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Immigrants, their children, and theories of assimilation: family structure in the United States, 1880–1970

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Abstract

This research employs United States census data from 1880 to 1970 to assess the influence of ethnicity and generation on the family structure of Mexican, Irish, Swedish, Italian, Polish, and native white children. Using evidence for three generations, it tests two theories, linear assimilation and segmented assimilation. Assimilation theory makes no special claims for ethnic effects, but segmented assimilation proposes that ethnicity influences the incorporation of immigrant-origin children into American society. We find few consistent ethnic effects on the probability of family type. Our principal finding is that migration itself, common to all groups, has similar consequences for all; these are revealed in generational changes in family structure. The historical periods of open immigration do differ from the contemporary period, which implies that immigration policy affects family structure. The results disconfirm segmented assimilation theory's emphasis on ethnicity in family structure, and confirm aspects of linear assimilation theory. They point to the salience of structural factors resulting from migration experience and policy, rather than ethnicity, in the evolution of family form among immigrant-origin persons.

1. Introduction

Scholarship on immigration to the United States (US) in the post-1965 era has taken as its central concern the differing fortunes of ethnic groups. The arrival of Latinos and Asians in this period has led many to argue that the linear assimilation models developed for descendants of earlier European-origin immigrants no longer serve. One part of this argument is that the rising levels of family disruption among certain immigrant-origin groups show the failure of the engine of assimilation. Because the family patterns of the immigrants from earlier periods have rarely been directly examined, we use historical data on the living arrangements of children to contribute to the debate. We compare the family structure of children of Mexican, Irish, Swedish, Italian, Polish, and native descent across the period 1880–1970; these represent the ethnicities of the first immigrant era (1840–1880, the Irish and Swedish), the second or 'classic' era (1890–1920, Italians, Poles and Mexicans), and the beginning of the contemporary era (1965–, Mexicans). Mexican-origin children offer unique insights into the assimilation process because they are the only sizeable non-European group in both the classic and

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The various R^2 statistics generated suggest that considerable confidence can be placed in the nuclear and single-mother family models; those for extension provide only moderate to weak improvement in ascertaining living arrangement choices.

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contemporary periods. We test whether immigrant-origin children diverged from native children in their family experience, whether the historical trajectory of family structure differed among ethnic groups, and whether ethnicity and generation were important factors in such trajectories. We find that generation, migration and period, rather than ethnicity, were the primary factors in the history of immigrant-origin families.

2. Theoretical models for the process of convergence

Theoretical interest in assimilation focuses on the descendants of immigrants and the rate of their convergence towards native norms. Two theories dominate the literature: linear assimilation theory and the more recently articulated segmented assimilation theory. Although a product of the early 20th century and subject to criticism in recent scholarship, linear assimilation (often simply assimilation theory) retains considerable appeal for many who see it as still the most useful way to understand how the integration of ethnic groups occurs (Morawska, 1994; Barkan, 1995; Alba & Nee, 1997, 2003). Linear assimilation predicts a steady, generational transition in which immigrant-origin groups take on the demographic, economic and cultural characteristics of natives. In family forms, distinct ethnocultural characteristics fade in strength over time and ethnic families become indistinguishable from native ones (Gordon, 1964; Goldscheider & Goldscheider, 1989; Alba, 1995; Wilmoth *et al.*, 1997; Abbasi-Shavazi & McDonald, 2000; Arias, 2001). The assimilation model implies pronounced generational effects; first-generation families are expected to be patently distinct, second-generation ones less so, and so forth.

The chief alternative to linear assimilation models emerged from the apparent failure of assimilation theory to explain contemporary assimilation patterns. Segmented assimilation theory responds to unexpected trends since 1960 in family structure, socioeconomic status, and educational achievement among descendants of certain immigrant groups (Waters, 1990; Gans, 1992; Skop, 2001). Hernandez (2004), for example, notes that 47% of children of Mexican immigrant origin live in non-nuclear settings, versus 18% for their native white counterparts. Only 5% of native children have a grandparent in the home as compared with 13% of the Mexican children. Increases in marital instability, greater incidence of female-headed families, and educational and economic deficiencies among second- and third-generation groups are all at variance with standard assimilation's predictions (Portes & Zhou, 1993; Portes, 1995).

Based on these unexpected trends, segmented assimilation theory posits two distinct assimilation trajectories for the descendants of recent immigrants (Portes & Rumbaut, 1996; Zhou, 1997). One, upward assimilation, leads towards the socioeconomic status, family structure, fertility and marital features common to the majority of native-born persons in the US. The other trajectory is downward assimilation, towards the socio-economic status and family structures among native-born groups marginalized by racial or ethnic prejudice. Thus, some immigrant groups move 'straight in the opposite direction to permanent poverty and assimilation to the underclass' (Portes & Zhou, 1994, p. 20).

The divergent trajectories of segmented assimilation are linked to the characteristics immigrants bring with them (education, skills and culture) and to the modes of incorporation offered them by the host society (economic opportunity, immigration policy and discrimination). One critical feature in the mode of incorporation offered by the host society is economic opportunity; segmented assimilation theory focuses on the lack of labour markets for the relatively unskilled and undereducated, opportunities said to be readily available to immigrants in the US economy at the turn of the century (Portes *et al.*, 2005; but see Waldinger, 2007).

Although the loss of employment opportunities has potent effects, ethnic and racial characteristics also shape assimilatory paths in the segmented model (Portes, 1995; Zhou,

1997). Here, segmented assimilation postulates two cultural explanations for divergent assimilation paths. The first finds that the stubborn cultural values of certain groups (primarily Asian in origin) lead to resistance through enclave strategies, the formation of resilient families, and an emphasis on educational success among descendants, all features of upward assimilation. A concomitant explanation contends that some ethnic groups – largely of Latino and Afro-Caribbean origin – appear to have weak cultural ties and may follow a downward assimilation path towards the norms of the marginalized populations of inner cities (Portes & Rumbaut, 2001). This path is largely a consequence of prejudice in the host population. Portes *et al.* 2005 submit that ‘Children of Asian, black, mulatto, and mestizo immigrants cannot escape their ethnicity and race, as defined by the mainstream....[because] the strong effects of discrimination...throws a barrier in the path of occupational and social acceptance’ (p. 1006). Likewise, Hernandez & Darke (1999) argue that the primary reason for a lack of economic improvement across generations among Mexican, Haitian and Dominican immigrants is that ‘racial and ethnic stratification...greatly limits their opportunities’ (p. 30). The impact of discrimination against persons whose ethnicity or race is the same as that of disadvantaged groups in the US is usually found among the children of immigrants (rather than the first generation) who turn towards the seductions of ghetto cultures, which become a primary reference for socialization (Portes & Zhou, 1993; Rumbaut, 1994; Portes & Rumbaut, 2001). Thus, from the perspective of segmented assimilation theory, while cultural values might shelter some groups from the corrosive impact of American conditions, ethnicity is for others a marker for discrimination by the majority white population that leads to negative outcomes.

