Assimilation by the third generation? Marital choices of white ethnics at the dawn of the twentieth century

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A R T I C L E   I N F O

A B S T R A C T

It is well known that marital ethnic endogamy declines by immigrant generation, but there is little information on how many generations are required for full marital assimilation. This study for 1880–1910 includes information on the birthplace of men's grandparents, so we can compare the first, second, third, and later generations. We estimate the odds of marrying a native white woman with native-born parents (NWNP) for Irish, Germans, British, and men of other ethnicities. Most groups even in their third generation still show a significantly lower rate of marital assimilation than native stock men. But mixed ancestry (having at least one NWNP parent or grandparent) can result in nearly complete marital assimilation by the third generation.

1. Introduction

A key hypothesis about immigrant assimilation is that there will be large differences in behavior across generations. It is expected that the second generation will be more likely to live outside ethnic enclaves (Massey, 1985), to participate in elections (Skerry, 2004), to speak English well (Portes and Hao, 1998), and (the subject of this study) to marry outside their ethnic group (Pagnini and Morgan, 1990; Kalmijn, 1998). Most research compares first and second generation ethnics with "natives" who are defined as persons in the third and later (3+) generation. Implicitly, because it is used as the standard for comparison, the 3+ generation is treated as fully assimilated. However, we have little empirical basis for this assumption. Perhaps the third generation is not quite native, and processes of assimilation continue into the fourth and later generations. For example, one analysis of a unique survey conducted among native whites in the Capital Region of New York State (Alba, 1990) found that generational status has a major impact on the probability of indentifying oneself ethnically, but although selection of ethnic labels dramatically reduces from the second to the third generation, the process of diminishing ethnic identity continues into the next generation. Regarding intermarriage, Lieberson and Waters (1988, p. 219) speculate that generational differences are greater between the first and third generations and diminish in later generations: "at some point – unknown at present because we generally do not have such detailed data – generational effects would decline to the point where they are essentially nil."

The main obstacle to a stronger conclusion on this question, as Lieberson and Waters emphasize, is lack of data. Standard national sources in the United States (the decennial census through 1970 and the Current Population Survey today) provide birth place for household members and their non-coresident parents, distinguishing immigrants from the children of immigrants. Studies of children, however, can take advantage of information about their parents' parents. An exemplar of such

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research is a study of children's language use (Alba et al., 2002) using 1990 census microdata. This analysis of speaking only English at home among Chinese, Korean, Cuban, Dominican, and Mexican children (identified through the census race and Hispanic origin questions) showed a strong shift between the second generation (who by definition have at least one foreign-born parent) and the third generation (both parents born in the US). On this dimension assimilation is virtually complete by the third generation for Asians, quite high for Cubans (78.4%), and above half for Dominicans (51.5%) and Mexicans (64.1%). Using data from the 1989 Current Population Survey, which includes data on grandparents, the same study also shows that speaking only English at home rises from 54.2% of third generation Mexican children to 61.2% in the fourth (or later) generation. Hence linguistic assimilation for this group is rapid between the first and second generation, but slower in the third generation, and it remains incomplete beyond that point. The persistence of Spanish language use into the fourth generation is understood to reflect the importance of Spanish in Latino neighborhoods and workplaces, supported by strong Spanish-language media in some parts of the US.

It is not known whether the pace or extent of marital assimilation is similarly patterned across generations. For the study of intermarriage, there are few potential sources for comparisons that go beyond the second generation. An exceptional case is yet another study by Alba, 1976; see also Abramson, 1973) based on a survey of Catholic Americans that included information on the birthplace of grandparents. Among groups for which Alba reported an intermarriage rate for all four generations, there is a pattern of increasing intermarriage across generations for the Irish and French, but a slight decline between the third and the 4+ generation. The maximum rate in the third generation was 79.1% for Irish and 58.8% for French. Among Germans there is no clear trend. Rates of intermarriage were 55.6% in the first generation, 77.4% in the second, 59.5% in the third, and 75.0% in the 4+ generation.

