INTERNATIONAL MIGRATION REVIEW

Immigrant Incorporation in American Cities: Contextual Determinants of Irish, German, and British Intermarriage in 1880[1]

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This study adds to a growing body of research on the contextual determinants of marriage choice and provides new information on ethnic intermarriage in the late 19th century. Census microdata for 66 major cities in 1880 are used to estimate a multilevel model of assortative mating of Irish, German, and British immigrants. Results demonstrate that marital choices made by individuals are significantly affected by the local urban context where they live. In addition, the very large disparity in endogamy between the British and other groups can mainly be attributed to the smaller size of the British population in these cities.

We examine marriage patterns of first- and second-generation white Americans in 1880. Studying these immigrants in a period over 130 years ago strengthens the baseline against which contemporary patterns can be evaluated (Foner, 2000; Perlmann, 2005). It also extends our understanding of the history of European immigration to America in the 19th century. The first wave of that immigration began in the early 1820s and lasted about a half century, bringing more than 7 million immigrants. The majority was either Irish or German, and British were the next largest group. After 1880 and lasting until around the First World War, a second wave brought more than 23 million immigrants largely from Eastern and Southern Europe. From a contemporary perspective, the key process for both waves was declining endogamy rates through the 20th century, which is interpreted as evidence of their cultural and social assimilation

[1]Paper presented at the Population Association of America, April 2009. This research was supported by research grants from National Science Foundation (0647584) and National Institutes of Health (1R01HD049493-01A2). The authors have full responsibility for the findings and interpretations reported here.

DOI: 10.1111/j.1747-7379.2012.00902.x

over the long term (Alba and Nee, 2003). A hundred years ago, it was more common to emphasize the distinction between these two waves (Lieberson, 1980). In 1910, the relative marital assimilation of earlier arrivals could be contrasted to the high rates of endogamy of Italian and Jewish newcomers (Pagnini and Morgan, 1990). This study opens a window on patterns just thirty years earlier when it was the disparity between the British, on the one hand, and Germans and Irish on the other that stood out. In 1880, several decades after they began arriving in this country in large numbers, the assimilation of Irish and Germans was still in question but the British seemed to pose no problem. That is the setting for our research. Our question is what accounts for these differences between first-wave immigrant groups?

A natural suspect is cultural differences, the central feature in Kennedy's (1944) classic study of New Haven that emphasized religion and a prominent category in a recent study of nearly 100 national-origin groups in the U.S. (Kalmijn and Van Tubergen, 2010). From a cultural perspective, there are reasons to expect both the Germans and the Irish to have relatively high rates of endogamy—the Germans because of linguistic distinctiveness and the Irish because of the predominance of Catholics among them. By contrast, the British (including English, Scottish, and Welsh) made up more than half of the total U.S. population in the 1790 census, they established English as the dominant language and their religious and secular culture profoundly influenced the native white majority in subsequent years.

We will argue that in fact much of the British distinctiveness in marital choice in 1880 can be explained in other terms, partly related to measurable individual-level differences but mainly to differences in group characteristics across cities and especially to group size. We turn now to a review of contextual effects on marital outcomes.

CONTEXTUAL EFFECTS ON MARITAL OUTCOMES

We distinguish two types of contextual influences. The first, structured association, owes much to Blau's (1977) macrosociological theory of social structure. Blau's insight was that people's inter-group associations of all kinds have an important random component, so that rates of intermarriage, for example, depend heavily on relative group size and community heterogeneity. The second, structured inequality, 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. Some other historical studies have introduced contextual effects as predictors of marital outcomes. Sassler (2005) introduced state-level group size and regional dummies in the analysis of intermarriage of white ethnics using 1910 census data. Landale and Tolnay (1993) used group size (denoted as ethnic concentration) and the sex ratio (not ethnically specific) at the county level to analyze ethnic variations in marital status (but not intermarriage) in 1910. Our study is the first to examine a larger set of contextual measures in a late 19th century setting. For this reason, most of the literature reviewed here is based on contemporary data.

Marriage Markets and Structured Association

One source of contextual effects is demographic composition of the local population, which constitutes a marriage market (South, 1991). Blau himself (Blau, Blum, and Shwartz, 1982) examined the effects of relative group size and population heterogeneity in metropolitan regions. "Small size," he argued, "promotes outmarriage and heterogeneity promotes intermarriage" (1982:51), because "heterogeneity increases the chances of fortuitous encounters between persons from different groups" (1982:54). Most relevant here, he found that outmarriage by whites born in the U.S. to foreign-born persons was strongly negatively associated with the native-born share of the metropolitan population. Similarly, the more heterogeneous the population in terms of national origin and ethnicity the higher the rate of marriages across these categories. Sassler (2005) found that relative group size affected marriage choice of white ethnics in 1910. Several contemporary studies have confirmed this finding. These include studies of Asian intermarriage (Hwang, Saenz, and Aguirre, 1997; Okamoto, 2007), inter-racial marriage (Harris and Ono, 2005) and marriage by immigrants in the Netherlands (Van Tubergen and Maas, 2007). These local level results mirror findings on group size at the national level (Kalmijn and Van Tubergen, 2010).

In addition to overall group size, social scientists who have studied local marriage markets also focus on the supply of eligible marital partners in a given group, especially the sex ratio of persons in the young adult age range (Lichter *et al.*,1991; South, 1991; Lewis and Oppenheimer, 2000; Van Tubergen and Maas, 2007). Hence, we hypothesize that intermarriage will be more likely in cities with a smaller share of group members and a more unbalanced sex ratio among group members of marriage age.

Social Boundaries and Structured Inequality

Because intermarriage reflects and affects the links between the social networks of the groups that each partner belongs to, it has often been used as an indicator of social boundaries among ethnic groups in the U.S. (Alba, 1986; Kalmijn, 1998). The structured inequality perspective (Okamoto, 2007) emphasizes the strength or permeability of these boundaries. For example, accounting for why shared religion did not lead to much intermarriage between Irish, Italians, and Poles in 1910, Pagnini and Morgan (1990:431) cited the "overwhelming power of nonreligious factors" including levels of residential and occupational segregation and ethnic socioeconomic differentials. These contextual variables were not included in their research, but they are key predictors in this study. Consistent with assimilation theory, it is anticipated that two aggregate characteristics of groups have substantial effects: the share of group members who are first-generation immigrants and the average occupational standing of group members. To some extent, these effects derive from individual-level processes, as first-generation immigrants are consistently found to be less likely to intermarry, while persons with higher occupational standing are more likely. Marriage is viewed as an indicator of having similar social rank, and social scientists have consistently found a high degree of status homogamy between spouses (Burgess and Wallin, 1943; Ramsoy, 1966; Rockwell, 1976). However, once these characteristics are taken into account at the individual level, any remaining effect at the city level can be understood as reflecting the structure of inter-group relations. Groups of more similar social status are more likely to intermarry (Kalmijn, 1993; Qian, 1997; Fu, 2001). Independent of a specific person's nativity or job category, if the group is longer established in the city and is employed in better occupations, those facts will have their own independent impact, especially on intermarriage with the dominant ethnic group (South and Messner, 1986; Lichter *et al.*, 2007; Okamoto, 2007).

