman (2004). The size of the ethnic group is obtained by dividing the number of people from that ethnic group by the number of people in the metropolitan statistical area (MSA). We compute both using the appropriate person weights. In order to identify the assortative matching effect, we also include differences in the average years of education between our ancestry groups and the general population in the MSA interacted with years of education. To limit sampling error in the formation of these variables, observations are dropped if there are fewer than 50 people from a person's ethnic group living in the MSA.

The controls used in the analysis are language ability, age, age squared, residence in the center city, veteran status, region of residence, and race. A dummy variable for whether the individual does not speak English is used to measure language ability.

[3] The dataset is publicly available at http://usa.ipums.org/usa/.
[4] The same restriction is imposed by Cutler *et al*. (2005).
[5] Qian and Lichter (2007) provide little evidence that cohabitation has become a substitute for marriage for interracial couples.

Because around three quarters of the foreign born are either Hispanic or Asian, we include dummy variables for being Hispanic or Asian in the baseline regressions. We also run regressions separately for Hispanics, Asians, and Non-Hispanic Whites. Although Hispanic was not listed as a race in the Census form, we coded respondents as Hispanic if they answered yes to the Hispanic question in the Census, regardless of how they answered the race question. Because there are not enough immigrant Blacks we drop individuals with Black race from the sample. Also, people who report more than one race are dropped from the sample.

Table 1 presents descriptive statistics for males in endogamous and exogamous marriages separately. Intermarried males have more years of schooling, belong to high-skilled ethnic groups, and live in cities with a smaller proportion of people with the same ancestry. They are more likely to be native born, speak English, and have fought in a war, but are less likely to live in the central part of the city. Table 2 shows endogamy rates, ethnic group sizes, and average education levels by ancestry. Endogamy rates are higher for groups that are racial minorities and for groups that are highly represented in the cities in which members of the group reside.

More detailed descriptive statistics are reported in Tables A1, A2 and A3 in the Appendix. These tables present average education, age, and age at arrival in the U.S., separately by ancestry and marriage type. Table A1 shows that endogamously married males have fewer years of schooling than exogamously married males. Table A2 shows that endogamously married men are older than exogamously married men. Table A3 shows that endogamously married immigrants entered the U.S. at an older age than exogamous married immigrants.

4 Empirical Results

Table 3 presents probit estimates of the marginal effects of education on endogamy. Standard errors are adjusted for clustering within MSA-ancestry cells. All specifications include a set of controls to capture ethnic preferences. Coefficients on the controls have the expected signs: The inability to speak English increases endogamy while being born in the U.S. decreases endogamy. Perhaps because the military exposes its members to people from many different backgrounds, veteran status decreases endogamy. Also, perhaps because preferences for marriage within ethnicity have decreased over the past century, older people are more likely to be in endogamous marriages, although this effect is not linear. This is consistent with Fryer's (2007) findings concerning interracial marriages. Because ethnic enclaves tend to be located in center cities, residence in the central part of a city tends to increase endogamy. Racial minorities are more endogamous than non-Hispanic Whites. Region dummies are also included in all specifications.

Table 3 shows that even with this set of controls, a one year increase in schooling is associated with a one percentage point decrease in the probability of marrying someone with the same ancestry. As discussed in the previous section, this coefficient on education is an average effect of the different mechanisms through which education could affect endogamy decisions. By adding the size of the ethnic group living in a person's city, we control for the possibility that people with more education are less likely to live in ethnic enclaves and so even by random matching, they may become less likely to marry endogamously. Column 2 shows that the marginal effect of education is almost cut in half when measures for the size of the ethnic group are added to the specification. This suggests that the enclave effect is an important mechanism through which education affects endogamy.

In Column 3, the assortative matching effect is accounted for by adding average education in the person's ethnic group along with the interaction between education and the difference in average ethnic education and average education of Americans in the person's city. When these measures of the availability of co-ethnics with a similar education are included in the analysis, the marginal effect of education alone stays about the same while the marginal effect of the interaction has the expected positive sign. Taken together, these marginal effects suggest that although education in general has a negative effect on endogamy, more education tends to decrease endogamy more for people living in areas where average ethnic education is lower than the average American education. Conversely, for people living in areas where ethnics have higher education levels than others in the local population, an increase in education can lead to an increase in endogamy (or at least a smaller decrease). We interpret this result as evidence of assortative matching on education in the marriage market.
Ancestry fixed effects are added in Column 4. Instead of exploiting variation in average education levels across ethnic groups and across cities, we look within ethnic groups to see how the effect of education responds to differences in relative education levels between ethnics and natives across different cities (see Brien, 1997). Note that the marginal effects of education alone and the interaction remain approximately the same.[6]

We conclude that there is support for all three mechanisms through which education affects endogamy. For the typical Mexican, either native-born or foreign-born, living in an MSA where Mexicans have two fewer years of education less than the population in general, an increase in education by one year, leads to a .009 percentage point decrease in the probability of marrying another Mexican. If that Mexican were to move to city where Mexicans had the same average education as natives, then the decrease in endogamy would only be by .005 percentage points.