We turn to historical data in order to examine intermarriage across generations for a national sample of men. This places our work in a very different time period and with a different set of immigrant groups than now, and it should not be assumed that the same patterns would be found today as in the late 19th Century. Yet we are asking the same fundamental question that continues unanswered today. Studying immigrants in a period over 130 years ago strengthens the baseline against which contemporary patterns can be evaluated (Perlmann, 2005; Foner, 2000). It also extends our understanding of the history of European immigration, which was formative for contemporary white European ethnicity. Our source is linked census data for men in 1880 and 1910 where information about parents and grandparents is available in the person's 1880 record and choice of marital partner is in the 1910 record. Utilizing this unique dataset allows us to identify people in the first through third generations and compare their behavior to that of the fourth generation (see Perlmann, 2010 for a study of German-American intermarriage that uses this same source to identify the fourth generation).

2. Determinants of intermarriage

The central process studied here is the integration of immigrants and their descendants with other new groups and with the established local population at the primary level (Gordon, 1964). We should expect some differences based simply on ethnicity. The three largest immigrant groups in US in 1880 were Irish, Germans, and British, groups that by the mid-20th Century were believed to be fully assimilated. There is considerable support for the view that white ethnicity today is mostly a symbolic identity (Waters, 1990). At the time of our study, several decades after they began arriving in this country in large numbers, their assimilation was not taken for granted. Ethnic differences among whites were understood in racial terms, and there was a recent history of hostility and even violent conflict between groups. Hence there are important parallels with the situation of Latino and Asian immigrant groups in the contemporary period that make the patterns found in the 19th Century useful for interpreting ethnic relations today. Further, because the theoretical traditions in immigration research and ethnic studies are strongly rooted in the experience of the late 19th Century, it is important to have accurate knowledge of that experience.

2.1. Cultural background

Differences in cultural background, including religion (Kennedy, 1944), native language, and other ethnic traits (Kalmijn and Van Tubergen, 2010) suggest that both the Germans and the Irish would have relatively low rates of intermarriage with native whites – the Germans due to linguistic distinctiveness and the Irish due to the predominance of Catholics among them. The British were a longer established ethnic group and more culturally similar to the native white majority although they had also experienced substantial new immigration in this period at that time. It is not surprising that prior research has shown that that the Germans and Irish were more endogamous at the end of the 19th Century than the British (Logan and Shin, forthcoming).

2.2. Immigrant generation

However, we would expect generational differences in every ethnic group. Attention to these differences goes as far back as the 1920s when Draschler (1921) analyzed marriage licenses in New York City between 1908 and 1912. Draschler found that intermarriage increased significantly between the first and the second generation of immigrants. Without using the term "assimilation," he credited the large increase in the proportion of intermarriage in the second generation to the forces

tending to undermine immigrants' community life. Many subsequent studies (Lieberson and Waters, 1988, pp. 210–211; McCaa, 1993; Pagnini and Morgan, 1990; Kalmijn, 1993; Qian, 1997) have replicated Draschler's finding.

2.3. Mixed ancestry

Closely related to generation is the phenomenon of mixed ancestry, which is a component of how ethnicity is measured. For example, persons in the second generation who have both an Irish and a native white parent may be more easily accepted by both groups or they may distance themselves from any single ethnicity. It is standard to treat such persons as second-generation Irish, but it is understood that they are not as "Irish" as those whose parents were both Irish-born. Because they may have a 3+ generation white maternal or paternal grandparent, people in the third generation are more likely to have mixed ancestry, and this factor should contribute to generational shifts. Utilizing the 1979 Current Population Survey, Alba and Golden (1986) confirmed that persons of mixed ancestry had higher rates of intermarriage than those of unmixed ancestry (see also Lieberson and Waters, 1988, pp. 181–186). Following prior usage, we will define ethnic generations in a way that allows us to introduce mixed ancestry as a separate predictor, but we emphasize that there is a natural linkage between these concepts.

2.4. Contextual influence

Other factors can affect marriage choices. The local demographic context is likely to have an important role. Blau's (1977) macrosociological theory of social structure points out that people's intergroup associations of all kinds have an important random component, so that rates of intermarriage, for example, depend heavily on relative group size. The effect of relative group size has been confirmed by studies of Asian intermarriage by Hwang et al. (1997; see also Okamoto, 2007) using data for PUMAs (areas of 100,000 or more persons) and of inter-racial marriage by Harris and Ono (2005) in a study across metropolitan regions. Okamoto (2007) discusses another type of contextual influence, termed structured inequality. This refers to the strength of social boundaries between groups, boundaries that lead people to prefer associations within their own group and that obstruct relations with other groups. Where white ethnics in the community at large are predominantly first generation, for example, there are likely to be stronger barriers to intermarriage with native whites (Kalmijn, 1998).