Segregation comes into play in multiple ways. Pagnini and Morgan (1990:408–410) note that some groups were more likely to be concentrated in certain cities (such as Jews in New York) and that "even within small towns and large cities, immigrants tended to form their own small ethnic communities." They also note the importance of segregation by occupation and divisions by ethnicity even within the same plant. As Kalmijn (1998:403) points out, marriage markets can be very local: "neighborhoods, schools, workplaces, bars, and clubs … [that are] often

socially segregated" Even when these venues serve only men or only women, they contribute to the network connections through which men and women can meet. Hence, segregation functions in part by partitioning social space and limiting contacts across groups. Segregation can also be an indicator of group boundaries in the community that could affect any other aspect of inter-group relations.

Occupational segregation is important because immigrant and minority groups tend to concentrate in specific economic sectors. Segregation implies that (1) group members are more likely to have different social status and (2) there is likely to be less cross-group interaction in workplaces. Even people who have no employment outside the home could be affected by the separation of social networks caused by occupational segregation. There have been few studies examining the effect of occupational segregation. Okamoto (2007) found that Asians who were more occupationally segregated from other Asian ethnic (or national origin) groups were less likely to marry a non-Asian or a person from another Asian group.

Parallel to occupational segregation is the phenomenon of residential segregation. The residential mobility pattern of immigrants has been extensively studied in the tradition of the Chicago School of Sociology, giving rise to the concept of "spatial assimilation" (Park and Burgess, 1921; Lieberson, 1962; Massey, 1985). According to this model, immigrant group members tend to disperse from ethnically distinct neighborhood as they gain better socioeconomic standing and are more culturally assimilated. The relationship between spatial and marital assimilation has often been commented on (Duncan and Lieberson, 1959). The earliest study (Bossard, 1932) was based on propinquity of engaged couples in a single city. Bossard showed that one-third of all couples listed addresses on Philadelphia marriage licenses that were within five blocks of one another (though these included 12.6% already living together before marriage). Subsequent studies explored whether couples had lived nearby prior to becoming engaged (Clarke, 1952) and what part the racial, religious, and ethnic homogeneity of neighborhoods played in promoting this effect of propinquity (Kennedy, 1943). Peach (1980, *see* also Ellis, Richard, and Parks, 2006) used data from marriage certificates in 1900, 1930, and 1950, again in a single city (New Haven), to assess whether ethnic groups that were more segregated from each other in each year were also less likely to intermarry. These correlations across pairs of ethnic groups were about −0.60, confirming his hypothesis. Telles and Ortiz (2008) brought

the analysis to the neighborhood level using survey data from Mexicans in Los Angeles and San Antonio, showing that the chances of Mexican intermarriage were positively associated with the proportion of other group members in the neighborhood. Stevens and Swicegood (1987) took a similar approach at the national level, finding that groups that were more segregated across states in the U.S. were less likely to be intermarried (but conflicting results were reported by Lieberson and Waters, 1990: 188–193).

More comparable to the current study are projects that compared levels of residential segregation across cities or metropolitan regions. These have had mixed results, which may be due to differences in measurement or in the specific groups or national contexts that were studied. South and Messner (1986) found no significant relationship between residential segregation (using the Index of Dissimilarity, which is unrelated to relative group size) and either white or black outmarriage rates in U.S. metropolitan regions. However, Van Tubergen and Maas (2007), using the same measure of segregation, found a strong positive effect on endogamy of immigrants in Dutch municipalities. Lichter *et al.* (2007) showed that rates of Hispanic intermarriage with non-Hispanic whites in metropolitan areas were strongly associated with the average exposure of Hispanics to whites at the census tract level, a measure that is affected by both the relative size of groups in the region and also their residential segregation.

RESEARCH DESIGN

Most studies of intermarriage use log-linear models to control for the relative numbers of men and women in each group. However, for the purpose of estimating contextual effects, a more appropriate approach is a regression model that includes both individual-level and city-level variables. Okamoto used multinomial logistic regression to examine predictors of different types of marriages, estimated with robust standard errors to deal with potential spatial autocorrelation. Her focus was on marriages involving at least one Asian American spouse, and contextual variables were measured at the level of metropolitan regions from the 2000 census. More recently Kalmijn and Van Tubergen (2010) estimated a multi-level model in which the effects of individual-level predictors of marital choice (*e.g.,* generational status or education) could be assessed, and the effects of group-level predictors (such as Christian or English-language background of the group, or its size and sex ratio) could be independently estimated.

We use the multi-level approach, estimating the model separately for each of three major immigrant groups, where all of the group-level predictors are characteristics of the group in a given city.

The Selection of Ethnic Groups for Study

For our purpose, it is necessary to have a large sample of individuals in a large number of cities with varying characteristics, so that both individual and contextual effects can be estimated together. We examine the intermarriage patterns of the Irish, Germans, and British in all 66 cities that had a population over 25,000 in 1880. Table 1 anticipates some findings from this study and provides figures for male and female endogamy from other national-level studies in later years. Endogamy for Germans and Irish was 70–80% in 1880, not very different from the 81–83% reported in 1910 for Italians, Poles, and Jews by Pagnini and Morgan (1990:413). By 1910, their endogamy had already dropped to a range of 50–60% (Sassler, 2005). British endogamy, however, was already significantly lower than that of Germans and Irish in 1880 at about 30–40% and it remained at that level in 1910. By 1960, endogamy of all these groups was much reduced (Kalmijn, 1993). Hence, our selection of ethnic groups at this time point highlights European immigrants who would eventually be highly assimilated in the course of the 20th century, but whose experience in the late 19th century was very diverse