The negative effects of discrimination can reputedly be seen in family structure. Rumbaut reports ‘striking increases in the prevalence of marital disruption over time in the United States and particularly in succeeding generations’ (Rumbaut, 1996, p. 27; Gil & Vega, 1996). Rapid increases in marital instability among Dominicans, Puerto Ricans and Haitians ‘mirror’ those among impoverished African Americans and native Hispanics and constitute a form of assimilation towards US norms, albeit a negative one (Fernández-Kelly & Schauffler, 1994; Portes & Zhou, 1994; Landale & Ogena, 1995; Portes, 1995; Waters, 1996). Higher rates of female-headed households among Mexican Americans may provide a model for Mexican immigrants and their descendants (Bean *et al.*, 1980; Frisbie & Bean, 1995; Landale & Oropesa, 1995). The children and grandchildren of immigrants mimic these traits rather than those of their culture of origin or of white natives (Matute-Bianchi, 1991; Suárez-Orozco, 1991; Portes, 1995, 1997). Landale & Oropesa (1995) found third-generation Latino children in 1990 much more likely than first-generation children to live in single-parent families, and substantially more likely than non-Latino white children. Hernandez & Darke (1999) located similar sharp increases in risk of single-parent families for third-generation children in 1990. Brandon (2002) notes that ‘Mexican, black, and other Hispanic children increasingly live in single-mother families, which by all measures indicates downward assimilation...’ (p. 432). Although scholars have recently raised objections to the broad claims of decline in segmented assimilation theory (Perlmann & Waldinger, 1997; Farley & Alba, 2002; Alba & Nee, 2003; Smith, 2003; Waldinger & Feliciano, 2004), the argument continues to receive substantial scholarly attention (see Portes & Rumbaut 2005a) and strident defence by its most prominent proponents (Portes *et al.*, 2005).

3. Structural explanations

Structural factors, embedded in linear assimilation theory and acknowledged in segmented models, reflect the impact on living arrangements of economic resources, demographic and geographical constraints, and contextual factors (including immigration policy). Utility maximization axioms in neoclassical economic theory, for example, suggest that persons choose the living arrangements that are most ‘profitable’ to them. Autonomous living arrangements provide the maximum utility, but are the most expensive; the concomitant rise

in average income and nuclear households among native-born Americans in the 20th century is seen as evidence of economic effects on family structure [Michael *et al.*, 1980; Schwartz *et al.*, 1984; for an opposed view, emphasizing normative change, see Ruggles (1994a) and for the author's revision of that to a largely economic view, see Ruggles (in press)]. Recent trends in countries said to possess highly familistic cultures strengthen the case for economic factors in choice of living arrangements; for example, in Japan, Taiwan and Korea, the 'trend towards ... living alone is unequivocal' (Palloni, 2000, p. 11; De Vos & Lee, 1988).

Multivariate research on contemporary living arrangements in the US generally shows that economic resources sharply reduce, but do not eliminate, the effects of ethnocultural factors. In comparative research on elderly Hispanics, Burr & Mutchler (1992, 1993a) concluded that cultural effects diminish in impact as economic status increases. Ethnic variables are still weaker when acculturation measures (such as English language acquisition) are used in the models. Kritz *et al.* 2001 found that higher probabilities of extended living arrangements for immigrant-origin groups (foreign born and US born) fall as controls are applied; ethnic effects remain significant but vary by group. Acculturation variables render foreign birth insignificant, or contrary in sign, indicating that it is the retention of an ethnic culture that influences family choices. Exposure to the US and its norms weakens ethnocultural influence, as assimilation theory predicts.

Research also demonstrates that demographic and geographical factors influence living arrangements, especially among immigrants. For example, Mincer maintains that extensive 'family ties deter migration' (Mincer, 1978, p. 758; Long, 1975), indicating that certain family forms are more likely to be found among persons who migrate, regardless of norms. Newly married couples and unmarried youth are more likely to migrate and nuclear families and solitaires should be common in the first generation (Kritz *et al.*, 2000). Van Hook & Glick (2007) show that Mexican Americans and Mexican immigrants of long duration in the US form vertically extended households (as they do in Mexico), whereas horizontal extension arises from a specific economic strategy among recently arrived immigrants who lack family members (Glick *et al.*, 1997; Blank, 1998).

Geographical setting and migratory movements affect the shape and dynamics of the family. Urban locations have a noted effect on family types, making some living arrangements more likely, and others less likely (see Ando, 1998). Regional differences in family type in the US are well established and based in part on migration patterns. Migrants from one region to another show higher rates of divorce and abandonment than sedentary groups (see Glenn & Shelton, 1985; Trovato, 1986). Interest in change in kin availability due to migration has led to the increased utilization of geographical context variables, including ethnic and nativity density measures (Hechter, 1987; Burr & Mutchler, 1993a, b; Ando, 1998). The density and composition of the ethnic population in the area of residence affects the demographic opportunities for different family types, implying a greater or lesser 'number of choices for coresidence based on proximity of relatives and other co-ethnics' (Burr & Mutchler, 1993b). Such variables have the advantage of measuring the relative level of exposure to 'native' norms.

Finally, policy particular to certain periods US immigration history may provide a significant structural influence on the family form of immigrants. Recent research suggests that the Immigration and Nationality Act (Hart-Celler Act) of 1965 encouraged vertical extension through its family reunification provisions (Burr & Mutchler, 1993b; Glick & Van Hook, 2002). Such period effects present an important interpretive difficulty in studies focused solely on the most recent immigration era, and they encourage the use of extended historical tests of the central factors identified in immigrant-origin family formation.

4. The need for historically based research

Assimilation theories are inherently historical, as they explain processes of adaptation that occur across time. Seeking a historical foundation, social scientists often take the immigration era between 1890 and 1920 as the ‘classic’ case. Most scholars view the absorption of the great waves of eastern and southern Europeans of that period as relatively straightforward (Alba, 1990; Waters, 1990; Portes & Zhou, 1993; Fernández-Kelly & Schauffler, 1994; Zhou, 1997). Portes states: ‘With exceptions, that course featured an orderly progression from the poverty and discrimination endured by the first generation to the rapid acculturation of the second generation ...’ (Portes, 1997, p. 814). Research after the Second World War on the distant descendants of classic era immigrants does reveal substantial assimilation (Sandberg, 1974; Alba, 1985).

Still, while attempts to assess certain ethnic groups’ family history exist (see Griswold del Castillo, 1984), scholars engaging in systematic, comparative research among different groups have largely confined their efforts to recent decades. Most social science assumes, rather than shows, that convergence for European-origin groups from the classic era followed a linear pattern. However, Foner (2000) found that immigrants from this era and their descendants faced daunting conditions and their reactions often mirrored the characteristics claimed to be distinct to the contemporary era. Direct research on early 20th century patterns found that the rate of convergence with native norms was quite slow and varied dramatically by group (Perlmann, 1988; Dillingham Commission [1912] in Rumbaut, 1994). Research using the 1910 census, although cross-sectional and limited in its capacity to reveal generational change, suggests that the distinct household structure of most new immigrant groups in 1910 was primarily a product of first-generation experience (Miller *et al.*, 1994). These results imply that the unusual demographic and economic circumstances of immigrants, rather than ethnic culture, explain both initial family forms and their disappearance.

Empirical work on non-European immigrant groups in earlier periods is rarer still. This is a curious deficiency, as Mexican Americans have been an important part of the story in both the classic and contemporary eras.¹ Unlike the present, in which they are among the most impoverished and poorly educated, Mexicans in the classic era shared with European immigrants lower-class backgrounds, rural origins, and poor language and educational qualifications. Both Mexican- and European-origin groups faced discriminatory practices, although hostilities towards Mexicans were more severe and certainly greater than those faced by Mexican immigrants after the Second World War (Valdés, 2000). Mexicans had almost no access to the entry-level jobs in heavy industry that scholars have argued facilitated European-origin immigrant incorporation (but see Waldinger, 2007). Portes & Rumbaut (2001) point to the potential utility of this unfortunate history: ‘Mexican immigrants have thus experienced a negative mode of incorporation not only at present but for over 100 years.... [they] represent *the* textbook example of theoretically anticipated effects of low immigrant human capital combined with a negative context of reception’ (p. 277).