3. Research design

3.1. Data

This study draws on a unique data source from the late 19th Century, a complete digital transcription of the 1880 census that is available as a result of the collaboration between the Minnesota Population Center (MPC) and the Church of Jesus Christ of Latter-Day Saints (LDS). The MPC has taken advantage of this 100% file to link records with the 5% microdata sample that is available for 1910 using automated techniques. The file used in this analysis is the IPUMS 1880–1910 Linked Male File (Ruggles et al., 2010). The linked file consists of both household and individual records in the two census years including information on location (state, county, and urban/rural status), nativity (foreign-born status of the person and his parents), occupation, and other demographic and family relation variables. This study also aggregates individual records from the 1880 microdata file to the county level in order to create additional variables about the person's community environment prior to marriage.

3.2. Sample restriction

We study white men who were bachelors in 1880 and married in 1910. In order to determine nativity of grandparents, we further restrict the sample to those who had coresiding parents in 1880. The great majority of these persons were children (average age under 12). Therefore with little loss to sample size we further restrict the analysis to persons age 15 and under in 1880. This restriction has the advantage that it specifies unambiguously that the first-generation men in the sample must have immigrated to the US as children. We refer to these as 1.5 generation men. Our final sample after these sample restrictions yields 7724 husbands in 1910. Note that in comparison with many other studies of intermarriage based on cross-sectional data, this sample has important advantages. First, we are assured that marriage did not occur prior to immigration to the United States because our subjects were all enumerated as single men in the US in 1880, most of them as children. Second, our measures of contextual variables are also based on county of residence prior to being married.

Analysis of another IPUMS linked file for 1880–1920 shows that most young men living with parents in 1880 had married by 1910, and of those who had not, the majority were still not married by 1920. We considered extending the analysis to another decade, but found that by this point there was considerable sample attrition because of mortality of some men who were included in the 1880–1910 sample.

3.3. Spouse's ethnicity

The dependent variable in this analysis is the ethnicity of the person's spouse in 1910. To measure ethnicity we can draw on the spouse's race, place of birth and parents' place of birth. Marital outcome is a dichotomy, marriage to a white woman in the 3+ generation vs. all others. In principle any exogamous marriage could be considered assimilation. However most exogamous marriages are with native white wives (see Table 1), and this particular form of intermarriage has special relevance for assimilation because it represents ties with the majority population.

Unfortunately with this data set it is not possible to identify the place of birth of the spouse's grandparents. This means that there is some ambiguity about whether the marriage is truly exogamous. For example, if a significant portion of marriages between a second generation Irish man and a 3+ generation white woman (a woman whose parents were both born in the US) actually involved a wife with an Irish grandparent, there would be uncertainty that we are identifying "intermarriages." We will use the standard term in the literature for 3+ generation wives, NWNP (native white with native parents) as a reminder that we have no further ancestry information for wives. There is no information here on the cultural outlooks or social situation of a couple in which a second or third generation ethnic marries a NWNP wife; the couple could be firmly embedded in the Irish community. What we know for sure is that the wife is at least a third generation American, and we ask which men marry such women in contrast to women in the first and second generation of any ethnicity.

3.4. Husband's ethnicity and generation

We create five broad categories of white ethnicity: native stock, each of the three largest immigrant groups (Irish, German, and British), and all others. Most previous studies using census data have coded ethnicity and generation based on birthplace of the respondent and parents (Sassler, 2005) or mother tongue (Pagnini and Morgan, 1990). By using information on grandparents we push generation a step further. We will use the term "native stock" to refer to US-born persons whose parents and grandparents were all born in the United States (hence 4+ generation white). Coding of the immigrant ethnic groups by generation is more complex. Persons in the third generation are those who have both US-born parents, but one or more foreign-born grandparents. For these persons ethnicity is primarily determined by the maternal grandmother's country of birth. If only the maternal grandmother was US-born (or if her birthplace was not reported), the maternal grandfather's country of birth will be applied. If both maternal grandparents are US-born, ethnic coding depends on the paternal grandparents, using the same logic.

Persons in the second generation are those who were born in the United States but at least one parent was born abroad. For the second generation, the persons' ethnicity is mainly determined by the mother's country of birth, but if the mother was born in the US it is the father's country of birth that is applied. For example, a person with a US-born mother (of any ancestry) and an Irish-born father would be classified as second generation Irish.