This study draws on a unique data source, 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). These data allow us to break new ground in investigating the role of contexts in marital choice. Two advantages of using the full-count census data are its large size and the ability to aggregate microdata without constraints to create group-specific contextual measures in geographic areas of any size. The limitation of the analysis to only three ethnic groups is due mainly to considerations of group size. Based on simulation studies of the statistical power of multilevel models, analysts typically recommend that there should be at least 30 sampled persons in at least 30 settings (Hox, 2002). Even for married men who met other sampling constraints, this threshold is met (and far exceeded) by the Irish in 66 cities, Germans in 60, and British in 65. The next largest origin group is Canadians, who met the threshold in 45 cities. We choose not to study Canadians because the significant divide between

TABLE 1

Reported levels of white ethnic endogamy (1st and 2nd generation), 1880 through 1960

	Our study	Pagnini and Morgan (1990)	Sassler (2005)	Kalmijn (1993)
Data source	Census 1880, 100% sample	Census 1910, 1/250 sample	Census 1910, IPUMS	Census 1960, 5% PUMS
Indicator of ethnicity	By birthplace (priority in the mother's for the 2nd generation of mixed origin)	By birthplace and mother tongue (priority in the mother's for the 2nd generation of mixed origin)	By birthplace (persons of mixed origin are excluded from the 2nd generation)	By birthplace (the 2nd generation must have at least one foreign-born parent, persons of mixed origin are indistinguishable)
Sample restriction	Married couples in 66 cities (wives of age 18–35, who had no children or her eldest child was U.S.born)	Persons of age 15 and older who married in the U.S.	Persons of age 15–40, currently married, spouse present	Couples who married in the U.S. (at least one spouse is U.S. born)
German endogamy				
Women	80% (n = 88,947)	64% (n = 1,807)	56% (n = 2,782)	NA
Men	78% (n = 91,744)	49% (n = 2,440)	49% (n = 2,316)	NA
Irish endogamy				
Women	72% (n = 81,896)	61% (n = 1,131)	49% (n = 1,391)	21% (n = 4,487)
Men	79% (n = 74,205)	63% (n = 1,041)	53% (n = 926)	22% (n = 4,210)
British endogamy				
Women	39% (n = 26,382)	42% (n = 769)	32% (n = 935)	12% (n = 5,372)
Men	35% (n = 29,099)	30% (n = 1,145)	27% (n = 925)	10% (n = 5,901)

English and French speakers complicates the definition of "Canadian" as an ethnicity. The potential French sample for our study, next in frequency, numbered above 30 in only 29 cities. In subsequent decades, Italians and East European Jews entered U.S. cities in large numbers, and their intermarriage patterns are of great interest. But in 1880, they were <1% of the urban population. Although the sample size is sufficient in most cities to study black–white intermarriage, this topic requires separate study, including consideration of the effects of anti-miscegenation laws both prior to and after the Civil War.

It is important for our purpose to establish that there were substantial variations in marital choice across cities for these groups in 1880. Table 2 summarizes 1880 rates of endogamous marriage for Irish, Germans, and British, using definitions that are explained in detail below. The table includes two kinds of information. First, for all 66 cities in our sample, it reports the level of endogamy for the city at the 10th percentile and the 90th percentile of the distribution, which we view as the effective range of variation. It is in fact a wide range. For Irish men, for example, endogamy varied from 53 percent to almost 90 percent. The Table also reports individual values for the six cities with more than 300,000 residents in 1880 to demonstrate that the largest cities also had widely varying outcomes. Irish men's endogamy ranged from 64 percent in Baltimore to 85 percent in Boston.

Measurement Issues

The 100 percent sample for the 1880 Census of Population includes information about several key population characteristics such as race, gender, age, marital status, occupation, and state or country of birth of every

TABLE 2
SHARE OF ENDOGAMOUS MARRIAGES BY IRISH, GERMANS, AND THE BRITISH, PERCENTILES FOR 66 CITIES IN 1880 AND INDIVIDUAL CITIES OVER 300,000

	Irish men	Irish women	German men	German women	British men	British women
10th percentile	53.5	51.9	49.2	52.0	18.4	22.3
90th percentile	89.6	81.1	81.3	83.9	44.0	46.1
Baltimore	64.3	60.2	76.7	77.9	18.0	22.3
Boston	85.9	79.6	59.8	72.7	30.3	31.1
Chicago	78.0	69.9	82.8	85.9	37.7	42.0
New York	85.2	76.3	81.3	84.8	34.1	36.2
Philadelphia	75.3	68.9	67.4	70.8	34.1	37.6
St. Louis	73.2	68.1	81.0	82.9	29.6	34.8

person in the household. In addition to these individual variables, various household characteristics are also available or can be computed. The census enumeration clearly identifies the spouse of the household head; we also make use of the MPC's inferential coding of probable married couples among subfamilies within a household.

Given our purpose, it would be inappropriate to study cases of immigrants who were married in their country of origin prior to entering the U.S. In addition, as we are interested in the effect of city context on marital choice, we should study couples who are likely to have been married in their 1880 city of residence. Some studies (Kalmijn and Van Tubergen, 2010) avoid this problem by limiting their analysis to second-generation immigrants or to first-generation immigrants who arrived prior to adulthood. Pagnini and Morgan (1990) used information on the length of marriage and year of arrival in the U.S. to screen out couples who were married abroad. Blau, Blum, and Schwartz (1982) selected couples where the wife was under 25 and had been living in the same county 5 years earlier.

The 1880 census data do not reveal the place and year of marriage. We therefore select two categories of married couples for study. First, among couples with no co-resident children, we select those where the wife is aged 18–35. If the couple in this age category had children, they would very likely be co-resident, so we surmise that there are no children (above age 35, there is a greater chance that there are adolescent or adult children living elsewhere). And as people are likely to have their first child early in their marriage, we surmise that these couples in 1880 were recently married and were more likely than older couples to have been married in their 1880 city of residence. Second, among couples with a co-resident child, we again select those where the wife is aged 18–35. Another criterion is that the oldest child is five or under and was born in the same state as the current residence. We judge these couples to be very likely to have been married in their 1880 city of residence. These sampling criteria are imperfect, but they approximate as closely as possible the sample that we would ideally wish to study. These sampling restrictions reduce the final sample from over 720,000 couples to 351,909.

There is an alternative method to control marital timing more directly. The original 1880 census questionnaire asked whether a person had married within the past 12 months. This variable is not available in the 100% file, but it is transcribed in the much smaller 1880 IPUMS 10% sample. We have replicated our analyses using a sample that only

includes recently married persons (close to 1,000 couples). Although some of the coefficient estimates from this sample were not statistically significant because of the much smaller number of cases, the direction and size of coefficients are similar, which adds confidence to the findings reported here (results are available from the authors upon request).