5. Reconstructing the ethnic family, 1880–1970

The lack of historically based research on ethnic family formation follows from the difficulty of finding representative longitudinal data (Frisbie & Bean, 1995). Gratton *et al.* 2001 address this deficiency, describing the data files used in this research. A series of census samples between 1880 and 1970 allows a direct comparison of native children with immigrant-origin

¹Mexican immigration to the US reached its pre-Second World War peak in the 1920s, when nearly 1.5 million Mexicans entered the US (Cardoso, 1980; US Immigration and Naturalization Service, 1996; Gratton & Gutmann, 2000). These immigrants forged the regional, occupational and community links upon which subsequent Mexican immigrants depended (Skop *et al.*, 2006).

children of different ethnicities, as well as an examination of generational differences within ethnic groups, at five points in time. The governing idea in the analyses is to prepare a *historical* test of theoretical propositions that depend on historical argument. By tracking trends for ethnicities and generations, the design facilitates a test of the consistency and durability of ethnic effects, across almost a hundred years and from several immigrant periods. The data allow controls for the major economic, geographical, and demographic factors identified in the literature as affecting living arrangements. The research design tests theories of assimilation by broadening both the span of time analysed and the number of ethnic groups and generations compared. The results should provide greater certainty about the process of ethnic family formation, and about the relative merit of competing theoretical models of immigrant incorporation.

Recent tests of assimilation have focused on children (Portes & Rumbaut 2001), as they provide the generational sequence necessary for examining convergence, or the lack of it. We employ children's living circumstances as the core criterion in evaluating theoretical models, both because of a substantive interest in children in the literature, and because the measurement of individual- rather than household-level experience has useful methodological properties (King & Preston, 1990; Ruggles, 1994a; Palloni, 2000). The data are drawn from the Integrated Public Use Microdata Samples (IPUMS) (Ruggles & Sobek, 1995; Gratton *et al.*, 2001) of the federal censuses and linked through common variable definition and coding; the samples for 1880, 1910, 1920, 1960 and 1970 include parental birthplace – a necessary characteristic in our definitions of generation and ethnicity and one that permits identification up to the third generation.

The analysis examines the probability that children would live in certain family types. The effects of ethnicity and generation constitute the principal variables of interest, with controls for economic, geographical, and demographic factors. Descriptive results trace change across time in the prevalence of each family type. Three logistic regression models then provide multivariate analysis for each census year: the first tests ethnicity alone, the second generation alone, the third the interaction of ethnicity and generation. Hypotheses may be stated as follows:

1. Under linear assimilation theory we expect sharp differences between native and immigrant groups in family structure in the initial era of immigration and expect these differences to diminish across time. In the ethnicity model, ethnicity should have significant but diminishing effects; in the generational model, generation should have pronounced effects in the first generation, and weaker ones in the second. The interaction model should reveal little difference among ethnic groups in ethnic/generation interactions, revealing the same linear process.
2. Under segmented assimilation theory we expect differences between native and immigrant groups in family structure; such differences should diminish across time for some groups but increase for others. In the ethnicity model, ethnicity effects should diminish for some groups across time but not for others. In the generational model, differences between generations should not be pronounced. The third model should reveal significant and distinct generation/ethnicity interactions.

Children (persons less than 18 years of age) are the unit of analysis, and the dependent variable measures whether a child lived in one of four family types: nuclear, vertically extended, horizontally extended and single-mother families.² We define nuclear families as those in which a child had both a mother and father present; there could be siblings present, but no other relatives. Boarders and lodgers might be present, as they could in other family types. Vertically

²We follow many scholars in defining this age group as children (see Eggebeen & Lichter, 1991). We categorized vertical and horizontal extension before single motherhood; a child living with a single mother in an extended family retained the extended family definition.

extended families were those in which three related generations lived, usually those that included a grandparent of the child. Horizontally extended families were those in which other relatives lived, but only in the same generation as the parents or children, such as aunts or cousins of the child. Finally, single-mother families were those in which no husband was present.³

Ethnicity and generation constitute the principle variables of interest. Ethnicity means linkage to an immigrant past, whether the child was first, second or third generation. Each child had birthplace and parental birthplace records. For those children living with parents, grandparental birthplace could be obtained. We categorize children as Irish, Swedish, Italian, Polish, Mexican, other foreign and native white using: (1) place of birth; (2) mother's place of birth; (3) father's place of birth; (4) grandparents' place of birth when available. First, we classify all children born in a foreign country by that country's dominant ethnicity. Children born in the US, but with at least one foreign-born parent, are identified by parental birthplace information. Children born in the US who had native-born parents but foreign-born grandparents receive their ethnic classification based on grandparents' birthplaces.⁴

Although most children could be identified to the third generation, the analysis used the generational status of the parents (specifically that of the mother), as they, not the child, were the active agents in the formation of families.⁵ Hence, we classify each child as living in a first- or second-generation family, depending upon the generational status of his or her mother. We determine this generational status by (1) the mother's place of birth; (2) her mother's place of birth; (3) her father's place of birth. Children whose mothers were born in a foreign country lived in 'first-generation' families (MOMGEN1). In such families, both first- and second-generation children could live. If the mother was native born but one or more of her parents was born in a foreign country, the family was a second-generation family (MOMGEN2). Children in such families were all in the third generation. If the mother was native born and both of her parents were native born, the family was a third generation or higher family (NATIVE) and all children were in at least the fourth generation. This was the excluded category. By analysing the interaction of ethnicity and generation, we assess whether ethnic characteristics declined, remained stable, or intensified across generations, a direct test of linear and segmented assimilation theory.

³Defining the single-mother family as any 'unmarried' mother without a spouse present prompted a spirited discussion among the authors. Some women may have selected 'widow' rather than 'unmarried' to avoid social condemnation. One side argued for accepting all mothers without a spouse present who were younger than 36 years of age, whether widows or not. The other argued that widowhood, a common status even among young women in earlier periods, was not equivalent to single mother. The latter view prevailed; using age restrictions produced similar models, with some differences in variables' significance and strength.

We excluded from the analyses those living in group quarters, which were never more than 2% of children in any census year. Children whose mother's age was missing were excluded; these children lived alone, with their fathers only, or in families headed by relatives other than their parents. Losses from these exclusions fell across the series, from 8.6% in 1880 to 5.9% in 1970. We also excluded the small number of children who lived in families of mixed type, such as those both vertically and horizontally extended. We excluded native black children from the analysis because their family circumstances, radically different from both immigrant-origin and native white groups, demand special analysis. For a straightforward comparison between African American and immigrant children, see Tolnay (2004; see also Ruggles, 1994b).

⁴For children whose parents were born in different countries, the following rules applied: (1) if one parent was born in the US and one in a foreign country the child's ethnicity was that of their foreign-born parent; and (2) if both parents were foreign born but in different countries then the child's ethnicity was Other Foreign. For children whose grandparents were born in different countries, the following rules applied: (1) if the child had three or more foreign-born grandparents from the same country, ethnicity was based on that birthplace; (2) if two grandparents were from the same foreign country and two were native born, ethnicity was that of the foreign-born grandparents; (3) if there were two or more foreign grandparents, but they came from different countries, the child was Other Foreign. Children with at least three grandparents born in the US were classified as natives. Lack of national sovereignty before 1920 made it difficult to identify Polish ethnicity. Children were classified as Polish if origins could be traced to specifically identified territories (e.g. German Poland), but we allowed Polish mother tongue to override country conflicts for parents and grandparents.

⁵Indeed, in descriptive analyses the living arrangements of first- and second-generation children (both of whom live with first-generation mothers) were practically indistinguishable. The identification of single-mother households can only be done through the mother and we find no evidence in the literature that using a mother-centred definition for family forms distorts outcomes (Oropesa & Landale, 1997).

