Cross-Nativity Marriages and Human Capital Levels of Children

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This paper compares the academic outcomes of children with two foreign born parents to those with a foreign born and native born parent. Using NELS:88 data, I find that children with a foreign born father and a native born mother have worse grades in school than children with same-nativity parents. On the other hand, I find that children with a foreign born mother and native born father have better grades than children with same-nativity parents. These relationships remain even after controlling for many characteristics correlated with intermarriage such as education levels of parents, that are known to have positive consequences on children's academic achievement. This suggests that the reason children with two foreign born parents do better than children with a foreign born father and native born mother lies in the benefits of ethnic networks as opposed to attributes of the marriage itself. Interpreting an immigrant's marriage to another immigrant as signal of his connection to his ethnic network, I then test various hypotheses regarding the

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usefulness of different networks for different types of people.

1 Introduction

Assimilation, the process by which immigrants and their descendents become indistinguishable from the native population, is very complex because it occurs through so many different dimensions. Rapid convergence to certain native trends may in fact impede the speed at which immigrants become similar to natives in other aspects. In this paper, I examine the relationship between social integration to the host society and human capital accumulation of children, two different aspects of assimilation. Using marriage to immigrants as a measure of immigrants' participation in their ethnic networks, I first examine whether this participation results in more favorable academic outcomes for their children. Then, I consider the usefulness of different networks for different types of people.

Theoretically, connection to an ethnic network has an ambiguous effect on socioeconomic outcomes of both immigrants and their children. Immigrants involved in their ethnic communities are more likely to share information regarding job opportunities, housing availability, and the quality of different schools in the neighborhood. On the other hand, if participation in an ethnic network comes at the expense of association with natives, then immigrants may forego on spillovers from natives' better educational, employment, and earnings outcomes.[1]

[1] Because host country language proficiency makes association with natives possible and is in turn strengthened by this association, it is potentially an important mechanism through which social connections affect children's outcomes. Second generation immigrants, the native born children of immigrants, with a native born parent are more likely to have English as a first language and even only language (Stevens 1985) when compared to children with two

Marriage to a co-ethnic is an appropriate measure of ethnic attachment both because immigrants that are more involved with their ethnic communities are more likely to marry ethnics and because marriage to an ethnic can result in further connections within the community. Recent studies have shown that the grown children of cross-nativity marriages have high levels of human capital. Even after controlling for age, sex, and race, Ramakrishnan (2004) finds that compared to having two foreign born parents, having a native born father decreases the probability of dropping out of high school by 0.315 while having a native born mother decreases the probability by 0.252. Similarly, Chiswick and DebBurman (2003) find that children of cross-nativity parents have more years of schooling than children with two foreign born parents.

It is difficult to interpret these results because it is unclear whether the positive effects from having a native born parent are coming from the individual characteristics of the immigrant parent that choose to marry a native, individual characteristics of the native born parent that choose to marry an immigrant, or attributes of the networks surrounding these marriages. For example, neither of the previously discussed studies take into account parental levels of education. This is potentially very important if immigrants who marry natives have different education levels than immigrants who marry immigrants or if natives who marry immigrants have different education levels than natives who marry other

foreign born parents. English proficiency is certainly positively correlated with test scores even after controlling for a number of household characteristics (Glick and White 2003, Portes and Rumbaut 2001). However, English spoken at home is not a significant predictor of academic achievement (Vernez and Abrahamse 1996), while being bilingual does have a positive effect on achievement (Rumbaut 1998).

natives. Unobservable characteristics of parents that may influence academic outcomes of children present an even bigger problem for interpreting the effects of parental nativity on child outcomes.

In this paper, I will examine how cross-nativity marriages are related to child outcomes while controlling for education of both parents as well as other household level variables. I find that children with a foreign born father and a native born mother have lower grades in school than children with either two foreign born parents or two native born parents. Children with a native born father and a foreign born mother, on the other hand, do better than any other category.

Interpreting the positive effect of a foreign born mother on child's human capital as a signal of the positive effects of ethnic networks, I then test various theories about the merits of different networks for different people. Specifically, I first consider whether the value of attachment to an ethnic network is increasing in the size and quality of the network. Next, holding average education of the network fixed, I test whether low skilled immigrants gain relatively more than high skilled immigrants from their cohesion with their ethnic networks. Lastly, I test the hypothesis that low skilled immigrants gain relatively more from low skilled networks and that high skilled immigrants gain relatively more from high skilled networks. Although there is convincing evidence for the first two theories, there is only weak evidence for the last two.

The remainder of this paper is organized as follows. In Section 2, I describe the data and present preliminary descriptive analysis regarding the impact of

cross-nativity marriages on academic outcomes of children. Section 3 examines the effects of these marriages while controlling for various household characteristics known to be associated with both child outcomes and cross-nativity marriages. It is then argued that after controlling for these characteristics, the positive effect of having a foreign born mother on second generation children's schooling can be interpreted as the gain from active involvement with the ethnic community. In Section 4, various hypotheses regarding the relative merits of cross-marriage depending on ethnic network quality and the individual's skill levels are described and tested. Section 5 concludes with a discussion of the significance of my findings and recommendations for future research.

2 Data Description

In order to examine whether children of same-nativity parents perform better or worse in school than children with cross-nativity parents, I utilize National Education Longitudinal Study (NELS:88) data. NELS:88 is a stratified, clustered sample of 8th graders in 1988. Asians and Hispanics are oversampled making the data set particularly well suited for immigration research. Although the data set is longitudinal, I only use the initial round of the survey in order to have a large enough sample size for the analysis. There are about 23,000 native born 8th graders in the sample out of which about ten percent have at least one foreign born parent. The students were asked questions regarding their nativity, race, household income, home environment, and success in school. Parents were asked about their nativity, ethnicity, education levels, and household income.

The measure of academic achievement used in the analysis is average grades in school in the past five years. It was computed as an average of self-reported grades in English, mathematics, science, and social studies. The grades in the individual subjects are reported on a five point scale,[2] and the composite grade measure is just an average over the four subjects. Other measures of academic achievement in the NELS:88 include ability groups in the four subjects, whether or not a grade was ever repeated, and scores on standardized tests in the four main subjects. Although grades may seem like a more subjective measure of academic achievement than standardized test scores, I chose to conduct the analysis using grades because of the findings in the literature that especially for minorities, grades in high school are a better determinant of college achievement than SAT scores (for example, Kane 2001).[3] Education of the parents is coded in six levels ranging from less than high school to more than a college degree. From these levels, I constructed a continuous years of schooling variable using the typical amount of time it takes to complete the various degrees.[4]

Nativity of the parents were coded simply as binary variables equal to one if the parent was born abroad and zero otherwise. An assumption made throughout this analysis is that couples consisting of two immigrants are more connected to their ethnic communities than those consisting of only one immigrant. Two

[2] Mostly A's are coded 4, mostly B's 3, mostly C's 2, mostly D's 1, and mostly below D's 0.5.