Individual-Level Predictors

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). In addition to studies of intermarriage, some historical research has also focused on the timing of marriage as an indicator of ethnic assimilation (Sassler, 1997; Sassler and Qian, 2003). In either case, most attention has been given to individual-level processes, going 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. McCaa (1993), using census data from the 1900 and 1910 public use samples for New York City, validated Draschler's finding. In another study using a national sample drawn from the 1910 census, Pagnini and Morgan (1990) observed that if intermarried, immigrants inclined to marry other immigrants, whereas persons of the second generation were more likely to marry individuals in the second generation of other ethnic groups (*see* also Kalmijn, 1993; Qian, 1997).

Like previous researchers, we combine each person's race and place of birth with parents' race and place of birth to create categories of ethnicity of the person and spouse. Married persons whose spouse is not living within the same household are not included in the study, because in that case there is no information on the spouse's ethnicity. Five white ethnic groups are categorized here: native whites (more precisely native whites of native parents, the usual term in the literature for 3+ generation whites), Irish, German, British, and "all others." For the foreign born, their country of birth determines their ethnicity. For persons born in the U.S. but with at least one parent born abroad, ethnicity is determined by their mother's country of birth. If only the father was foreign born (or if the mother was foreign born but her birthplace was not reported), the

father's country of birth is used. Irish and Germans are whites who were born in Ireland or Germany (not including areas of what is now Poland such as Silesia) or who had at least one parent born in that country. Similarly, the British are whites who were born in Great Britain (England, Scotland, and Wales) or who had at least one British-born parent. The remaining persons of other European origins are categorized as "all others," and they are treated here as a residual category. Some studies have used language or mother tongue as another indicator of ethnicity, and it would be of great value to be able to distinguish people by religion (such as the distinction among Germans between Protestants, Catholics, and Jews). However, the 1880 census includes no information on language or religion.

Table 3 provides a marriage contingency table showing marriage patterns for husbands and wives in these main categories of ethnicity, pooling data for the sample in all 66 cities. It shows, for example, that the sample includes 74,205 Irish husbands, of whom 79.1% married an Irish wife. There were 81,896 Irish wives, of whom 71.6% married an Irish husband. By far, the most common choice was endogamous (the diagonal cells). Endogamy was highest for German women (80.1%) and Irish men (79.1%) and lowest for British women (39.0%) and men (35.4%). When they married into another group, the British were more especially likely to marry native whites. The following analyses will seek to account for the relative odds of these pairings, taking into account characteristics of the person and the city where they lived.

TABLE 3
MARITAL CHOICE BY GENDER AND ETHNICITY IN 66 SELECTED CITIES ($N = 351,909$) – PERCENT OF MEN AND WOMEN OF EACH ETHNICITY ACCORDING TO SPOUSE'S ETHNICITY

	Spouse's ethnicity						
	Native white	Irish	German	British	Other	Total	
Husbands							
Native white	74.1%	7.8%	5.3%	7.1%	5.7%	100.0%	108,409
Irish	8.8%	79.1%	3.1%	5.3%	3.8%	100.0%	74,205
German	8.6%	4.8%	77.7%	2.3%	6.6%	100.0%	91,744
British	29.3%	19.2%	7.8%	35.4%	8.3%	100.0%	29,099
Other white	16.3%	9.9%	15.2%	4.8%	53.8%	100.0%	48,452
Wives							
Native white	72.3%	5.9%	7.1%	7.7%	7.1%	100.0%	111,096
Irish	10.3%	71.6%	5.3%	6.8%	5.9%	100.0%	81,896
German	6.5%	2.6%	80.1%	2.6%	8.3%	100.0%	88,947
British	29.1%	14.9%	8.1%	39.0%	8.9%	100.0%	26,382
Other white	14.3%	6.4%	14.0%	5.6%	59.8%	100.0%	43,588

Besides generational differences, mixed ancestry represents a step in the process of group assimilation. For example, persons 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. Utilizing the 1979 Current Population Survey, Alba (1986) confirmed that persons of mixed ancestry had higher rates of intermarriage than those of unmixed ancestry. We further distinguish among second-generation persons between those with mixed and unmixed parentage. Unmixed means both parents were born in the same foreign country. Mixed means that one parent was born in a different country (including the U.S.). For example, a person born in the U.S. with an Irish mother and German father would be categorized as Irish second generation, mixed.

Marriage bonds are created within a complex system of status hierarchies. Marriage can also be understood in terms of exchange: a person of higher socioeconomic status may "exchange" that status by marrying into a group with higher race/ethnic status (Merton, 1941). In a system where native whites have the highest status, followed by British, Germans, and then Irish, one would expect (if there were intermarriage) that immigrant group members of higher occupational standing would be more likely to marry native whites than would co-ethnics of lower standing and that such marriages would be most common for the British and least common for Irish.

The 1880 census did not gather information on income or education, the most conventional indicators of socioeconomic standing. The available measure is the Socioeconomic Index (SEI) provided by MPC, based on the average education and earnings of persons in each occupation as measured in 1950. An important question in using the SEI in a historical study is whether the relative standing of occupations is stable over time. Sobek (1996) has studied this question directly, comparing the average income of men in each of 140 occupations in 1890 to the income of men in those occupations in 1950. The correlation between the two is 0.93. Another concern is how to code SEI for women, of whom a large share in our sample (young and married) is housekeepers. We do not know their occupation prior to marriage, nor can we use their father's SEI to infer their class background. In the following analysis, therefore, we estimate multivariate models only for men. Separately, we conducted analyses for women using their husband's SEI as a predictor, or omitting SEI from the model. Because results were similar and the women's models

added no new findings, we report only the more complete and more clearly interpretable results for men.

We also include age in the model in an exploratory way. Because the sample is limited to couples in which the wife is aged 18–35, variation in age is small. However, if younger persons in our sample typically were married more recently, any effect of age might suggest changes over time in the social acceptability of intermarriage.

Contextual Variables

Although individual characteristics are theoretically important in their own right, the major contribution of this study is its focus on contextual effects. All contextual variables have been calculated from the individual-level reports, aggregated by city as identified in the census enumeration. Two of these are demographic factors, drawing on Blau's (1977) macro-sociological theory of social structure. Size is measured in relative terms, including the share of the total population that is native white and the share that is co-ethnic. We measure sex ratios as the group-specific ratios of co-ethnic women to men for persons 18–44 years old in each city. (This use of an age limitation is consistent with other studies, such as Fossett and Kiecolt, 1991; South, Trent, and Shen, 2001).