In order to assess the independent effects of ethnicity and generation, models should control for the influence of economic, geographical, and demographic factors identified in the literature. We use the occupational status of the household head, specified both as an ordinal occupational score (OCCSCORE) and as a dichotomous measure of whether the head had an occupation (NOOCCUP). Each child we located regionally (SOUTH, WEST, MIDWEST, and NORTHEAST)⁶ and whether living in a place with 2500 or more persons (URB). In order to assess demographic possibilities for family formation, we construct a propinquity measure (PROPIN), indicating whether the child lived in the same state in which she or he was born. To measure the density and composition of area populations, we use state economic areas (SEAs) in 1880, 1910 and 1920 and states in 1960 and 1970. SEAs are counties or groups of counties that share economic and social characteristics.⁷ We link five geographical characteristics to the child: the percentage of persons in the SEA/state who are of the same ethnicity (PEROFETH); the percentage of females in the SEA/state who are of the same ethnicity (FEMOFETH); the percentage of the same ethnicity population in the SEA/state who are first generation (GENOFETH); and the mean age of same ethnicity persons in the SEA/state (AGEOFETH). Finally, the age of the mother (MOMAGE) provides a customary demographic control for life-cycle effects on living arrangements.⁸

Although the censuses provide representative data for ethnic groups and have the singular quality of providing similar variables for almost a century, they lack a number of specifications useful for modelling living arrangements. As an example, only in 1940 did the census begin to ask respondents how many years of schooling they had completed. Other variables useful in assessing family types are not always available and for consistency's sake, we do not employ them. These include welfare receipt, measures of acculturation, such as command over English, and previous marital history. We do not attempt to specify period effects by testing directly the impact of policy, although the temporal series we present provides an opportunity to see their possible influence – with important results.

6. Descriptive results: children's experiences

We begin by comparing family types across ethnic groups at each census year for the period 1880–1970. Trends were adjusted to reflect annual rates of change. Although we are confident of their overall direction, linking 10-, 30- and 40-year gaps may obscure different slopes in the intervals. In Figs 1 and 2, we display the results for select ethnic groups for each of the four family types.⁹

Figure 1 demonstrates that the nuclear family type follows a clear upward trajectory across this period, a somewhat surprising trend given academic and public emphasis on the deterioration of this form for children in very recent decades. The percentage of children living with their mother, father and siblings rose across the 90-year period, peaking at 84% in 1960. There were only minor differences by ethnicity. Groups varied around the native 'norm', with some, such as Poles, marginally more likely than natives to be living in nuclear families, others, such as Mexican children, somewhat less likely, and still others higher or lower depending upon the census year. None of these differences was exceptional, and nothing in the 90-year period

⁶The states included in each regional category were based on the IPUMS 'Region' variable.

⁷For the creation of SEAs see Bogue (1951; see also Minnesota Population Center, 2007). Commonly used in morbidity analyses (see Manton *et al.*, 1987), SEAs have also been employed in studies of demographic change (Tolnay, 1996). For utility in ethnic research see Gratton *et al.* 2001. We refer to SEAs in the text, although only state-level identification was possible in 1960 and 1970.

⁸For one of the four living arrangements, single-mother families, regression models also included age squared (MOMAGESQR). Investigations of non-linearity in the models revealed non-linear age effects for single-mother families, and a second-order term was included for this family type. This was the only model so affected.

⁹We excluded some groups because of low frequency in the year or in the particular category, or because the results were repetitive of other groups' results.

predicts the sharp differences found for many groups in the period since 1970 (e.g. for Puerto Ricans; Landale & Hauan, 1992).

Despite the consistent predominance of nuclear families through 1970, other family types occasionally took on important roles for children. Vertically extended families, also shown in Fig. 1, represented the experience of about 5% of children at any point in time. Vertical extension was most likely for native children until 1960, when its incidence rose for some immigrant ethnic groups. Across the period surveyed, the *possibility* for vertical extension greatly expanded, as marriage age declined, fertility dropped and life expectancy increased (Ruggles, in press). As a result, the opportunity for vertical extension was much greater in 1960 than in 1880, and the lack of change occurred within an environment in which large increases could have been seen.

As Fig. 2 indicates, horizontal extension declined across time for all groups, falling from rather large proportions in the early 20th century when immigration peaked; after 1920 Mexican children were more likely than others to live in this form. This is a family form connected to immigration, and, except for Mexicans, rates of immigration declined in the period after 1920. The figure also shows that living in a single-mother family was unusual for children of any ethnicity throughout the period, rising from less than 2% from 1880 to 1920 to about 5% in 1970. Rates for all immigrant-origin groups were low, close to, or below, native norms, and largely invariant across the 20th century. Until 1970, Mexican-origin children, for example, were as unlikely as native children and European-origin immigrant children to live with only their mother present.

In summary, descriptive data tell us that the overwhelming majority of all children in the US lived in nuclear families and that the trend was largely towards that form and away from extension. As late as 1970, there is only a slight indication of the shifts in family form noted in more recent data. Differences between natives and immigrant-origin groups, and differences between ethnic groups, were small and inconsistent.

7. Multivariate results: ethnicity and generation in children's living arrangements

Although descriptive data portray the actual experience of children, they do not tell us whether their families were a product of their ethnicity, their generation, or of other variables that are correlated with those characteristics. Logistic regressions provide one way to control for different effects: they predict whether ethnicity, generation, or other variables affect the probability that a child will live in a certain family type. For each family type, and for each census year, we present logistic regression models for the dichotomous outcome: did the child live in this type of family or not? Because the set of independent variables and the universe of children differed among the four family types, we followed the dominant approach in the literature, using four separate logistic regressions rather than multinomial procedures (Mutchler & Burr, 1991; Ando, 1998). Our analytical strategy was to compare three models, the first with purely ethnic effects, the second with purely generational effects, and the third with an interaction term. Control variables were applied in each model, but we display them only for the third, interaction. The coefficients for controls were highly stable between the models.

Each table displays three models. Model 1 determined ethnic effects (Irish, Polish, etc.) on the probability that a child (first, second or third generation) lived in a certain family type. The excluded category was native white children. Model 2 removed the ethnic specifications and inserted generation variables for children whose mothers were immigrants or first generation, and for children whose mothers were in the second generation. Children whose mothers were

in the third or higher generation were the excluded category. Model 3 removed both the ethnic and generation terms and identified each child by the interaction of ethnicity and mother's generation. Native children (those in the fourth and higher generations) were the excluded category. Coefficients for economic, geographical, and demographic control variables, applied for all models, are presented only in this third, interaction model. The Appendix provides the acronyms for all variables in the model.

7.1. Nuclear families

Model 1 in Table 1 shows that, after controlling for economic conditions, geographical locale, etc., ethnic group membership usually reduced the probability that a child would live in a nuclear family: significant negative coefficients indicate that children in the group were less likely than natives to live in such families. This was consistent for most ethnic groups across the 90-year span. Model 2, which substituted generation for ethnicity, suggests a different reading. This model shows that, until 1960, children in families headed by foreign-born mothers (these children being first and second generation) were more likely to live in a nuclear setting than native children. Children in the third generation, living with second-generation mothers, were less likely than native children and even less likely than those in foreign families to live in nuclear settings. Ethnic coefficients in the first model reflect the impact of these third-generation children. In 1960 and 1970, however, a notable period effect appeared: *both* generations moved away from nuclear families, and the first-generation effect was stronger than the second.

The interaction term in Model 3 confirmed the proposition that what may appear to be ethnically specific family choices were largely generational influences that affected all groups. From 1880 to 1920, as positive significant coefficients indicate, most ethnic children with a foreign mother had a higher probability than native young persons of living in a nuclear family. Most ethnic children whose mothers were American born, on the other hand, had a lower chance of living in a nuclear family. Mexican children were the only consistent exception to this rule – they were less likely to live in nuclear families in both generations. The period effect can be seen in the interaction model, indicating a change beginning to appear by 1960. By this time, ethnic children of either generation were less likely to live in nuclear settings and, hence, more likely to be found in alternative family forms. The first generation has broken with its past nuclear structure.

