

This PDF is a selection from a published volume from the National Bureau of Economic Research

Volume Title: Human Capital in History: The American Record

Volume Author/Editor: Leah Platt Boustan, Carola Frydman, and Robert A. Margo, editors

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-16389-X (cloth); 978-0-226-16389-5 (cloth); 978-0-226-16392-5 (eISBN)

Volume URL: <http://www.nber.org/books/bous12-1>

Conference Date: December 7-8, 2012

Publication Date: October 2014

Chapter Title: The Role of Immigrant Children in Their Parents' Assimilation in the United States, 1850–2010

Chapter Author(s): Ilyana Kuziemko, Joseph Ferrie

Chapter URL: <http://www.nber.org/chapters/c12906>

Chapter pages in book: (p. 97 – 120)

The Role of Immigrant Children in Their Parents' Assimilation in the United States, 1850–2010

Ilyana Kuziemko and Joseph Ferrie

3.1 Introduction

The process of immigrant assimilation into the destination country's labor market fundamentally involves human capital: new arrivals often have to acquire a new language or learn new skills, and in many cases adapt to economic life in an environment vastly different from that in their home country. The view of migration as an investment in human capital has a long history (Schultz 1961; Becker 1962). More recently, the study of human capital formation by immigrants has been extended by considering the broader context in which that formation occurs. Rather than viewing each immigrant in isolation, immigrant husbands and wives are shown to make joint decisions regarding the accumulation and use of human capital (Baker and Benjamin 1997; Blau et al. 2003) and immigrants' decisions are influenced by the characteristics of the larger immigrant community in which they are located, particularly immigrant enclaves (Borjas 1995). The assimilation of parents has now been linked to the assimilation of their children once the children are adults (Abramitzky, Boustan, and Eriksson 2012; Portes and Rumbaut 2001; Perlmann and Waldinger 1997; Zhou 1997).

We examine immigrant assimilation in the United States, 1870–2010, but allow for a novel influence on the human capital accumulation and exploitation of immigrants: the presence of children who migrate along with their

Ilyana Kuziemko is the David W. Zalaznick Associate Professor of Business at Columbia Business School and a faculty research fellow at the National Bureau of Economic Research. Joseph Ferrie is the Household International Inc. Research Professor of Economics and professor of economics at Northwestern University and a research associate of the National Bureau of Economic Research.

For acknowledgments, sources of research support, and disclosure of the authors' material financial relationships, if any, please see <http://www.nber.org/chapters/c12906.ack>.

parents. Kuziemko (forthcoming) presents a model in which immigrant parents can both “learn” from their children as well as “lean” on them. That is, children might enhance adults’ assimilation if, say, they can help teach their parents English. Conversely, if children learn English and serve as translators for the household, parents’ incentives to learn the language themselves falls and their assimilation is thus retarded. Kuziemko finds that California’s switch from bilingual education to English immersion in 1998 caused a significant increase in the English proficiency of immigrant children, but decreased proficiency of the adults with whom they lived. As such, leaning seems to outweigh learning in the context of recent California immigrants.

There is an extensive literature documenting the returns to English-language proficiency for immigrants, so the practical impact of the learning effect can be quite large, as can be the practical impact of the leaning effect where the children effectively substitute their own proficiency for their parents’ proficiency. Ferrer, Green, and Riddell (2006) find that differences in English-language literacy alone explain two-thirds of the earnings gap between immigrants and natives. This effect of proficiency in the host country language is particularly large for higher-skilled workers (Berman, Lang, and Siniver 2003), and differs substantially by gender, with a lower penalty for females though their penalty rises more rapidly with education than the penalty for males (Mora and Dávila 1998). The importance of proficiency in the host country’s language for immigrants’ outcomes is underscored by the much lower rate of return earned on human capital acquired outside the host country (Friedberg 2000). Proficiency facilitates not just the acquisition of new skills specific to the host country but it also makes previously acquired skills more readily transferable. To address concerns that the relationship between language proficiency and outcomes might not be directly causal but instead run through another channel (for example, if immigrants proficient in the host country language have higher earnings because they are of higher ability), Bleakley and Chin (2004) examine immigrants who arrived as children. They compare those from English-speaking countries and non-English-speaking countries, and find a strong effect of English proficiency on earnings that appears to come through the proficiency’s impact on education.