Two measures are intended to probe the effect of aggregated individual-level characteristics that are important in the assimilation model. The first-generation share is the percentage of all group members who were born outside the U.S. The group's average occupational SEI is based on all group members with a reported occupation, including both men and women.

Occupational segregation is measured as an Index of Dissimilarity (D). This is the most commonly used measure of segregation. Unlike the most likely alternative, p* measures of exposure, it is independent of group size which is included separately in the model. Two measures are calculated for each group: one is in relation to native whites in the same city and the other is in relation to all other white ethnic groups (including native whites). The original industry categories of the 1880 U.S. Census as provided by MPC were recoded into 66 categories based on two-digit codes in the 1950 industrial classification system. Although the measure is based on industries, we refer to it as "occupational" segregation because the original data were enumerated as people's occupations.

Residential segregation is also measured as an Index of Dissimilarity for pairs of ethnic groups: group members versus native whites and group

members versus all others. To compute D, we first aggregated population data by ethnicity for neighborhoods in each city (defined as enumeration districts, which are similar to contemporary census tracts). The value of D, then, is the extent of residential segregation across neighborhoods in each city. The level of segregation in the city as a whole tells us both about the ethnic boundaries in that city and about the likelihood that two people of different ethnicity would meet in their home neighborhood. A conceptually different measure would be the ethnic composition of the neighborhood where the couple lived, but there is no way to know whether their residential choice was a cause or consequence of marital choice (as pointed out by Kalmijn and Van Tubergen, 2010:462).

For both of these aspects of segregation, we considered two measurement approaches. One sees segregation as a reflection of intergroup boundaries that involve the whole population, so the measure takes into account the occupation or residential location of all members of both groups. Another sees segregation more specifically in terms of the marriage market: to what extent are young adult (age, 18–35), unmarried men, and women found in the same neighborhoods or same occupations, and therefore at risk of meeting each other? The alternative measures are highly correlated with one another, in the range of 0.80–0.90, so the choice has only small impact on the findings. We report results here for the measures restricted by age and marital status.

Analytic Model

As noted earlier, some previous intermarriage studies examined only a single city such as New York and New Haven using historical marriage license data. Some other studies analyzed a national sample of historical census data, but gave little attention to city differences. What is required here is to estimate models that include both individual and contextual effects. Therefore, we estimate hierarchical linear models (HLM). HLM is designed to evaluate the effects of variables at two or more levels (such as the individual and city level). It also adjusts the standard errors of estimates of individual-level effects to take account of the clustering of individuals by city (Snijder and Bosker, 1999).

Our multi-level logistic regression model allows the intercept term in individual regression model to vary freely across different cities. This model is also known as the random logistic intercept model, and it can be specified as:

$$Y_{ij} = P_{ij} + R_{ij}$$

$$\text{logit}(P_{ij}) = \gamma_0 + \sum_{h=1}^{r} \gamma_h X_{hij} + U_{oj}$$

Here, Y_{ij} denotes the dichotomous outcome variable for individual i living in the city j; the outcome variable can be split into an expected value P_{ij} and a residual value R_{ij}. Logit (P_{ij}) is the sum of a linear function of predictors, x_{hij} and γ_h are the corresponding coefficients. While γ_0 represents the random intercept, which captures the average of logit (P_{ij}) across cities controlling for predictors, the U_{0j} are introduced as city-level residuals, which also can be understood as unmeasured city variations.

Our treatment of marriage involves two steps. First, does the man marry endogamously or exogamously (HLM model 1)? Second, if exogamous, is the marriage to a native white or to a woman in some other white group (HLM model 2)? The focus in this second model on native whites, as the representative of "mainstream" society, reflects the literature's concern with intermarriage as an indicator of assimilation.

All of these models are group specific. This approach has the advantage of computational simplicity, and it facilitates display of the similarities or differences in how various predictors affect marital outcomes for each group. The alternative of introducing many interaction terms (of each group with the individual variables and group-specific contextual variables) is difficult with HLM. As a final step, we do make use of the group-specific coefficients to calculate predicted values that allow us to draw conclusions about the overall sources of differences across groups.

Both log-linear models and HLM have the capability of controlling for the ethnic distribution of potential husbands and wives. Log-linear models do this directly in the calculation of odds ratios, while HLM achieves the same end by introducing level-2 variables for the city's group size and sex ratio. HLM has the advantage for our purpose that it facilitates estimation of other level-2 effects.

FINDINGS

Table 4 presents the means and standard deviations of variables introduced into the models, listing values separately for British, German, and Irish men. Notice that among all men (HLM1), the average age is about the same for each group. There is a hierarchy of occupational SEI that is

TABLE 4

GROUP-SPECIFIC MEANS AND STANDARD DEVIATIONS OF INDEPENDENT VARIABLES (STANDARD DEVIATIONS IN PARENTHESES)

	HLM1: all men			HLM2: intermarried men		
	Irish	German	British	Irish	German	British
Age	31.0 (6.9)	30.3 (8.7)	31.0 (11.7)	30.5 (6.3)	29.8 (6.2)	30.8 (9.5)
SEI	25.1 (20.1)	29.9 (21.0)	32.5 (21.5)	30.6 (21.7)	31.5 (21.6)	33.6 (21.9)
Nativity/parentage						
U.S. born mixed%	5.8 (23.5)	5.6 (18.0)	17.5 (36.8)	51.3 (36.0)	11.7 (28.5)	32.0 (40.1)
U.S. born unmixed%	32.8 (46.9)	28.9 (46.3)	22.3 (42.5)	10.3 (49.9)	41.8 (49.7)	15.3 (44.5)
Foreign born%	61.4 (48.7)	65.5 (47.5)	60.2 (49.0)	38.4 (48.7)	46.5 (49.9)	52.7 (49.9)
City contexts						
Native white population%	NA	NA	NA	29.2 (12.1)	27.9 (12.8)	28.9 (12.0)
Group population%	30.4 (8.6)	30.3 (11.2)	9.2 (4.7)	27.5 (9.1)	27.6 (11.4)	8.6 (3.7)
Group sex ratio	122.3 (11.5)	96.4 (7.0)	98.2 (9.4)	120.9 (12.6)	95.9 (7.8)	98.2 (9.5)
Group 1st generation%	42.7 (3.5)	42.1 (4.9)	46.9 (6.4)	41.6 (3.7)	41.7 (4.9)	46.1 (6.1)
Group SEI	15.0 (1.6)	18.2 (2.4)	21.2 (2.8)	15.2 (1.6)	18.4 (2.5)	21.5 (2.6)
Residential segregation						
Group versus all other whites	29.4 (4.3)	35.6 (6.6)	21.7 (4.5)	NA	NA	NA
Group versus native whites	NA	NA	NA	34.0 (6.3)	41.7 (9.1)	25.9 (5.7)
Occupational segregation						
Group versus all other whites	25.1 (4.2)	21.6 (3.5)	18.5 (4.3)	NA	NA	NA
Group versus native whites	NA	NA	NA	30.1 (5.0)	31.8 (4.4)	23.3 (6.7)
Number of cases	74,205	91,744	29,099	15,540	20,475	18,801