7.2. Vertical extension

One alternative to the nuclear family is a three-generational one. The positive, significant coefficients in Model 1 in Table 2 indicate that ethnicity almost invariably raised the probability of vertical extension across the 90-year span. Holding their economic and demographic circumstances equivalent to those of native white children, those of immigrant origin were more likely to live with grandparents. All ethnic groups share this tendency, suggesting a general feature of immigration rather than an ethnically specific one (Palloni, 2000). If we replace ethnicity by generation as in Model 2, however, we have reason to doubt even this explanation, both on the grounds of demographic logic and striking period differences. In the earlier censuses, children of foreign-born mothers were *less* likely to live in vertically extended families, in concert with the descriptive data. This is demographically reasonable, given that most grandparents remained in the country of origin. Because the children of second-generation mothers were much more likely to live with grandparents, the overall probability of vertically extended families became greater for most ethnic children. By 1970, however, the negative effect of the first generation disappeared. Such families did not differ from native families. This lack of negative impact is another period effect, a sharp contrast to the earlier era. Interaction terms in Model 3 reveal only intermittent exceptions to the rule of negative effects for first-generation families in the earlier era and positive effects for children in second-

generation families. In 1960 and 1970, the negative influence of the first generation on the probability of living in a three-generation household weakens or disappears, overturning a previously consistent, and demographically expected, historical pattern.

7.3. Horizontal extension

In horizontal extension, as Table 3 demonstrates, few clear ethnic effects emerged. After controlling for other factors, Irish children were more likely to live in horizontally extended families and Italian children less likely to do so. Mexican children are notable for not differing significantly from native children, a finding considerably at odds with current commentary about this group, and at odds with the lived experience of Mexican children, which found them somewhat more likely to be in this setting. The generational model is similarly inconsistent, especially across periods. In the earlier period, a first-generation mother generally reduced the probability of horizontal extension; in 1960 and 1970, having a foreign-born mother increased it. In the contemporary era, immigrants were much more likely to form horizontally extended families than natives, but their children were not. Linking ethnicity to generation in Model 3 provided no greater clarity. Although certain groups, such as the Irish, have fairly consistent patterns, the model does not give any clear readings for the role of ethnicity or generation in horizontal extension. An explanation consistent with the steep decline seen in Fig. 2 in horizontal extension is that all groups – immigrant origin and native – moved towards smaller family forms because of broadly influential economic and demographic changes (Gratton & Gutmann, 2007).

7.4. Single-mother families

Despite the small number of children living with their mothers only, this family type merits attention because of its supposed incidence under segmented assimilation theory and because it increases the likelihood of poverty for children (Eggebeen & Lichter, 1991; Wu & Martinson, 1993). Model 1 in Table 4 indicates that ethnicity sporadically made single-mother families less likely to occur. Generational effects were, however, pronounced, such that first-generation households were much more likely to be headed by single mothers and second-generation households more likely than native households to be of this form. Interaction terms in Model 3 showed these effects most clearly. Inconsistent before this year, by 1920, first-generation households in almost all ethnic groups were more likely to be headed by single mothers. Polish children, for example, stood out for the long consistency of their greater risk, but most ethnic groups had positive first-generation effects. Children with second-generation mothers generally showed no significant difference from natives, even in the contemporary period. Thus, single-mother households appear, in this 90-year period, to be a product of migration itself.

8. Economic, geographical and demographic factors

We applied controls to all models and found that their effects were highly consistent across the three models. We review these effects for Model 3.¹⁰

¹⁰Tables 5–8 provide the chi-square for Model 3. Each is highly significant, that is, independent variables (ethnic, generational and control) raise the probability of correctly ascertaining whether a child will live in a specific family type. The chi-square is not particularly useful, as the large sample sizes in the IPUMS guarantee that models will nearly always be significant. What is lacking in most logistic regressions is a useful estimate of variance explained, in part because of criticism of generalization of the coefficient of determination to logistic regression (Hosmer & Lemeshow, 1989). Menard (2000) notes that using the SAS generated coefficient to compare the same model on different data sets is especially suspect, as each result depends on the *base rate* (that is the proportion of cases where $Y = 1$). We calculated a number of proxies for coefficients of determination, including Menard's log likelihood ratio R^2 :

$$R_L^2 = 1 - \left(\frac{\ln L_{\hat{\beta}}}{\ln L_0} \right).$$

8.1. Nuclear families

Table 5 shows that higher occupational status for the head encouraged the formation of nuclear families, and that effect became much more powerful in the more recent censuses [for confirmation of this positive relationship in recent data, see Glick *et al.* 1997]. The lack of an occupation made nuclear families less likely and much less so in the earlier period. Regional variables provided broad corrections for characteristics common to multi-state areas. In comparison with the northeast, children in the south were less likely to live in nuclear families, while those in the midwest were more likely to do so. Urban location was consistent and often substantial: in all censuses it made nuclear family life less likely for children.

Contextual variables based on SEAs measure the demographic settings in which families are formed. Propinquity taps availability of kin, primarily for native children, by measuring whether they live in the state in which they were born. If they did, they were generally less likely to live in nuclear families, conceivably because they had greater opportunity to live in alternative forms. Because propinquity consistently reduced the probability of single-mother families and raised the likelihood of vertical extension, the results are demographically and theoretically expected. The percentage of same ethnic group in the locale had inconsistent but generally positive effects on the likelihood of a nuclear family, and the percentage of females of the same ethnicity had no consistent effect. However, a child living in districts with large numbers of foreign-born co-ethnics was always more likely to live in a nuclear family. The mean age of the ethnic group displayed negative results in the earlier era and positive ones in the contemporary period. The mother's greater age also followed a period reversal, raising the probability of nuclearity in the earlier era, and decreasing it in the contemporary period.

8.2. Vertical extension

Socio-economic status again demonstrated its robust influence in levels of vertical extension. As seen in Table 6, across all censuses, the higher the occupational status of the head, the less likely the child would live with grandparents, whereas the lack of an occupation raised that likelihood. The assumed effects of lower socio-economic status must be tempered here by the fact that a grandparent heading such a household may not be poor but retired. Regional variables indicated that a child living in the midwest or the west was much less likely to live with grandparents than one living in the northeast. This was a long-term and consistent difference. Urban residence, in contrast, had no consistent effect. Among demographic specifications, propinquity regularly raised the probability of vertical extension; children who lived in the same state in which they were born were more likely to have grandparents in the home. The percentage of the same ethnic group in the locale had positive effects in the earlier period, and negative or insignificant ones in 1960 and 1970, whereas the percentage of females was only significant in 1920. The higher the percentage of the ethnic group that was foreign born, the less likely vertical extension was, consistent with demographic expectation, and a rising age in the ethnic population increased the probability, again demographically consistent. Before 1960, the older the mother, the less likely the child would live with grandparents. In 1960 and 1970, however, the age effect was reversed.

8.3. Horizontal extension

In models for horizontal extension, socio-economic status again reveals its powerful role. In the earlier period, there were two seemingly contradictory impacts. The higher the occupational score of the head of the household, the more likely the family would extend; however, a lack of occupation also raised the probability of extension. The contemporary era witnessed a reversal of both effects – higher status made horizontal extension less likely, and so did the lack of an occupation. Children in the south were generally more likely to live in extended families, those in the midwest less likely. Urban location consistently raised the probability of horizontal extension (Table 7).

In measures of demographic context, propinquity had no effect. High levels of co-ethnic immigrants in the SEA generally encouraged horizontal extension, a finding in keeping with most scholarship on immigrant household formation. The percentage of female co-ethnics had significant negative effects beginning in 1920, whereas the percentage of foreign born in the locale consistently raised the likelihood that a child would live in a horizontally extended family. The older the ethnic population, the less likely horizontal extension occurred. A similar effect can be seen in the age of the child's mother – the older the mother, the less likely the child would live in such families. Horizontal extension was an expression of relatively young, more immigrant settings.