Persons in the first generation were born abroad and their ethnicity is based on their country of birth. Note that because the sample is limited to single men age 15 and under and coresiding with parents in 1880, our "first generation" is what researchers usually refer to as "1.5 generation," people who were born abroad but immigrated at a young age. One would expect the 1.5 generation to be have less social distance from the second generation than do persons who immigrated as adults, possibly moderating differences that we could expect to find in martial outcomes.

3.5. Mixed ancestry

Our definition of groups by ethnicity and generation leaves open the possibility of mixed ancestries. Given our outcome variable (marriage to a NWNP white woman), the relevant question is whether the man has any 3+ generation parent in addition to the foreign-born parent or grandparent who determined his ethnic coding. We code such men as mixed ancestry, where "mixed" refers specifically to a mixture including native stock. For example, a man with a US-born mother and an Irish maternal grandmother (a 2nd generation Irish mother) and a US-born father whose parents were both born in the US (a 3+ generation father) would be categorized as Irish third generation, mixed ancestry. While it would be possible for the effect of mixed ancestry to vary across ethnic groups, we found (in analyses not presented here) that there are no significant interaction effects between ethnicity and mixed ancestry.

3.6. Age at marriage

We also include age at marriage (based on age and number of years married as reported in 1910). Because our sample is limited to the sons in the 1880 households who married during the next 30 years, variation in age is limited. Of men who otherwise meet the criteria for our sample, 53% were married by 1900, and another 31% married by 1910. If there were a trend toward greater acceptance of intermarriage in this period, as suggested by trends in rates of intermarriage (Logan and Shin, forthcoming) we might expect that those who married at a later age would be more likely to intermarry.

3.7. Occupation

Occupation has been a standard measure of socioeconomic status and it is an important predictor of marital choice as well. IPUMS also provides information on literacy and school attendance in the 1880 file, but only for a small proportion

of the sample. We experimented with several alternative ways to code occupation including an interval scale of occupational standing (SEI). Our final choice reflects that fact that most Americans in 1900 lived in rural areas, and about half of our sampled men were working on farms at the time. SEI is a more meaningful measure of socioeconomic status in urban areas, but among farmers a stronger distinction is between farm owners and farm laborers. Therefore we group occupations into three categories utilizing the 1950 occupational classification system provided by the IPUMS, (1) farm owners; (2) farm laborers; and (3) non-farming occupations. Hence to some extent the occupation variable also indicates whether the person lived in an urban or rural area. We found that further distinctions among non-farming occupations did not yield significant results in this relatively small sample. We also experimented with adding the rural–urban designation or rural–urban migration as an additional predictor, but determined that these provided little extra information.

3.8. Contextual variables

Three contextual variables are aggregated from microdata in 1880 to the county level: the proportion of 3+ generation whites, proportion foreign-born, and population size (logged). Although urban counties tended to be larger than rural ones, there was considerable population size variation in each. The place of residence in 1900 is also introduced by adding dummy variables for US regions (Northeast, Midwest, West and South) to tap unmeasured regional differences that may affect the marital assimilation process.

4. Findings

4.1. Descriptive findings

Marital outcomes of husbands by their ethnicity and generation are provided in Table 1. The marriage contingency table is broken down by each ethnic group and generation here. The uneven distribution of ethnicity and generation is noticeable in Table 1. The Irish are greatly under-sampled in the linked dataset, probably because people with common names were excluded in the linkage process. The Minnesota Population Center reports that persons of less common names were 30 times

Table 1
Marital outcome by ethnicity and generation.