[3] Signficant differences by family type were not observed for the other measures of human capital. However, according to the 2000 U.S. Census, after controlling for parental levels of education, 16 and 17 year olds with mixed nativity parents were more likely to have dropped out of high school than those with either two foreign born parents or two native born parents.

[4] I determined the "typical" amount using Chiswick and DebBurman (2004)as a guideline.

potential concerns arise from this assumption. First, the foreign born who marry natives may be predominantly marrying the native born children of immigrants from their own ethnicity. This should not necessarily be interpreted as social integration to the mainstream host society. In fact, a second-generation immigrant could potentially be more connected with the ethnic network than a recently arrived immigrant since he or she has been in the community for a longer period of time. Second, the foreign born spouses of immigrants may be from completely different countries and cultures and again, calling this a sign of ethnic cohesion is perhaps misleading. To establish the magnitude of these potential concerns, it is useful to determine the proportion of all cross-nativity marriages involving a first and second-generation immigrant from the same ethnicity as well as the proportion of all two immigrant marriages involving immigrants born in different countries.

NELS:88 does not contain very detailed information about parental country of birth and has no information about grandparents' birthplaces. However, the parents of 8th graders in 1988 were most likely already married in 1970. Thus, by using the 1970 U.S. Census (the last census to ask questions related to parental birthplaces) to examine marriage patterns of immigrants that are relatively young (and thus more likely to have 8th grader children in 1988), we can gain some sense for whether these concerns are warranted. Table 1 presents marriage patterns of foreign born males and females. Note that the majority (61.5 percent) of foreign born males marry foreign born females and a majority (over 80 percent) of these marriages have both husband and wife born in the

Spouse Type		Males	Females
Foreign Born	Same Country	51.2	47.2
	Different Country	10.3	10.3
2nd Generation	Same Ethnicity	4.2	4.6
	Different Ethnicity	5.7	5.8
3rd+ Generation	Unknown Ethnicity	28.5	32.0
		100	100

Table 1: Spouse Types of Foreign Born Males and Females Age 35 and Under According to the 1970 U.S. Census

same country. That is, of those marriages where both spouses are foreign born, over 80 percent involve spouses born in the same country. This suggests that having a foreign born spouse is a good measure of ethnic attachment. In order to examine whether marriage to a native is a good measure of "unattachment" to an ethnic network, I consider whether most of the native born spouses of immigrants have parents born in the same country as the immigrant. I find that of those foreign born males that marry native born females, about three times as many marry women with two native born parents than with at least one foreign born parent. Even among those immigrants that marry native born children of immigrants, more than half of the women they marry are of different ethnicities. Only about 10 percent of the natives that marry immigrants have at least one parent born in the same country as the immigrant. Results for foreign born women are almost identical. Thus, I argue, marriages comprised of foreign born husbands and wives are a reasonable measure of ethnic connection.

Table 2 shows average grades by family type for the whole sample and then Asians and Hispanics separately. Children with a foreign born father and a native born mother have the lowest grades, but children with a foreign born mother and a native born father have the highest. Children with both foreign

	Both Native	Foreign Father	Foreign Mother	Both Foreign
All	2.90	2.84	2.98	2.95
Hispanics	2.76	2.72	2.90	2.78
Asians	2.77	2.91	2.99	3.43

Table 2: Average Grades of Eighth Graders by Family Type and Race

born parents have the second highest grades and the difference between two foreign born parents and just a foreign born mother is not statistically significant. The difference between having just a foreign born father and both parents foreign born is statistically significant at the 5 percent level.

These comparisons may not be very reasonable if different ethnic groups are more likely to cross-marry and specifically if this tendency varies by gender. For example, it could be that native born males are more likely than females to marry Asians, and since Asians typically have higher levels of education, it would be natural that children with foreign born mothers and native born fathers would have better grades than children with a foreign born father and native born mother. Thus, it is important to consider the patterns by race. Although Hispanics typically have lower grades than the population in general, Table 2 shows that the relationships between the different family types for Hispanics are about the same as the general population. For Asians, native born children with two native born parents have the lowest grades while children with two foreign born parents have the highest grades. Children with mixed parents perform somewhere in between but, contrary to the Hispanic case, the difference between whether the mother or father is foreign born is not statistically significant at the 5 percent level.

One may question whether certain ethnicities are more likely to marry Americans than others and whether this depends on the gender of the foreign-born spouse. Although NELS:88 does not contain information on parents' country of birth, the parents of eighth graders in 1988 were most likely already married in 1970. Thus, using U.S. Census data for 1970, we can observe typical marriage patterns for the parents of these students. Tables 3 and 4 respectively show the types of spouses foreign-born males and females ages 18 to 40 are most likely to have. Notice in Table 3 that most (75 percent) of all foreign-born males are married either to females born in their country of birth or native-born females neither of whose parents were born in the male's country of birth. There is substantial variation across ethnicities, however, in these patterns. For example, German, French, and Polish foreign-born males are significantly more likley to marry 3+ generation Americans than Koreans, Cubans, and Portuguese. As can be seen in Table 4, patterns are similar for females. Again the German and French foreign-born females are the most likely to marry Americans while the Cubans and Portuguese are most likely to marry same-nativity foreign-born males. However, Japanese and Korean females are much more likely to marry American males than Japanese and Korean males are to marry American females. This may be explained by the large number of American military forces, most of whom are male, stationed in these countries.