[6] A potential problem with this analysis is that people choose where to live. Conceivably, there could be a relationship between own education and the average ability of co-ethnics where a person chooses to live, and this relationship could be correlated with ethnic preferences. This would bias the assortative matching coefficient. Presumably, average education in one's ethnic group in the entire country is more exogenous in that people cannot choose it. We ran a regression exploiting only differences in average education levels across ancestries and results did not change qualitatively. Of course, this method of identification is also problematic because we cannot control for ethnicity fixed effects. However, even though both methods of identification are imperfect, they are imperfect for different reasons, so the fact that results are robust is very comforting.

As discussed in Furtado (2006), a potential concern in this analysis lies with the interpretation of the size of the ethnic group in an MSA as a measure of the opportunity to meet potential spouses with the same ancestry. There are two problems with this: First, we measure the size of the ethnic group in the person's MSA of residence at the time of the survey as opposed to the time and place where the person was actually searching for a spouse. Since location decisions of couples may be affected by their ethnic preferences, coefficients may be biased. Second, even if we could measure the size of the ethnic group at the right time and place, ethnics with higher preferences for endogamy are more likely to live in ethnic enclaves while searching for a spouse. Thus, the coefficient on the size of the ethnic group would be measuring both opportunity and preferences for intramarriage. Since the focus of this paper is on disentangling the cultural adaptability effect from the assortative matching effect while controlling for the enclave effect as well as preferences, the second issue is not so much of a problem for our purposes. Nevertheless, we deal with both of these concerns, at least for the native born population, by calculating the size of the ethnic group in people's state of birth as opposed to MSA of current residence.[7] Since one's state of birth is chosen by his parents, it is arguably less endogenous to marriage choice. Moreover, it certainly is not subject to reverse causality concerns. Qualitative results did not change when this different measure of opportunity was used. When using state of birth as opposed to current residence, we are not controlling for the enclave effect and so this is not our preferred specification. However, knowledge that our coefficients of interest are not sensitive to our measure of opportunity makes us less concerned about endogeneity biases.

The results in Table 3 show how education affects marriage decisions for all people that list at least one ancestry in the Census. However, the relative importance of the different mechanisms through which education affects endogamy could differ depending on how assimilated a person is to the U.S. culture. Table 4 shows the final specification separately for the native born and for immigrants that arrive in the U.S. at different ages. Specifically, Column 1 limits the sample to the native born while Column 2 includes only the foreign born. Column 3 presents results for the foreign born that arrived in the U.S. below the age of five. Column 4 limits the sample to the foreign born that arrived between the ages of 14 and 16, inclusively. The last column includes immigrants that arrived as adults.

As expected, the relative importance of assortative matching is higher for populations with greater attachment to the U.S. Although the coefficient on education alone is the same for the native (Column 1) and foreign born (Column 2), the coefficient on the interaction is quadruple the size for the native born as it is for the foreign born. Education decreases ethnic preferences for members of both groups, but relative to similarities in ethnic background, natives value similarities in education more than immigrants.

The interpretation of the coefficients is difficult for both of these samples. The native born sample includes second-generation immigrants, whose parents may have arrived in

[7] See Brien (1997) for how the geography level of the marriage market may differ by race.

the U.S. only shortly before they were born, as well as people whose families have been in the country for several generations. On the other hand, the immigrant sample surely includes immigrants that arrived in the U.S. already married and so their marriage decisions would not be very influenced by the educational distribution of potential spouses in the U.S. To deal with these concerns, we consider the foreign born that arrived at a relatively young age. There is a large psychology literature on the importance of age at arrival for language acquisition of immigrants. More specifically, immigrants that arrive younger than age 10 quickly learn the language and speak without an accent while those that arrive older than 14 have more difficulty in speaking fluently and often never lose their accents (see Bleakley and Chin, 2007). Thus, we compare marriage patterns of immigrants that came when they were younger than five to the immigrants that arrived between the ages of 14 and 16. Both sets of immigrants were very likely exposed to the U.S. marriage market, but those that came very young probably value shared ethnicity with their spouses less than those that arrived as teenagers. Interestingly, as seen in Column 3, there is no support for the cultural adaptability effect for immigrants that arrive very young while there is support for the assortative matching.

This is very consistent with Furtado (2006) who found no evidence for the cultural adaptability effect for second-generation immigrants, the native-born children of immigrants, with two foreign born parents. Conversely, for immigrants that arrive as teenagers, there is no support for the importance of assortative matching, but education does seem to decrease preferences for marriage within ethnicity. Immigrants that came as adults are more likely to have come already married and so it is reasonable that coefficients on all education variables are closer to zero.

To limit concerns that the foreign born, specifically those that arrived as adults, came already married, we use two different techniques. First, we dropped couples where husband and wife arrived in the same year. We also drop couples whose eldest child living in the household is not native born. Results are robust to limiting the sample in these ways.