Husband		Wife					
		3+ Generation	Irish	German	British	Others	Total
1.5 Generation	Irish	3	4	0	0	0	7
		42.9%	57.1%	0.0%	0.0%	0.0%	100%
	German	6	3	33	2	1	45
		13.3%	6.7%	73.3%	4.4%	2.2%	100%
	British	25	3	6	9	6	49
		51.0%	6.1%	12.2%	18.4%	12.2%	100%
	Other	22	4	6	10	54	96
		22.9%	4.2%	6.3%	10.4%	56.3%	100%
	Total	56	14	45	21	61	197
		28.4%	7.1%	22.8%	10.7%	31.0%	100%
2nd Generation	Irish	70	97	22	14	22	225
		31.1%	43.1%	9.8%	6.2%	9.8%	100%
	German	206	28	382	20	33	669
		30.8%	4.2%	57.1%	3.0%	4.9%	100%
	British	184	18	29	68	30	329
		55.9%	5.5%	8.8%	20.7%	9.1%	100%
	Other	231	34	96	28	154	543
		42.5%	6.3%	17.7%	5.2%	28.4%	100%
	Total	691	177	529	130	239	1766
		39.1%	10.0%	30.0%	7.4%	13.5%	100%
3rd Generation	Irish	109	13	8	11	8	149
		73.2%	8.7%	5.4%	7.4%	5.4%	100%
	German	125	3	24	14	9	175
		71.4%	1.7%	13.7%	8.0%	5.1%	100%
	British	160	8	10	16	19	213
		75.1%	3.8%	4.7%	7.5%	8.9%	100%
	Other	89	4	10	4	20	127
		70.1%	3.1%	7.9%	3.1%	15.7%	100%
	Total	483	28	52	45	56	664
		72.7%	4.2%	7.8%	6.8%	8.4%	100%
4+ Generation		4389	110	227	179	192	5097
		86.1%	2.2%	4.5%	3.5%	3.8%	100%

more likely to be linked compared to those of more common names, because there was less doubt about whether there was a real match between the 2 years. However the resulting sample is believed to be representative with respect to other variables (Ruggles et al., 2010). Our analytical method controls for the size of each group, but we have to keep in mind the actual sample size for every combination of ethnicity and generation. Because there are only seven 1.5 generation Irish in the sample, we omit coefficients and predicted values for this group from subsequent tables.

The first column of cells presents the proportion of persons who married to a NWNP woman. Because 86.1% of native stock (4+ generation) white men were married to a NWNP woman, we take this value as an indicator of what "complete assimilation" would mean for other groups. The closer to this value, the more complete the marital assimilation process of the Irish, the German, and the British. As expected (and disregarding 1.5 generation Irish), assimilation is generally uncommon in the first generation, but the proportion of persons married to a NWNP woman increases by generation for every group. Diagonal cells (shaded) represent ethnic endogamy and they are inversely related to the intermarriage rate. Each ethnic group presents a unique marital assimilation pattern. We note especially the persistence of German endogamy (marriage to a German wife) compared to other groups even in their third generation. Although the proportions of men married to a NWNP woman become fairly similar in the third generation, the German endogamy rate in the third generation is still notably higher than that of Irish and British. In contrast, a majority of British men even in the 1.5 generation have a NWNP wife.

The marriage contingency table is a first step in disentangling the complicated process of marital assimilation. As the next step, we evaluate the impact of various individual and contextual factors on marriage choices through logistic regression. A standard approach in analysis of intermarriage is to apply log-linear models (Kalmijn, 1993; Pagnini and Morgan, 1990; Qian, 1997). The advantage of these models, also commonly employed in studies of occupational mobility, is that they allow the analyst to evaluate which cells in the matrix are significantly higher or lower than expected, controlling for the frequency distribution of the marginal totals. We used a log-linear analysis to confirm that German endogamy is significantly higher than other groups, while British endogamy is significantly lower. However it is not practical to estimate a model in which all categories of husband's and wife's ethnicity – broken down by generation – are taken into account because many cells would be empty, and we lack a fourth generation category for wives. Further, our purpose is to go beyond analysis of this contingency table by introducing a number of other covariates at the individual and county level. Logistic regression is well suited to doing this, and this is the method employed by several other studies of intermarriage with similar purposes (Kalmijn and Van Tubergen, 2010; Lichter et al., 2007; Jacobs and Labov, 2002).

Table 2 presents means and standard deviations of variables used in the analysis. From Table 1, we already saw the generational composition of each ethnic group and the proportion of persons who married to a NWNP woman. Table 2 shows considerable variations in contextual factors. Thus we considered estimating hierarchical linear models (HLMs) to disentangle the impact of individual characteristics and county-level contexts with methodologically justifiable standard errors of the estimates. However, we could not implement a multi-level model given the limited individual-level observations nested in

Table 2
Descriptive statistics of variables used in the logistic regression.