Birthplace	Obs	Percent Married to			
		American	2nd Generation Same	Foreign-born Same	Foreign-born Different
Mexico	935	22.1	18.0	56.7	3.2
Cuba	434	13.1	0.5	78.8	7.6
France	69	47.8	0.0	24.6	27.5
Greece	200	24.0	13.0	54.5	8.5
Italy	637	29.5	10.8	51.5	8.2
Portugal	123	14.6	7.3	72.4	5.7
Germany	539	48.2	3.0	34.1	14.7
Poland	167	37.7	4.8	38.3	19.2
China	244	9.8	6.6	68.0	15.6
Japan	103	24.3	1.9	63.1	10.7
North/South Korea	54	3.7	0.0	85.2	11.1
Phillipines	202	20.3	4.0	70.8	5.0
Total	3707	26.1	8.7	56.2	9.0

Table 3: Male Marriage Types by Ethnic Group, using 1970 Census data

Birthplace	Obs	Percent Married to			
		American	2nd Generation Same	Foreign-born Same	Foreign-born Different
Mexico	907	19.3	17.5	58.4	4.7
Cuba	435	12.6	0.7	78.6	8.1
France	129	71.3	0.8	13.2	14.7
Greece	139	12.2	3.6	78.4	5.8
Italy	495	19.8	9.3	66.3	4.7
Portugal	118	17.8	5.1	75.4	1.7
Germany	1095	70.8	2.2	16.8	10.2
Poland	146	34.3	5.5	43.8	16.4
China	230	13.0	2.6	72.2	12.2
Japan	240	65.4	4.2	27.1	3.3
North/South Korea	121	57.0	0.8	38.0	4.1
Phillipines	239	32.6	4.6	59.8	2.9
Total	4294	37.7	6.5	48.5	7.3

Table 4: Female Marriage Types by Ethnic Group, using 1970 Census data

	Both Native		Foreign Father		Foreign Mother		Both Foreign	
	Mother	Father	Mother	Father	Mother	Father	Mother	Father
ALL								
Years of Schooling	13.00	13.10	12.98	12.93	12.75	13.51	12.12	12.42
Proportion								
< High School	0.13	0.13	0.16	0.21	0.14	0.08	0.29	0.29
High School	0.36	0.29	0.31	0.21	0.30	0.26	0.21	0.15
> High School	0.21	0.18	0.21	0.14	0.19	0.18	0.10	0.10
Bachelor Degree +	0.31	0.40	0.32	0.43	0.37	0.47	0.40	0.46
HISPANICS								
Years of Schooling	12.27	12.39	12.13	11.64	11.86	12.64	11.24	11.27
Proportion								
< High School	0.24	0.23	0.32	0.39	0.28	0.18	0.41	0.43
High School	0.35	0.27	0.32	0.18	0.20	0.23	0.20	0.16
> High School	0.17	0.16	0.18	0.10	0.18	0.19	0.10	0.08
Bachelor Degree +	0.24	0.33	0.18	0.32	0.34	0.40	0.29	0.33
ASIANS								
Years of Schooling	13.68	13.62	12.73	14.02	12.30	13.24	14.65	15.44
Proportion								
< High School	0.08	0.10	0.06	0.09	0.25	0.07	0.08	0.04
High School	0.25	0.25	0.36	0.12	0.28	0.27	0.10	0.12
> High School	0.21	0.17	0.13	0.42	0.12	0.23	0.11	0.10
Bachelor Degree +	0.46	0.47	0.45	0.37	0.35	0.42	0.71	0.75

Table 5: Parental Education Levels by Marriage Type and Race

3 Measuring Ethnic Connectedness with Marriage Choices

Because education affects intermarriage decisions (Furtado 2006, Meng and Gregory 2005), the variation in grades by family type could potentially be perfectly explained by variation in education levels of parents. Table 5 presents average schooling levels for mothers and fathers by marriage type. For the general population as well as Hispanics, natives married to natives have the highest schooling levels. For Asians, however, foreigners married to foreigners have the highest schooling levels. Correspondingly, except for in Asian marriages, natives typically have higher levels of education than their immigrant spouses in the mixed nativity marriages.

In order to learn something from marriage choices about the social integration process, it is necessary to hold other parental characteristics, especially education levels, constant. Thus, I use the following empirical specification:

$$\begin{aligned} GRADES &= \beta_0 + \beta_1 FBMOM + \beta_2 FBDAD + \beta_3 FBMOM * FBDAD \\ &\quad + \beta_4 X + \varepsilon \end{aligned}$$

where X is a vector of household characteristics including years of education of both mother and father and socioeconomic status. The coefficients imply that, controlling for the other variables, the difference in grades between children with two native born parents and children with a foreign born mother (and a native born father) is β_1. Similarly, for children with a foreign born father, the difference is β_2. If $\beta_1 + \beta_2 + \beta_3 > 0$, children with two foreign born parents have higher achievement levels than children with two native born parents. On the other hand, if $\beta_1 + \beta_2 + \beta_3 < 0$, it is the children with two native born parents that do better. Comparing grades of children with a foreign born mother and native born father to children with two foreign born parents, the coefficients suggest that two foreign born parents are better if $\beta_1 + \beta_2 + \beta_3 > \beta_1$ which simplifies to $-\beta_2 < \beta_3$. Similarly, two foreign born parents are better than a foreign born father if $-\beta_1 < \beta_3$.

Table 6 shows regression results separately for the entire population, Asians, and Hispanics. As discussed previously, at the very minimum, an analysis of the

effects of intermarriage must account for the abilities of those who intermarry. Because schooling levels of immigrants may not be associated with ability in the same way natives' schooling levels are, column 2 includes parental education levels as well as household socioeconomic status (SES). SES is computed using education, household income, and occupational prestige of the parents of the 8th graders.[5] Comparing columns 1 and 2, it can be seen that controlling for education makes the influence of parental nativity stronger. Having a foreign born mother and a native born father is associated with 0.08 *higher* grades than having two native born parents. On the other hand, children with a foreign born father and a native born mother have 0.06 *lower* grades than children with two native born parents. Two foreign born parents are associated with .08-.05+.12=.15 *higher* grades than two native born parents. This suggests that having two foreign born parents is better than having just one foreign born parent, but it is significantly better when compared to having a foreign born father and a native born mother.

The relationships between family types are similar within the Hispanic and Asian subsamples. However, the coefficients of interest are not statistically significant. This may be due to the small sample sizes.

It can be argued that there are other factors correlated with cross-nativity

[5] Besides measuring ability of parents, the income component of socioeconomic status can also influence children's academic achievement if market goods (tutoring services, computers, desks, and even a space within the home dedicated to schoolwork) are used in the production of child human capital. Table 5 demonstrates that families with a foreign born mother and native born father have the highest incomes, families with *two* foreign born parents have the lowest incomes while same nativity and foreign father/native mother families have incomes in between those two. Income is reported in 15 levels in the NELS:88. For the purposes of this study, I constructed a continuous measure of income by computing the mean level of income within each level.