8.4. Single-mother families

Although occupational measures suggest that lower socio-economic status is linked to single-mother family experience for children, these measures are not comparable with those for other family forms. The lack of a wage-earning husband means that the head is female, likely to be unemployed and, if employed, to have low occupational status. However, in 1960 and 1970, a better measure, the mother's educational status, was available. Models using this variable confirmed the impact of economic resources. Children whose mothers were poorly educated were much more likely to live in single-mother families. Regional variables exhibited consistent patterns. Children living in the midwest were much less likely, and children residing in the west much more likely than those in the northeast to live in single-mother families (Table 8). Those in the south were much less likely, but only in the earlier era. Urban location had a consistent, positive effect; again, the causal direction is debatable; single mothers may have migrated to cities because these provided better opportunities for sustaining a family without a male provider (Haber & Gratton, 1994).

The demographic setting offers several useful clues to the formation of single-mother families. Propinquity mattered – children whose mothers moved them from the state in which they were born had a consistently higher probability of living in a single-mother home. The larger an ethnic group's presence, especially its foreign-born proportion, the less likely a child would live with a mother only, another sign of the importance of kin networks. The proportion of females tended to raise the probability, as did the average age of the mother; the second-order term was inconsistent in sign.

9. Discussion and conclusions

Descriptive data provided little evidence of ethnic effects in the historical family experience of children. They revealed the impressive duration of a stable family system for both immigrant-origin and native white children, one moving towards the nuclear family, in stark contrast to the unstable conditions of recent decades. For nearly 100 years, ethnic children lived in families that looked very much like those of their native peers, leaving little to converge or assimilate towards. There were no signs of divergent paths of assimilation. Given the varieties of family form in regions sending migrants (Reher, 1998; Palloni, 2000; Thornton, 2001), the process of immigration seems to have encouraged great similarity and, after arrival, all immigrants encountered the invasive influences of a new American life. The lack of an ethnic effect and the lack of change over time run against the predictions of both linear and segmented assimilation theories.

In the descriptive data, the children of immigrant mothers were the most likely to live in nuclear families, and the least likely to experience vertical or horizontal extension. Although differences remain slight, children of second-generation mothers were more likely to experience extension. The broad array of ethnic groups that followed this pattern implies an economic and demographic context for family formation, rather than an ethnocultural one. Thus, ageing immigrant parents would actually be available to second-generation mothers to

shelter, and these older persons would probably be among the most vulnerable in the aged population. The vivid recollection of extended family life in many ethnic populations is probably a product of the memories of the third-generation children in these households. Although the data do not permit the analysis of ethnic children beyond that generation, research on the distant descendants of classic era immigrants shows little or no deviation from native family structure, implying that the effect is temporary (e.g. Alba, 1985). The overall argument for linear assimilation – that is, of convergence towards an American nuclear family norm – is sustained in this research, albeit beginning from a point of modest differences.

The multivariate results confirm these readings. Model 1 revealed mild ethnic effects on family structure. These did not diminish across time as linear assimilation argues; they did not shift differentially as segmented assimilation claims. No group appeared to be extraordinarily familistic. The generational test in Model 2 showed that ethnic influences were largely a mask for generational effects that conformed neither to linear assimilation's sequence of strong first-generation and weak second-generation effects, nor to segmented assimilation's weak generational effects. Model 3's interaction between ethnicity and generation provided the best reading; it confirmed linear assimilation's hypothesis of few differences between ethnicities, revealing a similar process for all groups, if not a perfectly linear one. Segmented assimilation's hypothesis of distinct generational effects for different ethnic groups was not evident. Most important, children of Mexican origin – defined by segmented assimilation as the 'textbook' case for discrimination and prejudicial treatment – did not differ from children of other ethnicities in the probability of one family structure or another and did not show a shift towards single-mother families across generations.

Linear assimilation models therefore receive support, if they are modified to accept the migration experience as foundational for all groups. Generation is manifestly more important than ethnicity. There were no clear differences between ethnic groups in the ethnicity/generation interactions and all followed a sequential generational transition. The dominant variables in all models were economic, with better economic status linked to nuclear family structures. Much of the shift not attributable to economic factors is tied to geographical movement for both immigrants and native migrants, movement that had demographic consequences. Migration produced generational demographic constraints – the lack of grandparents made vertical extension difficult for recently arrived families, whether the members were immigrants or persons moving from one state to another. Migration, more likely for young, nuclear families, made certain family forms difficult to realize and it increased the risk of fracture for married couples, leaving single mothers without ready recourse to family networks. In contrast, vertical extension was the province of the children of geographically settled, native women, who had the demographic opportunity to create such families.

By demonstrating the migration process itself to be a primary factor in ethnic family formation, we conclude that there is support for distinct economic, demographic, and geographical 'paths' to assimilation as the segmented model asserts. But there is little support for that theory's reliance on racial and ethnic prejudice and discrimination. Despite the considerable and differential prejudice faced by groups of European origin at the beginning of the century, there seems to be no noticeable, differential effect on family forms, especially across generations. The lack of negative paths in the family structure of Mexican-origin children is persuasive evidence against this racial argument. Mexican-origin persons faced much greater hostility in the earlier period than in the present, yet their family forms were, if anything, more stable in the past.

While the fundamental role of migration in family formation constitutes a central finding, the research presented here also calls for attention to period effects. Multivariate models show that well-established patterns in the period 1880–1920 gave way to new conditions in 1960 and

1970. One change was the sudden rise in vertical and horizontal extension for children in first-generation families. In 1960 and 1970 they were as likely as native children to live in vertically extended homes and they were more likely to be found in horizontally extended ones. Family reunification provisions in the 1965 Immigration Act have been brought forward to explain this phenomenon in recent data. Because of the noticeable period effects uncovered by this research, we locate the change as early as 1960. The 1952 McCarran-Walter Act may have already begun to influence immigration patterns, as the law gave higher levels of priority to the parents and adult children of US citizens (Ueda, 1994).

Although changes were slight, the percentage of children of all origins living in single-mother families rose in 1960 and 1970. This trend has since become more dramatic (Cohn & Keating, 2001), affecting some immigrant groups. For Mexicans, an upward shift would be particularly striking, as we have shown its family history to be remarkably stable up to 1970. Mexican-origin children were not more likely than native children to live in single-mother families, and, in multivariate models, Mexican ethnicity had no effect on the probability that a child would be in such a family. But research for the 1980–1992 period indicates that marital disruption increased more rapidly for Mexican-origin persons than for most groups; by 1992, levels of disruption among Mexican-origin individuals exceeded levels in the non-Hispanic white population (Bean *et al.*, 1996). Wildsmith (2004) found sharp increases in female headship among Mexican-origin women across the period 1960–1990, and in 1995 data, that third-generation women had higher rates than earlier generations.

For researchers focused on the contemporary era, such findings mean that ethnicity must be ‘a mark of permanent subordination’ (Portes & Rumbaut, 2005b, p. 986). Given the historical patterns presented in this research, it is unlikely that this can be the explanation, unless it can be shown that discrimination has suddenly emerged in a more forceful manner, which we consider unlikely. The groups most likely to bear the brunt of a more open prejudice in the past, particularly Mexicans, did not follow the pattern predicted by segmented assimilation. Scholars seeking to understand current ethnic differences in living arrangements should look less at the pernicious influence of prejudice and more at the differences in the composition and geography of the migration flow, the characteristics of the labour market in which persons of immigrant origin compete, and at changes in immigration policy.

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Appendix: Variables

Independent variables

Ethnicity

Irish, Italian, Mexican, Other Foreign, Polish, Swedish, and Native White (excluded), defined by birthplace, parental birthplace, and grandparental birthplace. See footnote 4.