In the last great wave of immigration, immigrants were predominantly from European countries and so were of the same race as most natives. Today about half of the foreign born are Hispanic and about a quarter are Asian. The marriage patterns of people with different races may respond differently to changes in education. Table 5 presents results separately by racial group and nativity.

For the foreign born, the ratio of the marginal effects on education alone to the interaction is highest for Hispanics and lowest for Asians. This is consistent with the idea that people in racial groups that are highly education-oriented, such as Asians, may value the education of their spouses relatively more than the ethnicity of their spouses. Also, as we may expect, assortative matching is relatively more important than cultural adaptability for native born Whites than for native born Hispanics. Results for native born Asians, however, are more difficult to interpret. For them, an increase in education leads to an *increase* in endogamy in general, but this increase is *lower* for Asians in areas where Asians have much higher education levels relative to the general population.

Robustness checks suggest that this result is driven by the Chinese and Japanese since coefficients have the usual pattern when these two groups are dropped from the sample. We suspect that this result is mainly driven by differences in Asian cohort quality, but a more detailed explanation is beyond the scope of this paper.

5 Robustness Checks

The results of this analysis suggest that there is a role for both the cultural adaptability and the assortative matching effects in marriage markets. We provide evidence that assortative matching is relatively more important for the native born than the foreign born. It is also more important for the foreign born that arrived young and for racial groups that are very education-oriented. In this section, we present a different technique for testing the assortative matching hypothesis. After establishing the importance of similarities in education in evaluating potential spouses, we introduce a method for backing out the relative preferences for endogamy of different groups. Results are consistent with those found in the previous section.

The main idea behind the assortative matching effect is that people value similarities in education levels with their spouses. In order to take full advantage of household public goods (Lam, 1988) they may want to marry someone with the same ancestry and level of education. However, if search is costly (as in, Furtado 2006), they may be willing to marry someone with a different level of education but the same ancestry or someone with the same education level but a different ancestry. This implies that at equilibrium, the absolute value of the difference in spousal education levels should be greater for intramarried couples than intermarried couples.[8] Moreover, the difference in spousal education differences between endogamous and exogamous couples should be greater for groups with higher ethnic preferences. In other words, the more important endogamy, the more of an education difference one is willing to tolerate in a spouse.

To test these hypotheses, we focus on a sample which is most likely to have high preferences for both ethnic endogamy and assortative matching on education: the foreign born that arrived before the age of 14. These immigrants were certainly exposed to the U.S. marriage market. Because they are foreign born, they most likely have high ethnic preferences. However, since they came at a young age, they do not face the language and cultural barriers in marrying outside of their ethnic group. Table 6 shows average (absolute values of) spousal differences in years of schooling by marriage type. As predicted, there are bigger educational differences between spouses in endogamous marriages than exogamous marriages.

Although we do not have data on ethnic preferences, we argue that certain categories of immigrants have higher ethnic preferences. Specifically, immigrants that arrived older, with poorer English skills, living in ethnic enclaves presumably have the highest preferences for ethnic endogamy. Thus, they should be willing to sacrifice the most in terms of educational similarities in their spouses. Table 6 presents average spousal

[8] This assumes that the education distributions are very similar across ethnic groups. If they are very different, then just by random matching, endogamous marriages should have smaller spousal differences in education. This makes our test for assortative matching even stronger.

educational differences separately by whether immigrants arrived before or after the age of seven. Consistent with the assortative matching hypothesis, intermarried couples have smaller differences in their years of schooling. Consistent with the hypothesis that older arriving immigrants have greater preferences for endogamy, the difference between endogamous and exogamous couples is greatest for immigrants that arrived older. Similarly, spousal differences in education are relatively greater in endogamous couples than exogamous couples for immigrants with poorer English skills.

The size of one's ethnic group living within close proximity has a theoretically ambiguous effect on the relationship between spousal educational differences and marriage type. On the one hand, a greater availability of same-ancestry spouses makes it easier to find a spouse with the same ethnicity and education level. On the other hand, immigrants with high ethnic preferences are more likely to live in ethnic enclaves. Thus, we may expect the difference in spousal education differences between endogamous and exogamous marriages to be greatest for immigrants living in MSAs with high concentrations of people sharing their ethnic background. Table 6 shows that, in fact, the greater availability of same-ethnicity spouses does not prevent the need to sacrifice educational similarities for ethnic similarities. The difference between endogamous and exogamous couples is greatest for living in cities where more than seven percent of residents share the spouse-searcher's ethnicity.[9]

Using this technique, we provide further evidence of our findings that racial groups that are more education oriented are more willing to sacrifice ethnic similarities for educational similarities in a spouse. As can be seen in Table 6, the difference in spousal educational differences between endogamous and exogamous couples is smallest for Hispanics and greatest for Asians. This is very consistent with the findings in the previous section that, controlling for the enclave effect, assortative matching on education is more important than the cultural adaptability effect for racial groups that are more education-oriented.