Variable group	Label	Mean	SD
Dependent variable	Marriage to a NWNP woman	0.727	0.445
Ethnicity and generation	4+ Generation whites	0.660	0.474
	German 3rd generation	0.023	0.149
	German 2nd generation	0.087	0.281
	German 1.5 generation	0.006	0.076
	Irish 3rd generation	0.019	0.138
	Irish 2nd generation	0.029	0.168
	Irish 1.5 generation	0.001	0.030
	British 3rd generation	0.028	0.164
	British 2nd generation	0.043	0.202
	British 1.5 generation	0.006	0.079
	Other 3rd generation	0.016	0.127
	Other 2nd generation	0.070	0.256
	Other 1.5 generation	0.012	0.111
Individual characteristics	Mixed	0.115	0.320
	Age at marriage	26.728	5.388
	Farm owner in 1910	0.353	0.478
	Farm laborer in 1910	0.029	0.167
	Non-farmer in 1910	0.619	0.486
Contextual measures	Northeast in 1910	0.243	0.429
	Midwest in 1910	0.377	0.485
	West in 1910	0.113	0.316
	South in 1910	0.267	0.443
	% Native white (NWNP) in 1880	58.854	22.568
	% Foreign-born in 1880	13.077	12.113
	Total population (logged) in 1880	4.473	0.489

so many counties (7724 individuals in 1884 counties). A typical HLM rule of thumb is to have at least 30 cases in each level 2 context. Our use of contextual variables without HLM corrections does not affect the estimated coefficients, but likely underestimates their standard errors. This problem is minimal in this case, because the two significant contextual effects have coefficients that are three to six times their standard error. It is possible but unlikely that HLM corrections would determine that these effects are not significant.

4.2. Multivariate logistic regression results

Table 3 reports binary logistic regressions predicting the odds of marrying NWNP women relative to all other types (including ethnic endogamy). In order to clarify the role of mixed ancestry we present two models, one without mixed ancestry and another where mixed ancestry is introduced separately for second generation and third generation persons.

Each log-odds coefficient, "b", is transformed to the effect on the odds, "Exp (b)". The odds are the ratios of the probability that the event of interest occurs to the probability that it does not. While odds larger than 1 indicate that the event of interest is more likely to happen than not to, those smaller than 1 means that the event is less likely to happen. It can also be interpreted as a difference in the likelihood of marrying a NWNP women compared to a reference category. For example, the following interpretation is possible from the first set of dummy variables (ethnicity and generation of husbands) in model 1. The odds of marrying a NWNP woman for German 3rd generation men are only 61.4% of the odds for native stock men, controlling for other factors. For continuous variables, such as age and the county share of native white residents the value of Exp(b) can be interpreted as the effect of a one unit increase in the predictor. Thus, a 1% increase in native white population in the county can increase the odds of marrying a NWNP woman by close to 1% if other conditions are the same.

Table 3
Coefficient estimates predicting marriage with a NWNP (3+ generation white) woman.

	Model 1		Model 2	
	b	Exp(b)	b	Exp(b)
Ethnicity and generation				
4+ Generation white (ref)				
German 3rd generation	−0.488[**]	.614	−0.677[**]	.508
German 2nd generation	−1.980[***]	.138	−2.118[***]	.120
German 1.5 generation	−2.817[***]	.060	−2.848[***]	.058
Irish 3rd generation	−0.449[*]	.638	−0.663[*]	.515
Irish 2nd generation	−2.001[***]	.135	−2.202[***]	.111
Irish 1.5 generation	##		##	
British 3rd generation	−0.120	.887	−0.361	.697
British 2nd generation	−0.789[***]	.454	−1.179[***]	.307
British 1.5 generation	−0.992[***]	.371	−1.012[***]	.363
Other 3rd generation	−0.432[*]	.649	−0.646[*]	.524
Other 2nd generation	−1.265[***]	.282	−1.531[***]	.216
Other 1.5 generation	−2.039[***]	.130	−2.070[***]	.126
Mixed ancestry				
Mixed 2nd generation			1.007	2.737
Mixed 3rd generation			0.263	1.300
Age at marriage	−0.015[*]	.985	−0.015[**]	.985
Occupation				
Non-farm occupation (ref)				
Farm owner in 1910	0.297[***]	1.346	0.315[***]	1.371
Farm laborer in 1910	0.903[***]	2.467	0.928[***]	2.530
Region				
South (ref)				
Northeast in 1910	−0.919[***]	.399	−0.936[***]	.392
Midwest in 1910	−0.955[***]	.385	−0.974[***]	.377
West in 1910	−0.753[***]	.471	−0.776[***]	.460
% Native white (NWNP) in 1880	0.010[**]	1.010	0.009[***]	1.009
% Foreign-born in 1880	−0.038[***]	.963	−0.037[***]	.963
Total population (logged) in 1880	0.066	1.068	0.077	1.080
Constant	2.284[***]	9.816	2.317[***]	10.150
Chi-square	2301.962; DF = 21; p < 0.001		2359.571; DF = 23; p < 0.001	

Omitted due to small sample size.
[*] p < .05.
[**] p < .01.
[***] p < .001.