Generation

MOMGEN1: 1 = mother born in a foreign country; 0 = not

MOMGEN2: 1 = mother born in the US; at least one maternal grandparent born in a foreign country; 0 = not

NATIVE: 1 = mother born in the US; both maternal grandparents born in the US (excluded)

Control variables

Economic characteristics

OCCSCORE: Median income rank for head's occupation in 1950 (range 1–80; 1–79 for 1970)

NOOCCUP: 1 = head has an occupation; 0 = head does not have an occupation

Geographical characteristics

SOUTH, WEST, MIDWEST and NORTHEAST (excluded), state of residence within IPUMS variable 'Region'

URB: 1 = living in a place with 2500 or more persons; 0 = living in an area with less than 2500 persons

PROPIN: 1 = child lives in the same state in which she or he was born; 0 = lives outside the state or foreign country of birth

Demographic characteristics

PEROFETH: Percentage of persons in the SEA/state who are of the same ethnicity as child. See footnote 7.

FEMOFETH: Percentage of females in the SEA/state who are of the same ethnicity as child

GENOFETH: Percentage of same ethnicity population in the SEA/state that are first generation

AGEOFETH: Mean age of same ethnicity persons in the SEA/state

MOMAGE: The age of the child's mother

Fig. 1.
Children living in nuclear and vertical family types.

Horizontally-Extended Family

Single Mother Family

Fig. 2.
Children living in horizontal and single-mother family types.

Table 1

Logistic regression for nuclear: ethnic and generational variables

	1880	1910	1920	1960	1970
Model 1					
Irish	-0.05	* -0.30	* -0.38	* -0.63	* -0.15
Italian	0.51 *	* -0.61	* -0.31	* -0.85	* -0.44
Mexican	-0.38	* -0.70	* -0.81	* -0.77	* -0.39
Other Foreign	-0.11 *	* -0.20	* -0.14	* -0.24	* -0.27
Polish	0.36 *	* -0.36	0.04	* -0.78	0.01
Swedish	-0.18 *	* -0.20	* -0.24	* -0.29	* -0.24
Model 2					
MOMGEN1	0.15 *	* 0.10	* 0.38	* -0.31	* -0.37
MOMGEN2	-0.12 *	* -0.14	* -0.04	* -0.23	* -0.18
Model 3					
MOMGEN1 Irish *	0.21 *	* 0.14	* 0.36	* -0.60	0.18
MOMGEN1 Italian *	0.93	* -0.36	* 0.21	* -0.67	* -0.45
MOMGEN1 Mexican *	-0.19	* -0.53	* -0.28	* -0.65	* -0.18
MOMGEN1 OtherForeign *	0.13 *	* 0.09	* 0.35	* -0.30	* -0.50
MOMGEN1 Polish *	0.75 *	* -0.13	* 0.54	* -0.51	* -0.40
MOMGEN1 Swedish *	0.07	* 0.04	* 0.26	* -0.63	* -0.34
MOMGEN2 Irish *	-0.12 *	* -0.29	* -0.21	* -0.57	* -0.30
MOMGEN2 Italian *	-0.89	* 0.20	* -0.36	* -0.85	* -0.44
MOMGEN2 Mexican *	0.09	* -0.44	* -0.23	* -0.78	* -0.57
MOMGEN2 OtherForeign *	-0.11 *	* -0.16	* -0.01	* -0.15	* -0.13
MOMGEN2 Polish *	-1.07 *	* 0.11	* -0.22	* -0.81	* 0.02
MOMGEN2 Swedish *	0.17	* -0.10	* -0.10	* -0.23	* -0.22
Number of cases	171,249	147,782	324,229	547,806	582,044

* Significant at the 5% level.

Table 2

Logistic regression for vertical: ethnic and generational variables

	1880	1910	1920	1960	1970
Model 1					
Irish	-0.06	0.16*	0.21*	0.56*	0.24*
Italian	-1.26*	1.05*	0.67*	1.17*	0.81*
Mexican	0.20	0.89*	1.03*	0.88*	0.80*
Other Foreign	0.21*	0.42*	0.32*	0.17*	0.27*
Polish	-0.32	0.42	0.06	1.02*	0.14*
Swedish	0.19	-0.58*	0.53*	0.29*	0.25*
Model 2					
MOMGEN1	-0.29*	-0.28*	-0.61*	-0.09*	-0.01*
MOMGEN2	0.12*	0.18	-0.03	0.16*	0.17*
Model 3					
MOMGEN1 Irish*	-0.055	-1.00*	-1.35*	-1.22*	-1.18*
MOMGEN1 Italian*	-1.99*	0.52*	-0.16*	0.41*	0.36*
MOMGEN1 Mexican*	-0.84	0.41	0.17	0.43	0.15
MOMGEN1 OtherForeign*	-0.18*	-0.19*	-0.53*	-0.06*	0.09*
MOMGEN1 Polish*	-1.14	0.03	0.90*	0.14	-0.04
MOMGEN1 Swedish*	-0.29	0.17	0.34*	0.06	-0.68
MOMGEN2 Irish*	0.03	0.10	-0.17*	0.75*	0.52*
MOMGEN2 Italian*	-0.14	-0.25	0.35*	1.13*	0.76*
MOMGEN2 Mexican*	0.76	0.58*	0.04	0.86*	0.94*
MOMGEN2 OtherForeign*	0.12*	0.30*	0.03	-0.01	0.03
MOMGEN2 Polish*	1.57*	-2.09*	0.08	1.03*	0.04
MOMGEN2 Swedish*	0.47	0.09	0.22*	0.21	0.26
Number of cases	171,249	147,782	324,229	547,806	582,044

* Significant at the 5% level.

Table 3

Logistic regression for horizontal: ethnic and generational variables

	1880	1910	1920	1960	1970
Model 1					
Irish	-0.05	0.46*	0.44*	0.60*	0.06
Italian	-1.22*	0.04	-0.13	-0.32*	-0.54*
Mexican	0.24	-0.09	-0.03	0.25*	0.11
Other Foreign	-0.24*	-0.05	-0.15*	0.02	0.07*
Polish	-0.65*	-0.07	-0.23*	-0.38*	-0.31*
Swedish	-0.15	-0.05	-0.22*	0.34*	-0.62*
Model 2					
MOMGEN1	-0.26*	0.06	-0.19*	0.23*	0.46*
MOMGEN2	-0.08	0.11*	0.09*	0.04	-0.001
Model 3					
MOMGEN1 Irish*	-0.11	0.45*	0.26*	1.30*	0.46*
MOMGEN1 Italian*	-1.46*	0.11	-0.22	-0.03	-0.06
MOMGEN1 Mexican*	0.46*	-0.03	-0.02	0.40*	0.34*
MOMGEN1 OtherForeign*	-0.33*	-0.04	-0.24*	0.04	0.45*
MOMGEN1 Polish*	-0.75*	-0.16*	-0.36*	-0.46*	-0.02
MOMGEN1 Swedish*	-0.15	0.17	-0.41*	0.34	-8.83
MOMGEN2 Irish*	0.03	0.50*	0.58*	0.16*	-0.08
MOMGEN2 Italian*	-0.06	-1.41*	0.24*	-0.41*	-0.74*
MOMGEN2 Mexican*	-1.59*	-0.18	-0.33	0.21*	0.11
MOMGEN2 OtherForeign*	-0.11*	-0.04	-0.06*	0.02	0.02
MOMGEN2 Polish*	0.19	0.66*	0.18*	-0.24	-0.27*
MOMGEN2 Swedish*	-9.29	0.31	-0.002	0.37*	0.41
Number of cases	171,249	147,782	324,229	547,806	582,044

* Significant at the 5% level.