8th Grader's Grades	All		Hispanics		Asians	
Foreign Mother	0.081	0.081	0.143	0.155	0.21	0.35
	(2.12)*	(2.27)*	(1.81)	(1.94)	(1.6)	(2.89)**
Foreign Father	-0.056	-0.054	-0.034	0.005	0.13	0.129
	(-1.45)	(-1.37)	(-0.52)	(0.07)	(0.63)	(0.61)
Foreign MotherX	0.029	0.115	-0.084	-0.06	0.32	0.026
Foreign Father	(0.5)	(2.12)*	(-0.85)	(-0.6)	(1.31)	(0.11)
Mother's Schooling		0.031		0.019		0.044
		(10.85)**		(1.82)		(3.04)**
Father's Schooling		0.043		0.039		0.022
		(16.88)**		(4.30)**		(1.39)
Family SES		0.046		0.004		0.044
		(15.99)**		(0.45)		(2.58)*
Constant	2.897	1.486	2.757	1.99	2.775	1.451
	(305.76)**	(39.02)**	(96.33)**	(15.56)**	(36.45)**	(7.20)**
Observations	19973	19111	2049	1951	622	605
R-squared	0	0.11	0	0.04	0.14	0.23

Absolute value of t-statistics in parentheses
* significant at 5%; ** significant at 1%

Table 6: Effect of Parents' Nativity on Children's Grades by Race

marriages that affect child human capital outcomes, but are not necessarily related to the social integration process. Parental ability levels are not the only inputs into child education.

At the most fundamental level, perhaps, lies the classic quantity/quality trade-off in children (Becker 1975). If immigrants that chose to marry natives have a higher relative preference for quantity of children as opposed to quality or alternatively, face a higher relative price for quality of children, they will choose to have more children but of lesser quality (Chiswick 1988). Table 7 shows that cross-nativity parents have fewer children than both-foreign parents, but more children than both-native parents. Interestingly though, for Hispanics, both-foreign parents have the most children while foreign-mother and native-father have the least number of children. Hispanic children with both-native

	Both Native	Foreign Father	Foreign Mother	Both Foreign
ALL				
Income (1988 Dollars)	38827	40337	44752	35794
Siblings	2.25	2.34	2.28	2.54
Homemaker Mother	0.16	0.18	0.21	0.24
Married Parents	0.82	0.78	0.82	0.86
HISPANICS				
Income (1988 Dollars)	29989	26290	32517	24147
Siblings	2.66	2.66	2.59	2.92
Homemaker Mother	0.22	0.22	0.27	0.30
Married Parents	0.82	0.72	0.84	0.86
ASIANS				
Income (1988 Dollars)	46007	43511	38142	66306
Siblings	2.68	2.33	2.10	1.86
Homemaker Mother	0.14	0.20	0.15	0.16
Married Parents	0.88	0.79	0.78	0.96

Table 7: Household Characteristics by Marriage Type and Race

born parents have just as many sibblings as children with a foreign-born father and a native-born mother. For Asians, both-foreign parents have the least number of children while both-native born parents have the highest number of children. Mixed parents fall somewhere in between with foreign-born mothers having fewer children on average.

Another input into the child quality production function often cited in the literature is time parents spend with their children (Datcher-Loury 1988). Although fathers typically work full time, there is quite a bit of variation in the amount of time mothers work outside of the home. There is some evidence that "stay at home" mothers do in fact have higher achieving children. If foreign born mothers married to foreign born fathers are more likely to work in the household, then the coefficient on the interaction could simply be capturing this

effect as opposed to social integration.[6] Table 7 shows that it is true that mothers in foreign born-foreign born relationships are more likely to be stay at home mothers.

There is also quite a large literature on the effect of marital stability and presence of a father in the household on educational outcomes of children (Pong 1997). It has also been found that interethnic marriages are more likely to end in divorce (Kalmijn, de Graaf and Janssen 2005). Table 7 shows that indeed cross-nativity parents are less likely to be married than foreign born same-nativity parents, but how they compare to native born same-nativity parents depends on which parent is foreign born. Foreign born father-native born mother relationships are more likely to end in divorce than any other category while foreign born mother-native born father relationshipes are just as likely to end in divorce as same-nativity native relationships.[7]

Table 8 shows regression results of equation 1, but with additional controls for the variables described above. In column 2, number of siblings is added to the specification. As expected, the coefficient on siblings is negative, but the coefficient on the interaction remains significant while the signs of the coefficients on foreign born parents do not change. This suggests that family size is not the avenue through which cross-marriage affects children's grades. The same patterns are seen when the other variables, i.e. homemaker mother, mar-

[6] There is also evidence that working mothers with a consistent schedules have positive effects on children's outcomes.

[7] Admittedly, whether or not the parents of the child are divorced is an extreme measure of marital stability. Frequent fights or even the threat of divorce are also associated with negative consequences for children. Although it is possible that same nativity parents have more friction in the household despite the fact that they do not divorce, I suspect that it is more likely that marital instability is positively correlated with divorce.

8th Grader's Grades	1	2	3	4	5
Foreign Mother	0.053	0.057	0.050	0.046	0.050
	(1.42)	(1.53)	(1.35)	(1.23)	(1.34)
Foreign Father	-0.056	-0.056	-0.059	-0.056	-0.059
	(-1.47)	(-1.47)	(-1.56)	(-1.47)	(-1.53)
Foreign MotherX	0.150	0.149	0.150	0.145	0.145
Foreign Father	(2.80)**	(2.77)**	(2.80)**	(2.65)**	(2.63)**
Mother's Schooling	0.017	0.016	0.018	0.020	0.021
	(5.67)**	(5.30)**	(6.00)**	(6.53)**	(6.67)**
Father's Schooling	0.031	0.032	0.029	0.029	0.030
	(11.82)**	(11.88)**	(11.08)**	(10.90)**	(10.88)**
SES	0.216	0.207	0.211	0.194	0.192
	(17.72)**	(16.93)**	(17.44)**	(15.68)**	(15.32)**
# Siblings		-0.026	-0.029	-0.030	-0.030
		(-7.04)**	(-7.90)**	(-8.06)**	(-7.94)**
Homemaker Mother			0.140	0.126	0.125
			(9.00)**	(8.03)**	(7.99)**
Married Parents				0.112	0.109
				(7.01)**	(6.81)**
Grandparent in HH					-0.061
					(-2.43)*
Constant	2.277	2.348	2.332	2.221	2.220
	(48.18)**	(47.98)**	(47.86)**	(43.97)**	(43.37)**
Observations	19972	19855	19855	19561	19404
R-squared	0.12	0.12	0.13	0.13	0.13

Absolute value of t-statistics in parentheses
+ significant at 10%; * significant at 5%; ** significant at 1%

Table 8: Effect of Parents' Nativity on Children's Grades with Controls for Household Characteristics

ried parents, and grandparent in the household, are added to the specification. Because the coefficient on the interaction remains significant, it is certainly plausible that the coefficient on the interaction is capturing network effects as opposed to household level effects. In the next section, the relative merits of different networks for different types of people are studied.