HLM, hierarchical linear models.

consistent with other historical accounts, lowest for Irish (Bider and Reimers, 1995), better for Germans (Wepman, 2002), and highest for the British. The British are most likely to have mixed parentage; Germans are most likely to be foreign born. Irish and Germans average 30% of the population in the cities where they live, compared to a much smaller 9% for the British. The Irish stand out for an imbalanced sex ratio, more female than male. Germans are the most occupationally and residentially segregated group, while the British are much less residentially segregated than the Irish but equally segregated across occupations. All of these differences could help account for the much lower endogamy of the British.

There are also useful comparisons of individual-level variables between all men and intermarried men. Intermarried men in each group have higher SEI, and they are more likely to be second generation (and especially for Irish and British, to be of mixed parentage).

Multivariate Results

We turn now to HLM models to evaluate the independent effects of individual and contextual variables on marriage choices. In these models, the effective sample size for estimating individual effects is the number of married men in each group and for estimating city effects it is the number of cities. The first three columns of Table 5 present results of models for Irish, German, and British men on the odds of exogamy versus endogamy. Effects of occupational standing and nativity/parentage are highly significant, and they are in the expected direction—men with higher standing were more likely to be exogamous, while first-generation immigrants were least likely to intermarry. Taking the antilogarithm of the log-odds coefficient allows us to estimate the magnitude of this effect. Individual SEI has a strong effect. Among the Irish, for example, a five-point increase in SEI (equivalent to a change of 0.25 standard deviations for all Irish men) would result in a 6% increase in the odds of intermarriage and also a 6% increase in the odds of marrying a native white. Nativity is statistically significant but has a smaller effect: Compared to a man born in the U.S. to one Irish parent and one parent of another ethnicity, an Irish immigrant had 1.9% lower odds of intermarriage, and a second-generation Irishman with both parents born in Ireland would have 0.9% lower odds of intermarriage. All of these effects were strongest for Irish men. The effects of nativity and parentage were weakest for British men.

TABLE 5
LOG-ODDS COEFFICIENT ESTIMATES PREDICTING INTERMARRIAGE AND MARRIAGE WITH NATIVE WHITES, BASED ON HLM ANALYSES FOR MEN OF EACH ETHNICITY ACROSS 66 CITIES

	Exogamy (versus endogamy)			Intermarriage with native whites (versus other groups)		
	Irish	German	British	Irish	German	British
Intercept	1.837**	0.781	2.247***	−0.014	−0.106	0.456
Age	0.013***	0.006***	−0.006**	0.021***	0.009***	0.011***
SEI	0.012***	0.003***	0.003***	0.012***	0.009***	0.017***
Nativity/parentage						
U.S. born mixed (ref)						
U.S. born unmixed	−0.009***	−0.010***	−0.003**	−0.003***	−0.003**	−0.000
Foreign born	−0.019***	−0.020***	−0.010***	−0.006***	−0.006***	−0.006***
City contexts						
Native white population%	NA	NA	NA	0.031***	0.040***	0.030***
Group population%	−0.038***	−0.031***	−0.068***	0.011	0.008	0.021*
Group sex ratio	−0.001	0.000	0.001	−0.004	0.001	−0.004
Group 1st generation%	−0.018	−0.007	−0.007	−0.029	−0.006	−0.016*
Group SEI	0.046*	0.029*	0.025*	0.029	−0.053*	−0.043*
Residential segregation						
Group versus other whites	−0.015**	−0.008**	−0.019***	NA	NA	NA
Group versus native whites	NA	NA	NA	−0.008	−0.006	−0.007
Occupational segregation						
Group versus other whites	−0.033***	0.008	−0.002	NA	NA	NA
Group versus native whites	NA	NA	NA	−0.025**	−0.021*	−0.001

Notes: *p<0.05, **p<0.01, ***p<0.001.
HLM, hierarchical linear models.

Table 5 also provides evidence of the effect of city context on intermarriage. One purely demographic explanation, the group's sex ratio in the city, has no significant impact. Nor does the share of group members who are immigrants. There is a very strong impact of group size, about twice as strong for the British as for Irish and Germans. When a group's share of the city population is larger, the likelihood of exogamy is greatly reduced. A 5-point increase in the British share of a city's population (approximately one standard deviation) would correspond to a 28.9% decline in the odds of exogamy; the effect of such a change for Irish or Germans would be a 14–17% decline. The average group SEI has a positive effect. A 2-point increase (which as a group average is a very large

change, more than two standard deviations for the Irish) would increase odds of exogamy by as much as 9.2% for the Irish, and somewhat less for Germans and the British. Segregation—an indicator of overall inter-group relations in a city and of opportunities for inter-group contact—has strong negative effects. Both residential segregation and occupational segregation are significant predictors of lower exogamy for the Irish, while residential segregation is significant for German and British men. A four-point increase in the residential segregation index for Irish (approximately one standard deviation) would predict somewhat a 6% decline in the odds of intermarriage. A four-point increase in Irish occupational segregation (about one standard deviation) would predict a 13% decline.

From an assimilation perspective, the most pertinent outcome is intermarriage with native white (3+ generation) women, for which results are provided in columns 4–6 of Table 5 (including only intermarried men). These predict having a native white wife in comparison with any other white ethnicity. Higher status men of all three groups were more likely to marry a native white. Effects of nativity and mixed parentage are similar to those found for intermarriage. First-generation immigrants were least likely to marry a native white, while those in the second generation with unmixed parentage (except for the British) were also less likely.