Table 4

Logistic regression for single mothers: ethnic and generational variables

	1880	1910	1920	1960	1970
Model 1					
Irish	0.25	-0.29 *	-0.31 *	0.22 *	-0.09
Italian	0.88	-1.47 *	-0.54 *	-0.02	-0.06
Mexican	-0.30	0.45	0.30	0.30 *	-0.13 *
Other Foreign	0.39 *	-0.20 *	-0.03	0.36 *	0.20 *
Polish	-0.27	0.45 *	-0.05	0.26 *	-0.12 *
Swedish	-0.31	-0.34	0.23	0.13	0.24
Model 2					
MOMGEN1	0.41 *	-0.01	0.25 *	0.97 *	0.51 *
MOMGEN2	0.30 *	-0.14	0.01	0.31 *	0.13 *
Model 3					
MOMGEN1 Irish *	0.387	-0.21	0.09	1.37 *	0.14
MOMGEN1 Italian *	0.96 *	-1.28 *	-0.30	1.94 *	0.23
MOMGEN1 Mexican *	-0.23	0.54	0.66 *	1.02 *	-0.06
MOMGEN1 OtherForeign *	0.47 *	0.01	0.26 *	1.15 *	0.69 *
MOMGEN1 Polish *	-0.18	0.77 *	0.35	1.86 *	0.77 *
MOMGEN1 Swedish *	-0.58	0.04	0.84 *	2.56 *	1.88
MOMGEN2 Irish *	0.06	0.12	-0.17	0.12	-0.04
MOMGEN2 Italian *	-7.33	0.80	0.37	-0.36 *	-0.01
MOMGEN2 Mexican *	-0.35	0.66	0.59	0.28 *	-0.04
MOMGEN2 OtherForeign *	0.39 *	-0.14	0.07	0.38 *	0.16 *
MOMGEN2 Polish *	-8.08	-11.52	-0.69	0.08	-0.15
MOMGEN2 Swedish *	1.58	-1.68	-0.46	0.02	0.08
Number of cases	161,958	140,160	310,567	537,821	569,640

* Significant at the 5% level.

Table 5

Nuclear Model 3 control variables

	1880	1910	1920	1960	1970
Economic factors					
OCCSCORE	-0.001	0.01 *	0.01 *	0.04 *	0.06 *
NOOCCUP	-3.13 *	-2.42 *	-2.44 *	-0.73 *	-1.63 *
Geographical controls					
MIDWEST	0.05 *	0.23 *	0.16 *	0.27 *	0.21 *
SOUTH	-0.17 *	-0.02	-0.03	-0.10 *	-0.10 *
WEST	-0.09 *	0.11 *	0.09 *	0.04 *	-0.09 *
URB	-0.14 *	-0.35 *	-0.41 *	-0.31 *	-0.21 *
Demographic characteristics					
PROPIN	-0.05 *	-0.02	-0.05 *	-0.15 *	-0.01
PEROFETH	0.25 *	-0.03	0.15 *	-0.06	0.16 *
FEMOFETH	-0.24	-0.71 *	-0.05	0.17	0.04
GENOFETH	0.41 *	0.38 *	0.21 *	0.87 *	0.99 *
AGEOFETH	-0.02 *	-0.03 *	-0.02 *	0.02 *	0.01 *
MOMAGE	0.002 *	0.004	0.001	-0.02 *	-0.01 *
Model chi-squared (sign. <0.0001)	21683.67	10762.61	24721.89	10588.33	11666.71
Degrees of freedom	24	24	24	27	27
Number of cases	171,249	147,782	324,229	547,806	582,044

* Significant at the 5% level.

Table 6

Vertical Model 3 control variables

	1880	1910	1920	1960	1970
Economic factors					
OCCSCORE	-0.004*	-0.002	-0.001	-0.01*	-0.01*
NOOCUP	0.77*	1.14*	1.28*	0.45*	0.79*
Geographical controls					
MIDWEST	-0.17*	-0.26*	-0.16*	-0.26*	-0.35*
SOUTH	-0.07*	-0.09*	-0.02*	0.08*	0.09*
WEST	-0.27*	-0.27*	-0.18*	-0.30*	-0.23*
URB	-0.07*	0.04	0.16*	0.04	0.03
Demographic characteristics					
PROPIN	0.20*	0.14*	0.22*	0.25*	0.11*
PEROFETH	-0.08	0.22*	0.16*	-0.40*	-0.01
FEMOFETH	-0.22	0.83*	0.51	0.10	0.10
GENOFETH	-0.04	-0.85*	-0.42*	-1.04*	0.09
AGEOFETH	-0.05*	0.05*	0.04*	0.01*	0.01*
MOMAGE	-0.01*	-0.01*	-0.01*	0.01*	0.01*
Model chi-squared (sign. <0.0001)	1802.17	2437.39	6147.33	3546.21	3257.84
Degrees of freedom	24	24	24	27	27
Number of cases	171,249	147,782	324,229	547,806	582,044

* Significant at the 5% level.

Table 7

Horizontal Model 3 control variables

	1880	1910	1920	1960	1970
Economic factors					
OCCSCORE	0.01 *	0.01 *	0.01 *	-0.02 *	-0.02 *
NOOCCUP	0.30 *	0.26 *	0.25 *	-0.25 *	-0.26 *
Geographical controls					
MIDWEST	0.09 *	-0.11 *	-0.03 *	-0.12 *	-0.10 *
SOUTH	0.31 *	0.08 *	0.17 *	0.10	0.15 *
WEST	0.21 *	-0.06 *	0.02	0.001	0.05
URB	0.11 *	0.31 *	0.38 *	0.03	0.05 *
Demographic characteristics					
PROPIN	0.04	-0.05	0.02	-0.04 *	-0.004
PEROFETH	-0.25 *	-0.04	-0.41 *	0.11	0.27 *
FEMOFETH	0.23	-0.37	-0.85 *	-1.23 *	-1.60 *
GENOFETH	-0.14	0.45 *	0.66 *	1.43 *	1.43 *
AGEOFETH	-0.01 *	-0.003	0.01	-0.02 *	-0.01 *
MOMAGE	-0.02 *	-0.03 *	-0.02 *	-0.003 *	-0.02 *
Model chi-squared (sign. <0.0001)	1059.99	1348.76	2730.63	2764.18	2378.36
Degrees of freedom	24	24	24	27	27
Number of cases	171,249	147,782	324,229	547,806	582,044

* Significant at the 5% level.

Table 8

Single mothers Model 3 control variables

	1880	1910	1920	1960	1970
Economic factors					
OCCSCORE	-0.03 *	-0.16 *	-0.12 *	-0.11 *	-0.11 *
NOOCUP	4.27 *	0.59 *	1.01 *	-0.35 *	0.43 *
Geographical controls					
MIDWEST	-0.27 *	-0.07 *	-0.21 *	-0.28 *	-0.03
SOUTH	-0.21 *	-0.45 *	-0.27 *	0.11 *	0.01
WEST	1.39 *	0.23 *	0.20 *	0.44 *	0.38 *
URB	0.15 *	1.18 *	1.15 *	1.08 *	0.46 *
Demographic characteristics					
PROPIN	-0.61 *	-0.35 *	-0.51 *	-0.12 *	-0.06 *
PEROFETH	-0.59 *	-0.45 *	-0.36 *	0.47 *	-0.57 *
FEMOFETH	2.47 *	1.08 *	-1.14 *	2.08 *	1.36 *
GENOFETH	-1.49 *	-0.70 *	-1.64 *	-3.13 *	-2.93 *
AGEOFETH	-0.08 *	0.02	0.04 *	-0.11 *	-0.04 *
MOMAGE	0.12 *	0.26 *	0.18 *	0.10 *	0.03 *
MOMAGESQR	-0.001 *	0.003 *	0.01	-0.01	-0.001 *
Model chi-squared (sign. <0.0001)	7211.45	4286.37	8172.24	6525.76	7422.63
Degrees of freedom	25	25	25	28	28
Number of cases	161,958	140,160	310,567	537,821	569,640

* Significant at the 5% level.