4 Immigrant Type, Ethnic Network Quality and Intermarriage Consequences

Since I cannot control for all possible household characteristics surrounding cross-nativity marriages, it is not clear that the relationship between cross-nativity marriages and educational outcomes of children imply that human capital levels of children are affected by the ethnic environment in which they are raised. However, by testing traditional hypotheses related to the benefits of ethnic networks to different groups of people, we can arrive at further evidence linking the benefits of same-nativity marriages to the benefits of ethnic networks.

There is no reason to believe that connection to an ethnic network has the same effect for all immigrants. If same nativity marriages are both a result and a cause of strong network connections, the relationship between intermarriage and children's academic success should depend on how much immigrants stand to gain from their networks. This may be determined by the size of the network, the quality of the network, the immigrant's skill level, and the interaction of the immigrant's skill level with the quality of the network.

Studies have shown that attachment to an ethnic network is more useful when the network is larger (Gang and Zimmerman 2000). Larger networks allow for more connections, and thus more information can be shared. Also, if children of immigrants form their aspirations based on the most successful members of their ethnic group, leaving average education in the network constant, larger

groups are more likely to have the most successful members. If, as claimed in the previous section, the reason children with two foreign born parents do so well in school is related to their connection with ethnic networks, then we may expect that given a child has a foreign born father, having a foreign born mother will have a greater positive effect if the child is in a larger network.

In order to test this hypothesis, I restrict the sample to children of foreign born males. The following specification is run separately on all native born Asian and Hispanic eighth graders with a foreign born father:

$$\begin{aligned} GRADES_{ik} &= \gamma_o + \gamma FBMOM_{ik} + \gamma_2 FBMOM_{ik} * SIZE_k + \\ & \gamma_3 SIZE_k + \gamma_4 X_{ik} + \upsilon_{ik} \end{aligned}$$

where $SIZE_k$ refers to the percent of students in race $k = \{Hispanic, Asian\}$ in the child's eighth grade class. Average education in the groups are implicitly accounted for since the regressions are run separately on Hispanics and Asians.

Table 9 shows the estimated coefficients. Although the interaction is not significant for Hispanics, regression results suggest that for children with a foreign born father having a foreign born mother is more beneficial if there are many Asians in their 8th grade class and presumably in their community. Even if there are no Asians in a child's eighth grade class, having a foreign born mother is associated with a .236 increase in an Asian child's grades. However, the effect of the foreign mother increases by .01 for every percentage point increase in Asians in the class.

8th Grader's Grades	Hispanics		Asians	
Mother's Schooling	0.021	0.025	0.011	0.012
	(1.12)	(1.30)	(0.75)	(0.79)
Father's Schooling	0.020	0.025	0.009	0.011
	(1.23)	(1.51)	(0.61)	(0.72)
SES	0.059	0.078	0.210	0.204
	(0.86)	(1.18)	(3.32)**	(3.00)**
# Siblings	-0.028	-0.023	-0.102	-0.117
	(-1.64)	(-1.32)	(-2.48)*	(-2.76)**
Parents Married	0.083	0.074	0.211	0.231
	(1.06)	(1.01)	(1.05)	(1.14)
Homemaker Mother	0.232	0.222	-0.048	-0.048
	(3.62)**	(3.60)**	(-0.47)	(-0.46)
Grandparent in HH	-0.194	-0.173	-0.103	-0.098
	(-1.92)+	(-1.65)+	(-0.82)	(-0.74)
Foreign Mother	0.087	0.135	0.378	0.236
	(1.29)	(1.24)	(2.62)**	(1.55)
Foreign Mother X		-0.002		
% Hispanic 8th Graders		(-0.83)		
% Hispanic 8th Graders		0.003		
		(1.60)		
Foreign Mother X				0.012
% Asian 8th Graders				(3.06)**
% Asian 8th Graders				-0.013
				(-4.83)**
Constant	2.234	1.979	2.646	2.766
	(6.26)**	(5.30)**	(7.34)**	(7.46)**
Observations	825	773	349	326
R-squared	0.05	0.06	0.26	0.28

Absolute value of t-statistics in parentheses
+ significant at 10%; * significant at 5%; ** significant at 1%

Table 9: Importance of Ethnic Group Size in Value of Foreign Born Spouse for Children's Grades

There is a large literature on the importance of the quality of networks in, among other things, job search and the determination of educational aspirations. In a series of papers, Borjas (1992, 1993, 1995) explains the slow rates of assimilation with a story involving "ethnic spillovers": the human capital of children is shaped by the human capital of their parents along with the human capital of others in their social circle. Since children of immigrants are more likely to come in contact with people in their ethnicity, their educational aspirations and ideals will coincide with the accomplishments of their co-ethnics. Because the average education in people's ethnicity enters the child human capital production function, people's educational choices have an externality on those within their ethnicity. This in turn can decrease the rate of convergence of immigrant human capital levels to mainstream native levels. For immigrants in low education ethnicities, ethnic spillovers will impede increases in human capital levels. For those in high education ethnicities, ethnic spillovers will impede decreases. Thus, if marriage to an immigrant enforces connections within the network, then the quality of the network has very important implications for intermarriage's effect on children.

Leaving the quality of the ethnic network constant, human capital levels of immigrants may have important implications regarding the network's usefulness. Because the quality of a network can be measured by its average human capital, members with above average human capital levels are net contributors while those with below average levels are net benefactors (Munshi 2003). Thus, those with low levels of human capital should benefit more from same nativity

marriages than those with high levels.

It is also conceivable that the usefulness of the network depends on the interaction between human capital and the average human capital in the ethnic network. For example, one very important function of ethnic networks is the dissemination of job opportunity information (Munshi 2003). Since people know more about job opportunities within their occupation, one can imagine that an ethnic network composed predominantly of low skilled workers would be most useful for those immigrants with low levels of education. The converse would be true for networks composed mainly of high skilled workers.

Although it is not as clear, a similar process could operate in child human capital acquisition. For example, the support most useful for inspiring someone to complete high school may be very different from what is required for admittance into the best colleges. Thus, a second-generation immigrant with very high aspirations may gain very little from a low education network. On the other hand, a hypothetical network composed predominantly of Ph.D.'s may not provide the necessary support for someone considering dropping out of high school. Again, even in terms of children's grades, this implies that marrying an immigrant may be most useful for a highly educated immigrant in a high education ethnic group while it would be most useful for a low educated immigrant in a low education ethnic group.