We also restricted the analysis to individuals who got married after the age of 25 in order to prevent reverse causality. Since most people have finished studying by the age of 25, then we can say that education is causing marriage.[10]

We also use data from the 5% IPUMS of the 1980 and 1990 Censuses in order to distinguish changes in cohort quality from changes in immigration law. After 1965, it became relatively easier to arrive as a spouse of a citizen, family reunification became much more important than quotas after 1965. This change in policy may confound changes in cohort quality. Thus, it may seem that the quality of immigrants has decreased whereas it is law differences that have led to decreases or increases in endogamy (cutting and pasting from a previous email correspondence).

[9] Seven percent is the median value for the size of the ethnic group in the MSA for this sample.
[10] We do not observe the exact age of marriage of the individual. We derive it by subtracting the age of the "own" eldest child in the household from the age of the individual.

6 Conclusions

This paper provides evidence of three different mechanisms through which education affects interethnic marriage decisions. On average, education decreases endogamy for all people that list an ethnic background in the Census. However, the negative relationship is not quite as strong after controlling for the probability of encountering someone with the same ethnic background. This is consistent with the idea that people with more education are less likely to live in or near ethnic enclaves. Lastly, we show that the availability of co-ethnics with a similar level of education is also a very important determinant of interethnic marriage decisions, suggesting the importance of assortative matching on education.

The relative importance of these mechanisms differs for various populations. Assortative matching on education is relatively more important for people that are more attached to the U.S. Specifically, the native born seem to value similarities in education more than similarities in ethnicity relative to the foreign born. Also, assortative matching on education seems to be more important for immigrants that arrived in the U.S. at a young age. Lastly, Asians seem to value similarities in education more than ethnicity relative to Whites and Hispanics while Whites value education more than Hispanics. This is consistent with the idea that racial groups that are very education oriented, value a spouse's education relatively more than her ancestry.

We conclude that not only is education an important determinant of intermarriage decisions, but that there are several mechanisms linking education and spouse-choice and that relative importance of these mechanisms differs by nativity, race, and age at arrival for the foreign born. If we assume that marriage to a native is a measure of a person's association with natives more generally, then there are several policy implications that might be drawn from this analysis.

Point systems of immigration like those in Canada, in Australia, and recently in the UK tend to put more weight on years of schooling and language ability than countries without a point system. Part of the rationale for doing this is that more educated immigrants tend to assimilate economically and socially faster than non-educated immigrants. This paper suggests that this is true in general. Moreover, taken together with the Borjas ethnic externalities story, this implies an even slower rate of assimilation because low education immigrants would not be benefiting from the high education of their ethnic peers.

However, another important finding of this paper is that the effect of education differs by immigrant group. In fact, for immigrants in high education groups living in areas with low-education Americans, more education may even lead to a decrease in social

integration. This implies that for certain high education ethnic groups, assimilation to U.S. average education levels may be slower than what is implied by the Borjas results. If the social integration of highly educated immigrants is a policy goal, our findings suggest that given two immigrants with the same education, more points should be given to the immigrant in the low education ethnic group. In a similar way, the findings that the relative importance of assortative matching depends on race, nativity, and age at arrival can also inform policy discussions.

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Appendix

Table 1. Descriptive Statistics

	Exogamous Couples		Endogamous Couples		All	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Years of Education	14.25	3.190	12.77	4.417	13.66	3.793
Age	45.14	9.856	44.71	10.077	44.97	9.946
Size of Ethnic Group in MSA	0.09	0.083	0.13	0.127	0.10	0.105
Mean Ethnic Education in MSA	14.15	1.420	13.06	2.301	13.71	1.896
Mean Education in MSA	13.79	0.611	13.61	0.757	13.72	0.678
Cannot Speak English	0.00	0.058	0.04	0.189	0.02	0.128
White	0.95	0.208	0.76	0.430	0.89	0.312
Asian	0.02	0.134	0.16	0.366	0.07	0.262
Hispanic	0.10	0.295	0.32	0.467	0.19	0.389
US born	0.90	0.301	0.53	0.499	0.75	0.431
Veteran	0.29	0.454	0.18	0.384	0.25	0.431
In Metro Area, Central City	0.12	0.322	0.19	0.390	0.14	0.352
In Metro Area, Outside Central City	0.51	0.500	0.46	0.498	0.49	0.500

Table 2. Endogamy Rate, Size of Ethnic Group, and Average Education Level by Ancestry.