As expected from a demographic perspective, the native white share of the total city population is a strong and significant predictor of marriage to native whites. A six-point increase in the native white share (about one-half standard deviation) would correspond to an 18–24% increase in the odds of a native white wife for an intermarried man. But few other contextual variables are significant. Unexpectedly, where the German or British average SEI in a city was higher, these men were less likely to intermarry with a native white rather than someone of another ethnicity. To understand this result would likely require looking in much more detail at the composition of other ethnicities in cities with higher German or British SEI and taking into consideration the occupational standing of both native whites and those alternative groups. We can offer no ready explanation. In line with assimilation theory, where a higher share of the British was first generation, British men were less likely to intermarry with a native white woman. Residential segregation had no significant effect, but in cities where Irish were more occupationally segregated from native whites, they were also less likely to marry a native white.

How far do these models go toward explaining the low observed rates of endogamy among British men, and which factors are most responsible? Put differently, how much should we rely on cultural affinity with the native white majority to account for their greater marital assimilation, and how much can be explained with other measurable factors at the individual or city level? We address this question by calculating predicted values from the coefficients in Table 5, using the group mean values in Table 4. One approach is to compare the average predicted value for British men, using the coefficients in the British model but applying alternately the average values of predictors for the British, Irish, and Germans. From the descriptive statistics, we observed that the British have a higher SEI, more "mixed" origins, and fewer first-generation members than the Irish and Germans. They are also residentially and occupationally less segregated. We can assess the effects of these differences from the predicted values in Table 6. The first three rows of the table show that model estimates approximate observed values very closely for all three groups. The predicted value for Irish men using Irish coefficients and means (denoted I-I) is 17.1% exogamous, compared to the actual average of 20.9%. The same comparison for Germans (G-G) is 22.0% versus 22.3%, and for the British (B-B) it is 66.9% versus 64.6%.

Now let us apply the British coefficients to the Irish means (B-I, row 4) and the German means (B-G, row 5). In either case, the result is to bring the estimate much closer to what we observed for Irish and Germans, 25.7% (B-I) or 24.6% (B-G). We conclude that fairly similar processes influence intermarriage for every group and that most of the observed difference is because British men had different individual characteristics and lived in different city contexts. More specifically, using British means for every variable except the (higher) Irish or German population yields estimates of British exogamy that are reduced by more than half, from 66.9% to about 32%. Very large observed differences between the groups now turn out to be much more modest.

TABLE 6
PREDICTED AND OBSERVED PROBABILITY OF EXOGAMY FOR IRISH, GERMAN, AND BRITISH MEN (BASED ON MODELS IN TABLE 5)

	Predicted exogamy	Observed exogamy
Irish coefficients with Irish means (I-I)	17.1	20.9
German coefficients with German means (G-G)	22.0	22.3
British coefficients with British means (B-B)	66.9	64.6
British coefficients with Irish means (B-I)	25.7	NA
British coefficients with German means (B-G)	24.6	NA

In short, if cultural affinity contributed to British propensity to intermarriage, its direct and independent effect was much smaller than that of other factors. This does not mean that cultural differences did not matter. British immigrants' language facility, their potential ethnic ties with British employers, and other advantages likely contributed to their overall higher socioeconomic status and lower levels of residential and occupational segregation from native whites. We doubt, however, that these aspects of ethnic culture had strong effects on the size of the British population in cities, which is the key contextual variable in explaining the British versus Irish/German results.

Decomposing the Variance Across Cities

These results show that city-level differences are substantial and that group-specific city characteristics included in the models—especially group size—have significant effects on people's choices. As a final step in the analysis, we evaluate how well various combinations of predictors succeed in explaining differences across cities. Table 7 reports the residual city-level variance for models that include various combinations of predictors and shows what portion of the residual inter-city variance is explained by each model. This offers another basis for evaluating the relative strength of these predictors.

We first examine the results for models predicting endogamy versus exogamy (HLM1). The empty model for Irish men that includes no predictors has a residual city-level variance of 0.521. Adding all of the individual-level predictors from Table 5 by themselves reduces this to 0.378, so that 27.5% of the variance across cities is explained in this way. This is a considerable effect. It shows that differences in the composition of Irish men (as measured by the individual-level variables in this model) contribute considerably to city variations in Irish endogamy. We then add various city-level predictors to this model. Residential and occupational segregation of the Irish has some independent impact, increasing the explained variance to 35.0%, mostly because of occupational segregation. Adding instead the level of group SEI has a stronger effect, increasing the explained variance to 56.1% for Irish men. The Irish population share in the city, in contrast, increases the explained variance remarkably to 81.4%. Hence, by far, the best predictor of Irish endogamy in a city is the size of its Irish population. The full model, including all of the variables in Table 5, increases the explained variance even further to 91.7%. The model is highly successful.

TABLE 7
DECOMPOSITION OF THE CITY-LEVEL VARIANCE FOR IRISH, GERMAN, AND BRITISH MEN; RESULTS OF STEPWISE ANALYSES INCLUDING VARYING SUBSETS OF PREDICTORS

	Irish		Germans		British	
	Residual city-level variance	Explained (%)	Residual city-level variance	Explained (%)	Residual city-level variance	Explained (%)
HLM model: endogamy						
Empty model	0.521	0.0	0.268	0.0	0.277	0.0
Individual predictors alone	0.378	27.5	0.275	−2.8	0.228	18.0
Individual + residential and occupational segregation	0.339	35.0	0.183	31.8	0.190	31.4
Individual + group SEI	0.229	56.1	0.198	26.3	0.127	54.4
Individual + % group	0.097	81.4	0.046	82.9	0.036	87.1
Full model	0.043	91.7	0.031	88.3	0.014	94.9
HLM model 2: native white intermarriage						
Empty model	0.494	0.0	0.523	0.0	0.222	0.0
Individual predictors alone	0.431	12.8	0.499	4.7	0.215	2.9
Individual + residential and occupational segregation	0.324	34.4	0.351	32.9	0.205	7.3
Individual + group SEI	0.379	23.2	0.506	3.2	0.217	2.2
Individual + % group	0.366	26.0	0.472	9.7	0.209	5.6
Individual + % native white	0.182	63.2	0.125	76.1	0.046	79.1
Full model	0.119	76.0	0.070	86.7	0.032	85.5

HLM, hierarchical linear models.

The results for Germans and the British follow the same main trend, but there are some variations. Individual-level effects explain none of the inter-city differences for Germans and less for the British than for Irish. Residential and occupational segregation add somewhat more to the explained variance for these two groups, but group SEI is equally helpful in the German model and much more important in the British model. But for both the Germans and the British, as is true for Irish, the outstanding variable is the group's population share.