The results for model 1 show that British men are much more likely than Germans or "others" in the 1.5 first generation to marry a NWNP woman. Every group has a modest change from the 1.5 to the second generation, but a considerable increase in the third generation. By the third generation, Germans, Irish, and other ethnicities have nearly equal probabilities of intermarriage, but they remain well below the British.

Model 2 shows the impact of mixed ancestry in the second generation (statistically significant and quite large) and third generation (not significant). Introduction of these variables also affects the generation coefficients. Independent of mixed ancestry, model 2 reveals that generational effects are not as large as they appeared in model 1. We interpret this to mean that mixed ancestry is one of the reasons for increasing marital assimilation in later generations.

The coefficient estimates of other individual-level factors do not vary appreciably between the two models. Those who marry at an older age are less likely to intermarry with NWNP women. Farmers (especially farm laborers, an unexpected result) are more likely to intermarry than are non-farmers, which suggest that ethnic boundaries may be more rigid in cities than in the countryside. The regional dummies indicate that marital assimilation is more likely in the South than other regions. We did not have any expectation about the direction of region differences, but the magnitude of this effect is great and it should stimulate further study. The size of the native white population (positive) and share of foreign-born persons (negative) have the expected effects at the county level. The logged total population of the county has a positive but not statistically significant effect.

4.3. Effects of mixed ancestry

As noted above, mixed ancestry is closely linked to generation, and both of these factors have strong effects. Table 4 draws out the implications by displaying predicted values of marrying a NWNP woman for first, second and third generation husbands of mixed or unmixed ancestry (applying the unique coefficients of each ethnicity by generation and the average or modal values of other predictors in Table 2).

The first row of Table 4 presents the predicted value of .793 for the native stock men (4+ generation), married at age 26.7 (the sample mean), non-farmers (the most common job), and living in the Midwest (the most populous region) in 1900 who had lived in a county with average characteristics in 1880.

As we already observed from the contingency table, Table 4 shows that there are notable increases from the 1.5 generation (where by definition ancestry is unmixed) compared to unmixed second generation men for Germans and other ethnic groups, but not for the British. Then, for all groups but especially for the Germans and Irish, there is an additional large increase from the second to third generation. However, among men of unmixed ancestry, the predicted value for no ethnic group reaches the predicted value for native stock men even in the third generation. The difference in probabilities between the native stock and each other group is smallest for the British, who had relatively high probability of intermarriage even in the 1.5 generation. For other groups the difference is about .13. Taking into account mixed ancestry, however, increases the predicted values substantially. All white ethnic groups approach (but do not quite reach) the predicted probability of native stock men in the third generation if they have at least one native white parent or grandparent.

Mixed ancestry is a key element of marital assimilation of white ethnics. However, its actual weight varies by different ethnic groups and generations, because some groups are more likely than others to have mixed ancestry. As shown in Table 5, the share of mixed persons varies from as little as 9.4% (German 2nd generation) to as high as 86.4% (British 3rd generation). There is a large increase between the second and third generation for every group, but Germans still lag other groups by at least 10% points. Hence mixed ancestry contributes less to German marital assimilation than to that of other groups.

Table 4
Predicted probability of marrying a NWNP wife by ethnicity, generation, and mixed ancestry status.

Native stock (reference)	0.793	
	Unmixed	Mixed
German		
3rd Generation	0.660	0.716
2nd Generation	0.315	0.557
1.5 Generation	0.181	
Irish		
3rd Generation	0.663	0.719
2nd Generation	0.297	0.536
1.5 Generation (omitted)		
British		
3rd Generation	0.727	0.776
2nd Generation	0.540	0.763
1.5 Generation	0.581	
Other ethnicities		
3rd Generation	0.667	0.723
2nd Generation	0.453	0.694
1.5 Generation	0.325	

Table 5
Share of husbands of mixed ancestry by ethnicity and generation.