Ancestry	Endogamy	Size of Ethnic Group in MSA	Mean Ethnic Education in MSA	Mean Education in MSA
Austrian	0.039	0.003	15.85	13.89
Belgian	0.094	0.008	14.76	13.81
Danish	0.057	0.010	15.10	13.88
Dutch	0.157	0.033	14.32	13.78
Finnish	0.102	0.011	14.74	13.93
French	0.148	0.032	13.98	13.75
German	0.344	0.172	14.34	13.82
Greek	0.291	0.007	14.24	13.90
Irish	0.277	0.091	14.45	13.87
Italian	0.289	0.102	14.17	13.88
Norwegian	0.128	0.049	14.68	13.96
Portuguese	0.404	0.059	11.90	13.58
Swedish	0.086	0.022	14.94	13.89
Swiss	0.085	0.005	15.34	13.81
Czechoslovakian	0.088	0.007	15.02	13.84
Hungarian	0.095	0.010	14.64	13.82
Lithuanian	0.068	0.004	15.41	13.89
Polish	0.230	0.055	14.43	13.86
Russian	0.358	0.018	16.59	13.90
Yugoslavian	0.214	0.001	13.90	13.72
Spaniard	0.385	0.008	13.23	13.53
Mexican	0.747	0.201	9.79	13.10
Central American	0.621	0.012	9.83	13.46
South American	0.609	0.010	12.99	13.75
Puerto Rican	0.569	0.027	12.12	13.80
Cuban	0.600	0.163	13.07	13.42
West Indies	0.712	0.018	12.00	13.87
Hispanic	0.490	0.017	12.13	13.47
Asian Indian	0.874	0.018	16.47	13.90
Chinese	0.841	0.032	14.62	13.86
Filipino	0.818	0.037	14.52	13.68
Japanese	0.614	0.052	15.52	13.73
Korean	0.918	0.014	15.19	13.67
Vietnamese	0.894	0.014	12.53	13.72

Table 3. Probit Marginal Effects of Education on Endogamy.

Endogamy	1	2	3	4
Years of Education	-0.009	-0.005	-0.004	-0.005
	(0.001)**	(0.001)**	(0.000)**	(0.000)**
Age	-0.006	-0.006	-0.005	-0.005
	(0.001)**	(0.001)**	(0.001)**	(0.001)**
Age Squared/100	0.008	0.008	0.008	0.008
	(0.001)**	(0.001)**	(0.001)**	(0.001)**
Cannot Speak English	0.178	0.129	0.096	0.105
	(0.021)**	(0.020)**	(0.018)**	(0.018)**
White	-0.230	-0.182	-0.154	-0.072
	(0.025)**	(0.014)**	(0.021)**	(0.024)**
Asian	0.234	0.348	0.377	0.299
	(0.027)**	(0.015)**	(0.023)**	(0.025)**
US born	-0.269	-0.333	-0.322	-0.308
	(0.014)**	(0.015)**	(0.016)**	(0.015)**
Veteran status	-0.038	-0.040	-0.038	-0.037
	(0.002)**	(0.002)**	(0.002)**	(0.002)**
Region dummies	Yes	Yes	Yes	Yes
In metro area, central city	0.005	0.030	0.030	0.023
	(0.012)	(0.009)**	(0.009)**	(0.008)**
In metro, area, outside central city	-0.009	0.004	0.007	0.006
	(0.008)	(0.004)	(0.004)+	(0.004)+
Size of Ethnic Group		2.247	2.258	2.278
		(0.100)**	(0.105)**	(0.147)**
Square of Size		-2.325	-2.369	-2.371
		(0.201)**	(0.207)**	(0.250)**
Mean Ethnic Education			-0.016	-0.016
			(0.005)**	(0.004)**
Mean Ethnic Education-Mean Education			-0.031	-0.022
			(0.008)**	(0.006)**
Education X (Mean Ethnic Education-Mean Education)			0.003	0.002
			(0.001)**	(0.000)**
Ancestry dummies	No	No	No	Yes
Observations	681884	681884	681884	681884

Notes: Robust standard errors in parentheses. Standard errors clustered on MSA × ancestry cells.
+ significant at 10%; * significant at 5%; ** significant at 1%

Table 4. Probit Marginal Effects of Education on Endogamy by Immigrant Generation.

Endogamy	US Born	Foreign Born, All	Foreign Born, Ages 0-5 at Arrival	Foreign Born, Ages 14-16 at Arrival	Foreign Born, Age Greater than 18 at Arrival
Years of Education	-0.004	-0.004	-0.003	-0.011	-0.002
	(0.000)**	(0.001)**	(0.002)	(0.002)**	(0.001)**
Age	-0.004	-0.006	-0.013	-0.016	-0.008
	(0.001)**	(0.002)**	(0.006)*	(0.005)**	(0.001)**
Age Squared/100	0.006	0.010	0.016	0.017	0.009
	(0.001)**	(0.002)**	(0.007)*	(0.006)**	(0.001)**
Cannot Speak English	0.157	0.075	0.358	0.048	0.052
	(0.062)*	(0.009)**	(0.135)**	(0.025)+	(0.008)**
White	-0.166	0.062	-0.178	-0.014	0.094
	(0.018)**	(0.024)**	(0.042)**	(0.043)	(0.018)**
Asian	0.155	0.239	0.120	0.230	0.182
	(0.033)**	(0.021)**	(0.071)+	(0.055)**	(0.025)**
Veteran status	-0.019	-0.126	-0.052	-0.019	-0.074
	(0.002)**	(0.008)**	(0.015)**	(0.018)	(0.008)**
Region dummies	Yes	Yes	Yes	Yes	Yes
In metro area, central city	0.016	0.001	0.002	-0.013	-0.006
	(0.008)+	(0.007)	(0.022)	(0.020)	(0.006)
In metro, area, outside central city	0.009	-0.008	0.004	-0.016	-0.005
	(0.003)**	(0.004)+	(0.015)	(0.015)	(0.004)
Size of Ethnic Group	2.211	1.239	1.969	1.535	0.907
	(0.135)**	(0.092)**	(0.255)**	(0.166)**	(0.072)**
Square of Size	-2.336	-1.267	-1.895	-1.440	-0.924
	(0.244)**	(0.168)**	(0.402)**	(0.288)**	(0.129)**
Mean Ethnic Education	-0.019	-0.001	-0.042	-0.003	0.002
	(0.004)**	(0.005)	(0.014)**	(0.013)	(0.004)
Mean Ethnic Education-Mean Education	-0.037	-0.023	-0.023	-0.014	-0.018
	(0.007)**	(0.006)**	(0.020)	(0.013)	(0.005)**
Education X (Mean Ethnic Education-Mean Education)	0.004	0.001	0.002	-0.000	0.000
	(0.000)**	(0.000)**	(0.001)*	(0.001)	(0.000)**
Ancestry dummies	Yes	Yes	Yes	Yes	Yes
Observations	552081	126295	8851	8397	93496