Because the theories rely so heavily on the quality of the immigrants' networks, some measure of ethnic network quality must be used. Although the NELS:88 does not ask for parents' country of birth, it does have information on

the child's race. If the child answers "Hispanic" or "Asian," he or she is then asked for further classification. Asians can get as specific as Japanese, Chinese, and Southeast Asian while Hispanics can choose among Mexican, Cuban, and Puerto Rican. In all, there are 17 different ethnic classifications. This question is not asked of all fathers.[8] However, as shown in Table 3.1, if both parents are foreign born then the mother is most likely to be from the same country as the father and so the child's ethnicity should correspond to both. Also, to the extent that the child is most likely to identify with the ethnic background of the foreign born parent, if the mother is native born, he is most likely to identify with the ethnicity of the foreign born father. Thus, the quality of the network is measured by average levels of education of males in the child's ethnicity.

The following empirical specification run only on the children of foreign born males is used to test the theories described above.

$$\begin{aligned} GRADES_{ij} &= \delta_o + \delta FBMOM_{ij} + \delta_2 FBMOM_{ij} * \overline{EDU_j} + \\ &\quad \delta_3 \overline{EDU}_j + \delta_4 X_{ij} + \epsilon_{ij} \end{aligned}$$

where $GRADES_{ij}$ refers to the grades of child i in ethnicity j and $\overline{EDU_j}$ is the average level of education in ethnicity j. Because the schooling levels of both parents and variables related to household structure are included in the specification, it is reasonable to believe that the coefficient on nativity of the wife is capturing network effects as opposed to within household characteristics.

[8] It is asked of the parent who fills out the parent survey, but in very few cases is this the father.

8th Grader's Grades	1	2	3
Mother's Schooling	0.020	0.017	0.018
	(1.82)+	(1.62)	(1.63)
Father's Schooling	0.024	0.021	0.024
	(2.33)*	(2.08)*	(1.70)+
SES	0.159	0.113	0.113
	(3.88)**	(2.77)**	(2.75)**
# Siblings	-0.035	-0.029	-0.029
	(-2.63)**	(-2.21)*	(-2.21)*
Parents Married	0.131	0.132	0.132
	(2.42)*	(2.50)*	(2.50)*
Homemaker Mother	0.166	0.163	0.163
	(3.19)**	(3.16)**	(3.17)**
Grandparent in HH	-0.122	-0.150	-0.150
	(-1.82)+	(-2.20)*	(-2.19)*
Foreign Mother	0.181	-0.816	-0.834
	(4.32)**	(-1.52)	(-1.53)
Foreign Mother X Avg Schooling		0.076	0.083
		(1.85)+	(1.79)+
Avg Schooling		0.015	0.010
		(0.37)	(0.25)
Foreign Mother X Father's Schooling			-0.005
			(-0.37)
Constant	2.236	2.104	2.115
	(11.10)**	(4.01)**	(4.02)**
Observations	1731	1731	1731
R-squared	0.14	0.15	0.15

Absolute value of t-statistics in parentheses
+ significant at 10%; * significant at 5%; ** significant at 1%

Table 10: Tests of Value of Attachment to Ethnic Network for Children's Grades

Column 1 in Table 10 presents the least squares estimates of the coefficients of a model which includes parental schooling levels, household characteristics, and a dummy variable for whether or not the mother is foreign born. Consistent with the findings in Section 2, a foreign born mother has a positive effect on the grades of children with a foreign born father. If marriage to a native is related to a lack of social cohesion within one's ethnic network, the negative coefficient is consistent with the hypothesis that second-generation children gain from the support of their ethnic network, at least when compared to the support from the native "network" acquired from the women most likely to marry foreign born males.[9]

Column 2 adds average ethnic group years of schooling and the interaction between this variable and whether the mother is native born to the specification, thus providing a more nuanced view of the ethnic network hypothesis. The negative coefficient on the mother's nativity variable paired with the positive coefficient on the interaction suggests that marriage to an immigrant is better for immigrants in higher education ethnicities. For immigrants in ethnicities with low enough average levels of education, marriage to an immigrant could lead to negative effects on children's grades. The magnitudes of the coefficients suggest that for immigrant males in ethnicities with average years of schooling less than 10.9, marriage to a native has a positive effect on children's grades. For those in ethnicities with more than an average of 10.9 years of schooling, marriage to a native has negative consequences for children's grades. Although

[9] A careful analysis of the self-selection process of native born women most likely to marry foreign born males is certainly warranted, but beyond the scope of this paper.

no ethnic group has low enough schooling levels to imply a positive effect of marriage to a native, the coefficients indicate large differences in the magnitude of the negative effect depending on ethnicity. For Mexicans, a native born mother decreases the grades of children with a foreign born father by only 0.06 points while for South Asians, a native born mother decreases a child's grades by 0.50 points. This is almost a ten fold difference.

In order to test the hypothesis that individual human capital levels influence how much immigrants stand to gain from being connected to their ethnic network, the interaction between the nativity of his wife and his own schooling level is added to the model in column 3. The negative coefficient suggests that consistent with the discussion above, an increase in education makes the network less useful. The coefficient, however, is not statistically different from zero.

A possible explanation for why the coefficient on the interaction between education and the wife's nativity is not significantly different from zero is that the effect of education has opposite effects depending on the person's ethnicity. Specifically, immigrants with low education may benefit more from being in a low education ethnic group while immigrants with high education may benefit more being in a high education ethnic group. In terms of children's grades, the idea is that if the father is in a low education ethnic group, children with highly educated fathers would get higher grades from having a native born mother, but if the father is in a high education group, the child would be better off with a foreign born mother.

To test for this, specification 2 is run separately for Hispanics, a group that typically has low levels of education, and Asians, a group that typically has high levels of education. Results are shown in Table 11. Although the coefficient on the education interaction is greater for Asians than Hispanics as predicted, it is not positive. Again, neither of the coefficients are statistically different from zero.