Table 7 also reports a decomposition of explained variance for intermarriage with native whites versus other groups (HLM2). Here, individual-level variables have very small effects. Apparently, once it is known that a person will marry outside the group, individual-level indicators of social assimilation play only a small role in which other group will be selected. Residential and occupational segregation (of group members from native whites) has a substantial impact for Irish and Germans but

not for British men. Group SEI does not count so strongly here either, and once selected for intermarriage, the choice of partner does not depend on one's own group size. Rather what matters most is the native whites' share of the population (or, by implication, the share of the population in all other potential partner groups combined). In the model for Irish men, for example, adding just the native white population percentage to a model with individual-level predictors raises the explained variance from 12.8 to 63.2 percent. Adding the other city-level predictors raises this further to 76.0 percent. Findings are similar for Germans and the British.

SUMMARY AND CONCLUSION

The social environment for intermarriage is defined at both the individual and community level. We find that there are significant effects of personal characteristics that are thought of as indicating a propensity to assimilation: being in the second generation and having higher occupational standing. These effects are already well documented and it would be surprising to find otherwise. We learn more from this study about the community level and about how city differences influence marital outcomes.

At the end of the 19th century, the intermarriage rates suggest that there were strong social boundaries between German or Irish immigrants and native whites in the major cities of the U.S. These were reflected in high endogamy and a relatively small number of intermarriages that crossed these ethnic lines. Like Pagnini and Morgan (1990:429), who used data from 1910, we find that "endogamy was overwhelming" for these groups in 1880. British newcomers in the first and second generation were much more likely to find partners outside their ethnic group, particularly among native whites, a pattern also found by other researchers in 1910. Translated into a contemporary context, this is like finding that Asians and Latinos tend to be endogamous, but that European immigrants are much more likely to intermarry with non-Hispanic whites. A plausible interpretation would emphasize the racial, linguistic, or cultural boundaries between groups. Our analysis suggests that—at least for 1880—this interpretation would be looking in the wrong direction; the major factor, we argue, is in the city context where people lived and formed marital unions.

Because the 1880 dataset offers unusual flexibility in the creation of contextual variables and estimation of their effects, we have a unique ability to evaluate city-level differences. Some contextual variables—the group's sex ratio that defines the ethnic marriage market and the share of

immigrants among group members—do not have consistent or strong effects. But group size, the average group occupational SEI, and segregation are all important.

Effects of group size are in the expected direction: larger groups are more endogamous, and we find that this one factor is sufficient to account for most of the difference in endogamy between the British and the two larger, newer immigrant groups. Surely it also mattered that there were obvious cultural and language similarities between the British who were arriving at this time and 3+ generation Americans. These similarities probably also contributed to the higher socioeconomic standing of the British and their lower levels of residential and occupational segregation. Nevertheless, most of the British uniqueness in propensity for exogamy can be accounted for with observed variations in group size, especially across cities. Further, group size explains the major portion of inter-city differences in endogamy versus exogamy for all three groups. This finding is theoretically important especially because it could well have been otherwise. That is, one can easily imagine a society where group boundaries are strong enough that even a very small ethnic minority would look within itself for marriage partners. In such a society, marrying a native white (*i.e.*, a member of the mainstream majority group) would be unlikely even if native whites were plentiful. The major white ethnic groups in urban America in 1880 were not so strongly bounded as that. If an Irish, German, or British man had few co-ethnic women as potential partners, they were much more likely to intermarry with another group. If there were many native whites in the local population, intermarriages were much more likely to be with native white women. This aspect of the sheer demographic situation was critical. By implication, if British immigration to the U.S. during the mid- to late 19th century had been of larger magnitude, British men would likely have been more endogamous.

Average group SEI has very strong effects on exogamy—in cities where group members have higher occupational standing, their members are more likely to marry outside the group. Presumably in these cities, the group has higher social standing, and therefore, men have wider marital choices, even after taking into account their own occupation. Unexpectedly, group SEI has negative effects for German or British intermarriage with native whites compared to intermarriage with another ethnic group. However, these negative effects are small and account for little of the variation across cities.

Residential segregation and occupational segregation between groups are the other important contextual predictors, and these have not previously been documented for white ethnic groups. A narrow interpretation is that where members of two groups are less likely to meet each other in their neighborhoods or at work, they are naturally less likely to marry. This account is consistent with the way we defined segregation in this study, limiting it to unmarried young adults. But we found similar results when measuring segregation more broadly, and we believe a broader interpretation is equally plausible. That is, segregation in both dimensions can be understood as an indicator of the strength of the social boundary between groups in a given city. Segregation is an indicator of the existence of separate social worlds in the same city, defined by ethnicity. Very likely, many marriages result indirectly from overlapping social networks, even for people who do not work or otherwise venture outside the home. In either case, we argue that housing and labor markets are the primary mechanisms through which ethnic boundaries between social networks are established and reinforced. Because these boundaries are so consequential for marriage choices, they are then reproduced across generations in family relationships.

It may be argued that the city is not necessarily the most relevant social context. Especially in the case of large cities like New York, Brooklyn, and Philadelphia, it might be more relevant to identify zones within the city and calculate contextual variables at that level. To the extent that the city is actually too large a unit, our results understate the importance of contextual variables. However, there is no impediment to replicating these analyses at other scales.

The multivariate analyses here have focused on marriage choices of men, in large part because we wished to control for the effects of occupational standing. For women, a better indicator than current occupation (as relatively few married women were employed in 1880) would be their father's occupation. Tables 2 and 3 show that there are some differences between men and women. Irish women, for example, were less likely to be endogamous than were Irish men, while the opposite was true among the British. Other historical research suggests that men and women differed in both the timing of marriage (Sassler and Qian, 2003) and in the structural predictors of intermarriage (Sassler, 2005). Such gender differences remain an important topic for future research in the late 19th century.

Social scientists understand ethnic group relations as the product of a socio-historical process in which social boundaries are constantly evolv-

ing and shifting (Omi and Winant, 1994), and it is expected that each new wave of immigration could rearrange and reshape inter-group relations. Applying that same perspective to cities within the U.S. suggests that inter-group relations should vary across the country according to demographic, cultural, and economic conditions. Our results for the late 19th century should encourage similar analyses with contemporary data. A full model of inter-group relations should include the effects of variations within groups in people's social and economic background, variations between groups in cultural and structural factors, and variations across the local contexts in which the groups interact.

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