Notes: Robust standard errors in parentheses. Standard errors clustered on MSA × ancestry cells.
+ significant at 10%; * significant at 5%; ** significant at 1%

Table 5. Probit Marginal Effects of Education on Endogamy by Race and Nativity.

Endogamy	White Natives	White Foreign Born	Hispanic Natives	Hispanic Foreign Born	Asian Natives	Asian Foreign Born
Years of Education	-0.004	-0.017	-0.018	-0.005	0.009	-0.001
	(0.001)**	(0.002)**	(0.003)**	(0.001)**	(0.003)**	(0.000)+
Age	-0.004	-0.014	-0.007	-0.010	-0.037	0.005
	(0.001)**	(0.004)**	(0.004)+	(0.002)**	(0.008)**	(0.002)**
Age Squared/100	0.006	0.020	0.010	0.013	0.047	-0.003
	(0.001)**	(0.004)**	(0.004)*	(0.003)**	(0.009)**	(0.002)+
Cannot Speak English	0.005	0.093		0.082		0.087
	(0.081)	(0.051)+		(0.012)**		(0.011)**
Veteran status	-0.018	-0.183	-0.040	-0.112	-0.026	-0.169
	(0.002)**	(0.015)**	(0.008)**	(0.013)**	(0.032)	(0.010)**
Region dummies	Yes	Yes	Yes	Yes	Yes	Yes
In metro area, central city	0.012	0.064	0.040	-0.016	0.094	0.016
	(0.009)	(0.014)**	(0.017)*	(0.010)	(0.030)**	(0.010)
In metro, area, outside central city	0.009	0.009	-0.003	-0.029	0.021	-0.006
	(0.003)**	(0.010)	(0.018)	(0.008)**	(0.024)	(0.008)
Size of Ethnic Group	2.482	2.642	1.824	1.223	4.930	0.555
	(0.183)**	(0.393)**	(0.150)**	(0.104)**	(2.281)*	(0.125)**
Square of Size	-3.107	-4.470	-1.715	-1.201	-15.407	-0.250
	(0.396)**	(1.068)**	(0.219)**	(0.176)**	(10.269)	(0.170)
Mean Ethnic Education	-0.018	0.011	-0.044	-0.003	-0.035	-0.011
	(0.004)**	(0.009)	(0.011)**	(0.009)	(0.021)+	(0.011)
Mean Ethnic Education-Mean Education	-0.038	-0.128	0.013	-0.020	0.115	-0.030
	(0.009)**	(0.014)**	(0.013)	(0.009)*	(0.035)**	(0.013)*
Education X (Mean Ethnic Education-Mean Education)	0.004	0.008	0.002	0.000	-0.005	0.001
	(0.000)**	(0.001)**	(0.001)+	(0.000)	(0.002)**	(0.000)*
Ancestry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	518309	30692	23353	46904	(0.047)**	129803

Notes: Robust standard errors in parentheses. Standard errors clustered on MSA × ancestry cells.
+ significant at 10%; * significant at 5%; ** significant at 1%

Table 6. Spousal Differences in Schooling by Marriage Type.

	Spousal Differences in Years of Education		
	Endogamous Couples	Exogamous Couples	Difference
Total	2.29	2.00	0.29
Age at Arrival			
Younger than 7	2.09	1.92	0.17
7 and above	2.40	2.11	0.29
English Ability			
Speaks only English	1.90	1.91	-0.01
Speaks some English	2.34	2.10	0.24
Does not speak English	2.81	2.31	0.49
Size of Ethnic Group in MSA			
Less than .07	2.08	2.00	0.08
.07 and above	2.46	1.99	0.47
Race			
White	2.03	1.95	0.09
Hispanic	2.46	2.08	0.38
Asian	1.99	1.96	0.03

Table A1. Mean years of schooling by ancestry group and type of marriage (population weighted).