This suggests that there is not much merit to the hypothesis that the interaction of father's education and marriage to a native directly affects children's grades, regardless of the foreigner's ethnicity. However, connections within an ethnic network may be very important for finding jobs and thus for income which in turn is known to have positive consequences on child's grades. In columns 3 and 6 of Table 11, coefficients are shown for a model where socioeconomic status (which is formed using both income and occupation) is omitted. As predicted by the theory, in this model, the coefficient on the interaction is negative for Hispanics and positive for Asians. This suggests that, in fact, participation in an ethnic network is better for the lowly educated in low education ethnicities and for the highly educated in high education ethnicities. The effect on child's grades does exist; it just works through income. Perhaps because of small sample size, however, the coefficients are not significant.

5 Conclusion

This paper attempts to shed some light on the value of ethnic networks by examining the role of intermarriage in determining children's grades. It was

8th Grade Grades	1	2	3	4	5	6
		Hispanics			Asians	
Mother's Schooling	0.021	0.021	0.026	0.011	0.011	0.023
	(1.12)	(1.11)	(1.57)	(0.75)	(0.75)	(1.73)
Father's Schooling	0.020	0.033	0.041	0.009	0.011	0.024
	(1.23)	(1.47)	(1.94)	(0.61)	(0.19)	(0.41)
SES	0.059	0.057		0.210	0.21	
	(0.86)	(0.84)		(3.32)**	(3.41)**	
# Siblings	-0.028	-0.028	-0.032	-0.102	-0.102	-0.109
	(-1.64)	(-1.65)	(-1.75)	(-2.48)*	(-2.47)*	(-2.69)**
Parents Married	0.083	0.082	0.099	0.211	0.21	0.295
	(1.06)	(1.05)	(1.30)	(1.05)	(1.13)	(1.59)
Homemaker Mother	0.232	0.232	0.219	-0.048	-0.048	-0.041
	(3.62)**	(3.62)**	(3.39)**	(-0.47)	(-0.47)	(-0.41)
Grandparent in HH	-0.194	-0.192	-0.204	-0.103	-0.103	-0.111
	(-1.92)	(-1.90)	(-2.02)*	(-0.82)	(-0.82)	(-0.86)
Foreign Mother	0.087	0.292	0.303	0.378	0.407	0.236
	(1.29)	(0.99)	(1.01)	(2.62)**	(0.47)	(0.25)
Foreign Mother X		-0.018	-0.019		-0.002	0.009
Father's Schooling		(-0.72)	(-0.78)		(-0.04)	(0.15)
Constant	2.234	2.079	1.901	2.646	2.62	2.3
	(6.26)**	(4.78)**	(5.44)**	(7.34)**	(2.68)**	(2.30)*
Observations	825	825	825	349	349	349
R-squared	0.05	0.05	0.05	0.26	0.26	0.23

Absolute value of t-statistics in parentheses
* significant at 5%; ** significant at 1%

Table 11: Tests of Value of Ethnic Networks for Hispanics and Asians Separately

shown that, when controlling for education levels of parents, children with native born mothers and foreign born fathers have lower levels of human capital than both children with two native born parents and children with two foreign born parents. This relationship remains even after controlling for household characteristics such as whether or not the parents are married, the number of siblings the child has, household socioeconomic status, and whether a grandparent lives in the household. This suggests that the effect of a foreign born mother is not coming from characteristics of the mother or the household, and therefore may be interpreted as the effect of the ethnic network connections.

Consistent with the literature on networks, this paper shows that immigrant males gain more from higher quality networks. Specifically, the higher the average education in the immigrant male's ethnic group, the worse it is in terms of second generation children's grades to have a native born mother.

Also consistent with theory, there is evidence that immigrant males with lower levels of human capital have more to gain from connection to their ethnic network (compared to those with higher levels of education). The data suggests that marriage to a foreign born wife is better in terms of child grades for males with lower levels of education, leaving constant average education in his group. However, the relevant coefficient is not statistically significant.

Lastly, I test the hypothesis that low education ethnic networks are relatively more useful for low educated immigrants and high education ethnic networks are relatively more useful for high education immigrants. In terms of child grades, I find no direct evidence of this phenomenon. However, there is some evidence

of this effect on income which in turn affects children's grades.

The analysis in this paper is very preliminary. Although I have tried to control for household characteristics as much as possible, I cannot rule out that there is some other characteristic specific to the immigrants who choose to marry natives (or the natives that choose to marry immigrants) that influences children's grades. A careful analysis of this self-selection process is needed in order to make more definitive statements about ethnic networks. It is possible that once this selection is taken into account, grades of children with mixed nativity parents are identical to grades of children with same nativity parents suggesting a zero effect of ethnic networks.

Also, one of the interesting findings in this paper is the differential effects of mixed nativity parents depending on which parent is foreign born. Specifically, I find that while children with a native born mother and foreign born father have lower levels of human capital than children with same nativity parents (either both foreign or both native born), children with a foreign born mother and a native born father have higher levels of human capital than children with same nativity parents. Although part of this effect disappears when looking at specific ethnicities, I can only speculate that the abundance of military wives accounts for part of the remaining differentials. Further research on this topic is certainly warranted, but is beyond the scope of this paper.

References

Angrist, Joshua. "How do Sex Ratios Affect Marriage Markets and Labor Markets? Evidence from America's Second Generation." *Quarterly Journal of Economics*. Vol. 117, Issue 3, (2002), 997-1038.

Battu, H., Mwale, M. and Y. Zenou. "Do Oppositional Identities Reduce Employment for Ethnic Minorities." IZA Discussion Paper, No. 721.

Becker, Gary. "A Theory of Marriage: Part 1." *Journal of Political Economy.* Vol. 81, Issue 4, (1973), 813-46.

Becker, Gary. *A Treatise on the Family*. Harvard University Press. Cambridge, MA (1981).

Bergstrom, Theodore. "A Survey of Theories of the Family," in *Handbook of Population Economics*, ed. Mark Rosenzweig and Oded Stark. New York: North Holland (1997), 21-74.

Bisin, Alberto and Thierry Verdier. "'Beyond The Melting Pot': Cultural Transmission, Marriage, and the Evolution of Ethnic and Religious Traits." *Quarterly Journal of Economics*. Vol. 115, Issue 3, (2000), 955-988.

Bisin, Alberto, Giorgio Topa and Thierry Verdier. "An Empirical Analysis of Religious Homogamy and Socialization in the U.S." *Journal of Political Economy*, Vol. 112, Issue 3, (2004), 615-64.

Borjas, George J. "Ethnic Capital and Intergenerational Mobility." *The Quarterly Journal of Economics*. Vol 107, Issue 1, (1992), 123-150.

Borjas, George J. "The Intergenerational Mobility of Immigrants." *Journal of Labor Economics.* Vol 11, Issue 1, (1993), 113-135.