	Mixed	Total	% Mixed
German			
3rd Generation	125	175	71.4
2nd Generation	63	669	9.4
Irish			
3rd Generation	123	149	82.6
2nd Generation	37	225	16.4
British			
3rd Generation	184	213	86.4
2nd Generation	132	329	40.1
Other ethnicities			
3rd Generation	102	127	80.3
2nd Generation	126	543	23.2

5. Discussion and conclusion

This study provides new information on ethnic intermarriage in the late 19th Century. Our central focus is to examine whether marital assimilation is accomplished by the third generation, as many previous studies suggested or assumed, or whether it continues into the fourth and later generations. We find that each ethnic group presents a unique pattern by generation and mixed ancestry status. The key finding is that marital assimilation is far from complete by the third generation, and this study provides a clear measure of the difference between the several generations.

This finding has important methodological implications. Many studies have studied intermarriage from the perspective of the first and second generation, assuming that marriage to a 3+ generation (or NWNP spouse) constitutes ethnic assimilation. We show that many men in the third generation retain an ethnic preference in their marital choice that reflects their parents' or grandparents' national origin. We suspect that if we had comparable information about the grandparents of wives, we would see further evidence of ethnic preferences in the third generation. The implication is that while marriage to a third-generation person can reasonably be taken as evidence of some degree of assimilation for a first or second generation ethnic, it does not necessarily imply the eclipse of ethnic identity.

But with this proviso the results are supportive of most expectations of assimilation theory. Generational differences are important, even if they vary across groups. And when we take mixed ancestry into account, the support is stronger. Mixed ancestry is a consequence of prior intermarriages and it likely blurs group boundaries, which has a profound implication for the process of social assimilation (Alba and Nee, 2003; Yinger, 1985). For every group the third generation probability of marrying a NWNP wife is close to that of the native stock for a man with some NWNP ancestry. For the British this equalization occurs even in the mixed-ancestry second generation. In a sense, the finding is that intermarriage begets intermarriage – if an ethnic parent or grandparent has married a native spouse, that fact in itself shifts the balance considerably in a man's selection of a marriage partner. It is often noted that mixed ancestry and generation tend to work together as part of a single process that encourages the reduction of ethnic boundaries. We find indeed that mixed ancestry is less common in the second generation, but it is the modal situation in the third. Taken together, generational shifts and mixed ancestry are powerful predictors of marital assimilation.

We also find that assimilation is context-dependent. It depends in part on region of the country and on differences between people with agricultural and non-agricultural occupations. Marriage to NWNP women depends in part on the marriage pool as indicated by the share of NWNP residents in the community, and it is less likely in communities with larger shares of foreign-born residents. Intermarriage is also most prevalent for the British and least prevalent for Germans, suggesting the importance of specific group-level processes. For a given group, one should consider religion, language use, and occupational segregation as potential contributors to their distinctive pattern. Of particular importance is regional clustering of group members. Logan and Shin (forthcoming) show that the low rate of endogamy of British men in 1880 was largely due to the small pool of British women from which they could find a wife. Of the groups studied here, Germans had the largest volume of immigration between 1860 and 1880, though Irish immigration was greater during 1840–1860 (Wepman, 2002). The largest wave of British immigration came earlier. It's possible, therefore that each group's history of immigration play a role in these results – the British might have had the highest probability of finding a NWNP wife with British ancestors, while Germans might have been unlikely to find a NWNP wife with German ancestors.

This is a study of a specific era and a specific set of white ethnic groups. Because it is based on the population of single young men in 1880, it includes very few of the next large wave of immigrants – especially Italians and Jews from East Europe. The experience of these latter groups may have been very different due to their own distinctive group characteristics and the way that they were perceived by native whites. By 1910, as Lieberson (1980) points out, the Germans and Irish were being described as the more responsible and assimilable immigrant stream, in contrast to the Italians and Jews. Our attention to these groups may seem obscure today because white ethnicity has become so much less salient a century later. Yet these groups dominated social science research on ethnicity and immigration well into the 20th Century. Our expectations about

the sources and pace of assimilation across generations are strongly influenced by what we know about Germans and Irish, Italians and Jews. A clear understanding of their experience will provide a better baseline and point of comparison to understand the contemporary period, when non-European groups constitute such a large share of the immigrant population.

Acknowledgments

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