Ancestry	Endogamous marriages	Exogamous marriages	All
Austrian	16.3	15.8	15.9
	(3.7)	(3.2)	(3.3)
Belgian	15.0	14.7	14.8
	(3.4)	(2.8)	(2.9)
Danish	15.0	15.1	15.1
	(3.1)	(2.9)	(2.9)
Dutch	14.3	14.3	14.3
	(3.0)	(2.9)	(2.9)
Finnish	14.2	14.8	14.7
	(2.8)	(2.8)	(2.8)
French	13.6	14.1	14.0
	(3.1)	(2.8)	(2.9)
German	14.2	14.4	14.3
	(2.8)	(2.8)	(2.8)
Greek	13.0	14.8	14.3
	(4.7)	(3.3)	(3.9)
Irish	14.4	14.5	14.5
	(2.9)	(2.9)	(2.9)
Italian	13.7	14.4	14.2
	(3.1)	(2.9)	(3.0)
Norwegian	14.5	14.7	14.7
	(2.8)	(2.8)	(2.8)
Portuguese	9.5	13.5	11.9
	(4.8)	(2.9)	(4.3)
Swedish	15.1	14.9	15.0
	(2.9)	(2.9)	(2.9)
Swiss	14.1	15.5	15.4
	(4.6)	(3.1)	(3.3)
Czechoslovakian	14.8	15.1	15.0
	(3.0)	(2.9)	(2.9)
Hungarian	14.5	14.7	14.7
	(3.6)	(3.1)	(3.1)
Lithuanian	16.4	15.4	15.4
	(3.5)	(3.1)	(3.2)
Polish	14.0	14.6	14.4
	(3.1)	(2.9)	(3.0)
Russian	16.9	16.5	16.7
	(3.6)	(3.4)	(3.5)
Yugoslavian	12.3	14.4	13.9
	(3.9)	(2.9)	(3.2)
Spaniard	13.4	13.8	13.6
	(4.3)	(3.6)	(3.9)
Mexican	9.6	11.9	10.2
	(4.6)	(4.2)	(4.6)
Central American	9.6	10.6	10.0
	(4.8)	(4.5)	(4.7)
South American	12.8	13.9	13.3
	(4.2)	(3.6)	(4.0)
Puerto Rican	12.0	12.8	12.4
	(3.6)	(3.2)	(3.4)
Cuban	12.8	13.9	13.2
	(4.0)	(3.7)	(3.9)
West Indies	10.8	12.9	11.6
	(4.5)	(4.3)	(4.5)
Hispanic	11.9	13.6	12.9
	(4.0)	(3.4)	(3.8)
Asian Indian	16.7	16.5	16.7
	3.7	4.2	3.7

Chinese	14.4	15.4	14.6
	(5.5)	(4.3)	(5.3)
Filipino	14.5	14.6	14.5
	(2.9)	(3.1)	(2.9)
Japanese	15.7	15.5	15.6
	(3.0)	(3.0)	(3.0)
Korean	15.1	15.4	15.1
	(3.5)	(3.7)	(3.5)
Vietnamese	12.4	12.9	12.4
	(4.2)	(4.4)	(4.3)

Notes: Standard deviations in parentheses.

Table A2. Mean age by ancestry group and type of marriage (population weighted).

Ancestry	Endogamous marriages	Exogamous marriages	All
Austrian	49.2	47.4	47.5
	(11.1)	(9.7)	(9.7)
Belgian	48.4	45.4	45.7
	(9.6)	(9.9)	(9.9)
Danish	47.2	46.8	46.8
	(10.5)	(9.8)	(9.9)
Dutch	46.9	45.8	46.0
	(10.2)	(9.9)	(10.0)
Finnish	46.2	45.9	45.9
	(10.7)	(9.8)	(9.9)
French	45.8	45.6	45.6
	(10.0)	(9.9)	(9.9)
German	45.6	45.5	45.5
	(9.9)	(9.9)	(9.9)
Greek	49.0	44.5	45.8
	(10.1)	(9.6)	(9.9)
Irish	45.5	45.1	45.2
	(10.0)	(9.8)	(9.8)
Italian	45.9	45.1	44.9
	(10.2)	(9.8)	(9.9)
Norwegian	46.0	44.4	45.3
	(10.2)	(9.7)	(9.8)
Portuguese	46.6	45.3	45.0
	(10.0)	(9.7)	(10.0)
Swedish	48.2	44.0	46.7
	(9.8)	(9.8)	(9.7)
Swiss	47.0	46.6	47.5
	(10.1)	(9.7)	(9.7)
Czechoslovakian	48.4	47.5	45.9
	(9.9)	(9.7)	(9.8)
Hungarian	49.1	45.7	46.9
	(10.1)	(9.8)	(9.9)
Lithuanian	47.0	46.7	47.1
	(10.3)	(9.9)	(9.8)
Polish	46.9	47.1	45.7
	(9.7)	(9.7)	(9.7)
Russian	47.7	45.4	47.2
	(9.8)	(9.7)	(9.6)
Yugoslavian	47.1	46.8	46.3
	(9.2)	(9.5)	(9.3)
Spaniard	48.7	46.0	46.8
	(10.5)	(9.4)	(10.6)
Mexican	41.7	45.7	41.8
	(9.8)	(10.4)	(9.8)
Central American	40.7	42.3	40.0
	(8.8)	(9.7)	(8.7)
South American	44.2	38.9	43.3
	(9.6)	(8.5)	(9.5)
Puerto Rican	45.1	41.9	44.1
	(10.0)	(9.2)	(9.9)
Cuban	45.7	42.9	44.4
	(10.7)	(9.6)	(10.3)
West Indies	44.7	42.4	43.6
	(9.8)	(9.3)	(9.6)
Hispanic	43.8	43.8	43.8
	(10.4)	(9.9)	(10.1)