Borjas, George J. "Ethnicity, Neighborhoods, and Human Capital Externalities." *American Economic Review*, Vol 85, Issue 3, (1995), 365-390.

Borjas, George J. "To Ghetto or Not to Ghetto: Ethnicity and Residential Segregation." *Journal of Urban Economics*, Vol 44, (1998), 228-253.

Card, David, John DiNardo, and Eugena Estes. "'The More Things Change: - and the Children of Immigrants in the 1940s, the 1970s, and the 1990s." *Issues in the Economics of Immigration*, National Bureau of Economic Research Conference Report, (1999).

Chiswick, Barry. "Sons of Immigrants: Are They at an Earnings Disadvantage?" *American Economic Review*, (1977), 376-380.

Chiswick, Barry. "The Effect of Americanization on the Earnings of Foreign-Born Men." *Journal of Political Economy.* Vol 86, Issue 5, (1978), 897-922.

Chiswick, Barry and Noyna DebBurman. "Educational Attainment: Analysis by Immigrant Generation." *Economics of Education Review*, Vol. 23, Issue 4, (2004), 361-379.

Cohen, Steven Martin. "Socioeconomic Determinants of Intraethnic Marriage and Friendship." *Social Forces*. Vol 55, Issue 4, (1977), 997-1010.

Datcher-Loury, Linda. "Effects of Mother's Home Time on Children's Schooling." *The Review of Economics and Statistics*. Vol. 70, Issue 3, (1988), 367-373.

Davis, Kingsley and Pietronella van den Oever. "Demographic Foundations of New Sex Roles." *Population Development Review*. Vol. 8, (1982), 309-340.

Djajic, Slobodan. "Assimilation of Immigrants: Implications for Human Capital Accumulation of the Second Generation." *Journal of Population Economics*. Vol.16, (2003), 831-845.

Edin, Per-Anders; Fredriksson, Peter; Aslund, Olof. "Ethnic Enclaves and the Economic Success of Immigrants–Evidence from a Natural Experiment." *Quarterly Journal of Economics.* Vol.118, Issue 1 (2003), 329-57.

"The Foreign Born Population in the United States: 2003." Current Population Reports. Population Characteristics. Series P20-551, (2004).

Furtado, Delia. "Human Capital and Interethnic Marriage Decisions." Unpublished Manuscript, (2004).

Gang, Ira and Klaus Zimmerman. "Is Child like Parent? Educational Attainment and Ethnic Origin." *Journal of Human Resources*, 35 (2000), 550-569

Gordon, Milton. *Human Nature, Class, and Ethnicity*. New York: Oxford University Press. (1964).

Hyman, Herbert H. and Charles R. Wright. *Education's Lasting Influence on Values*. Chicago: University of Chicago Press (1979).

Jasso, Guilermina and Mark Rosenzweig. *The New Chosen People : Immigrants in the United States*. New York : Russell Sage Foundation. (1990).

Jasso, Guilermina, Douglas Massey, Mark Rosenzweig, and James Smith. "Assortative Mating Among Married New Legal Immigrants to the United States: Evidence From the New Immigrant Survey Pilot, " *International Migration Review*. Vol 34, Issue 2, (2000), 443-459.

Kalmijn, Matthijs. "Shifting boundaries: Trends in Religious and Educational Homogamy." *American Sociological Review*, Vol. 56, (1991), 786-800.

Kalmijn, Matthijs. "Spouse Selection among Children of European Immigrants: A Comparison of Marriage Cohorts in the 1960 Census." *International Migration Review.* Vol 27, Issue 1, (1993), 51-78.

Kalmijn, Matthijs, Paul M. de Graaf and Jacques P. G. Janssen. "Intermarriage and the Risk of Divorce in the Netherlands: The Effects of Differences in Religion and in Nationality." *Population Studies.* Vol. 59, Issue 1, (2005), 71-85.

Kane, Thomas J.. "Basing College Admission on High School Class Rank." Working Paper, June 2000.

Kantarevic, Jasmin. "Interethnic Marriages and Economic Assimilation of Immigrants." IZA Discussion Paper, No. 1142.

Kohn, Melvin L. *Class and Conformity.* Chicago: University of Chicago Press, (1977).

Kao, G. and Tienda, Marta. "Optimism and Achievement: The Educational Performance of Immigrant Youth. *Social Science Quarterly.* Vol. 76, (1995), 1-19.

Lichter, Daniel T. and Zhenchao Qian. "Measuring Marital Assimilation: Intermarriage Among Natives and Immigrants." *Social Science Research* Vol. 30, (2001), 289-312.

Lieberson Stanley and Mary Waters. *From Many Strands: Ethnic and Racial Groups in Contemporary America.* Population of the United States in the 1980s, a Census Monograph Series. New York: Russell Sage Foundation, (1988).

Meng, Xin and Robert G. Gregory. "Intermarriage and the Economic Assimilation of Immigrants." *Journal of Labor Economics.* Vol. 23, Issue 1, (2005), 135-75.

Munshi, Kaivan. "Networks in the Modern Economy: Mexican Migrants in the U.S. Labor Market." *Quarterly Journal of Economics*, Vol 118, Issue 2, (2003), 549-597.

Pong, Suet-Ling. "Family Structure, School Context, and Eighth-Grade Math and Reading Achievement." *Journal of Marriage and the Family.* Vol. 59, Issue 3, (1997), 734-746.

Portes, Alejandro and Min Zhou. "The New Second Generation: Segmented Assimilation and its Variants Among Post-1965 Immigrant Youth." *Anals of the American Academy of Political and Social Sciences*, Vol. 530, (1993), 74-96.

Ramakrishnan, S. Karthick. "Second-Generation Immigrants? The '2.5 Generation' in the United States." *Social Science Quarterly,* Vol 85, Issue 2, (2004), 380-399.

Robinson, John P. *How Americans Use Their Time*. New York: Praeger (1977).

Ruggles, Steven and Matthew Sobek et al. Integrated Public Use Microdata Series: Version 3.0 Minneapolis: Historical Census Projects, University of Minnesota, 2003.

Smith, James P. "Assimilation across the Latino Generations." *American Economic Review*. Vol 93, Issue 2, (2003), 315-319.

Stevens, Gillian and Gray Swicegood. "The Linguistic Context of Ethnic Endogamy." *American Sociological Review*. Vol 52, Issue 1, (1987), 73-82.

Wong, Linda. "Why Do Only 5.5% of Black Men Marry White Women?" *International Economic Review*. Vol 44, Issue 3, (2003), 803-806.