Continued

Continued

Ancestry	Endogamous marriages	Exogamous marriages	All
Asian Indian	43.2	43.2	43.2
	(9.9)	(9.9)	(9.9)
Chinese	45.2	43.3	44.9
	(9.4)	(8.8)	(9.4)
Filipino	46.1	43.0	45.5
	(9.7)	(9.8)	(9.8)
Japanese	46.0	43.7	45.1
	(9.8)	(8.7)	(9.5)
Korean	45.7	40.8	45.3
	(9.7)	(10.1)	(9.8)
Vietnamese	45.0	39.8	44.5
	(9.7)	(8.9)	(9.7)

Notes: Standard deviations in parentheses.

Table A3. Mean age of arrival by ancestry group and type of marriage (population weighted).

Ancestry	Endogamous marriages	Exogamous marriages	All
Austrian	29.8	17.4	18.7
	(10.3)	(14.0)	(14.1)
Belgian	36.1	20.5	25.2
	(11.4)	(14.2)	(15.2)
Danish	29.3	20.7	22.0
	(9.5)	(13.4)	(13.2)
Dutch	24.6	16.7	18.6
	(13.7)	(12.7)	(13.4)
Finnish	32.2	17.1	23.5
	(10.3)	(13.4)	(14.3)
French	28.6	19.3	21.6
	(11.4)	(13.2)	(13.4)
German	19.0	13.0	15.0
	(14.6)	(13.0)	(13.9)
Greek	22.2	17.8	20.4
	(8.7)	(10.8)	(9.8)
Irish	21.2	15.8	18.1
	(11.1)	(13.7)	(12.9)
Italian	19.6	17.4	18.6
	(10.6)	(12.7)	(11.6)
Norwegian	28.9	15.8	18.7
	(14.8)	(15.0)	(15.9)
Portuguese	23.1	17.3	21.5
	(10.2)	(12.2)	(11.1)
Swedish	32.9	19.1	22.4
	(11.8)	(13.7)	(14.5)
Swiss	33.3	23.0	25.6
	(10.1)	(12.7)	(12.9)
Czechoslovakian	29.6	17.4	22.4
	(10.2)	(13.2)	(13.5)
Hungarian	26.5	17.4	20.8
	(11.0)	(11.6)	(12.2)
Lithuanian	23.4	14.9	18.4
	(13.3)	(12.9)	(13.7)
Polish	28.8	14.8	25.2
	(11.1)	(13.3)	(13.2)
Russian	34.9	25.3	32.8
	(11.1)	(15.5)	(12.8)
Yugoslavian	29.3	20.2	25.3
	(11.0)	(12.4)	(12.5)
Spaniard	28.0	24.7	26.3
	(11.9)	(12.3)	(12.2)
Mexican	22.3	19.8	21.9
	(9.4)	(9.4)	(9.4)
Central American	25.8	21.4	24.2
	(8.3)	(8.2)	(8.6)
South American	28.4	21.1	25.8
	(10.1)	(10.6)	(10.8)
Puerto Rican	20.5	16.5	19.0
	(12.4)	(11.7)	(12.3)
Cuban	25.9	17.2	23.1
	(13.7)	(12.3)	(13.9)
West Indies	26.7	21.1	24.7
	(10.1)	(9.9)	(10.4)

Continued

Continued

Ancestry	Endogamous marriages	Exogamous marriages	All

Hispanic	23.4	20.5	22.2
	(11.0)	(11.6)	(11.4)
Asian Indian	28.9	24.3	28.3
	(9.1)	(10.4)	(9.4)
Chinese	29.2	23.4	28.7
	(10.7)	(11.1)	(10.9)
Filipino	28.1	19.3	27.0
	(10.8)	(11.7)	(11.3)
Japanese	30.9	19.1	28.2
	(10.3)	(13.4)	(12.1)
Korean	29.6	18.7	28.9
	(10.5)	(13.5)	(11.1)
Vietnamese	29.6	21.2	28.8
	(12.4)	(11.9)	(12.6)

Notes: Standard deviations in parentheses.