We extend the analysis of the role of children as teachers or helpers of their US immigrant parents and assess the relationship between immigrant children and outcomes for their parents in two eras (1850–1930 and 1970–2010).¹ We present several related empirical results. We first document a striking difference between the immigrants of the Great Migration and more recent immigrants—the latter were far less likely to arrive with their children or to later send for their children. These early immigrants were far more

1. See Goldin (1994) on the political economy of the decision to close borders to immigrants in the 1920s, effectively ending the Great Migration era.

likely to start families after arriving in the United States. Second, we show that assimilation appears slower for this more recent group of immigrants, though in both eras we find declining cohort quality that complicates estimates of assimilation.

Finally, we show that arriving with children during the early period appears to lead more to learning than to leaning, whereas today parents are more likely to lean on than to learn from their children. As children who migrate at very young or very old ages are unlikely to be relevant to their parents' decision to learn English or otherwise assimilate (as we will discuss in greater detail, a very young child cannot translate for the household and a very old child would have trouble learning the language herself), we use differences in the age of children at arrival as identifying variation for the leaning/learning effect. In the early period, arriving with a child of a "useful" age is associated with faster assimilation in terms of English language skills and wage growth of the household head, whereas in the current period it is associated with slower assimilation.

3.2 Immigrant Children and Their Parents' Assimilation

Kuziemko (forthcoming) provides a full description of a model of adult immigrants' human capital acquisition that takes account of the presence of these immigrants' children. As in the standard human capital model, investment decisions depend on the costs and benefits of additional units of human capital. In the present context, immigrant parents who come to the United States unable to speak English could invest in formal training to attain English proficiency (e.g., attending ESL classes). If they have children, however, they can learn English, perhaps at a lower cost, from those children. This is the "learning" effect. Here, children's human capital reduces the cost of parents' acquisition of human capital.

In some contexts, however, parents may choose to rely directly on the English-language skills of their children rather than transferring some of those skills to themselves. For example, the child may act as a translator. This is the "leaning" effect. In these cases, children's human capital acts as a substitute for the human capital of their parents. This substitution can take the form of acting as an intermediary in daily commercial transactions or helping parents seek employment.

The model does not predict whether the learning or leaning effect will dominate, but it does provide some insight into when the effect of children on adults' human capital is likely to be positive or negative. Specifically, the learning effect will be larger (the effect of children on adults' human capital will be positive and larger in magnitude) when adults have characteristics (e.g., basic literacy) that are complementary to acquiring human capital through tutoring by their children. When adults' utility from consumption goods is independent of their ability to speak English (e.g., if their own con-

sumption consists of only food or clothing, or if the surrounding community provides a wide array of goods and services that the adult immigrants can consume in their native language), the leaning effect will be larger (the effect of children on adults' human capital will be negative and larger in magnitude). Conversely, if parents highly value the labor market returns to learning English or if children are especially adept English "tutors," the leaning effect will dominate.

3.3 Data

We use the 1850 to 2010 versions of the Integrated Public Use Microdata Series (IPUMS), though rely mostly on the years 1900 to 1930 and 1970 to 2010 as the variables related to immigration in these years are more detailed than in other years. These years also cover the high-immigration period of the "Great Migration" as well as the recent wave of immigration from Central America.

Over this long span of US history, there have been substantial changes to US immigration policy that should be kept in mind throughout the following analysis (Barde, Carter, and Sutch 2006). In the period from the early 1850s through the late 1910s, immigration to the United States was, with only a few minor exceptions, "free" in that anyone able to afford passage to the United States was unimpeded in entering the country, seeking employment, and eventually becoming a citizen. This unrestricted environment ended with the imposition of a literacy test for admission in 1917 and the imposition of quotas for each country of origin in 1921 and 1924. For immigrants arriving after 1917, the ability to read and write was crucial for admission, but there remained no requirement that the immigrant be literate in English.

Beginning in the 1950s (with further changes in 1965), however, policy came to favor immigrants with particular skills in demand in the United States, as well as close relatives already in the country. The first of these changes should have resulted in the admission of more immigrants with readily transferrable skills (and presumably greater English proficiency at arrival), while the second facilitated family reunifications from which we largely abstract below by focusing on immigrants who arrived at roughly the same time as their children.

Finally, with the imposition of the restrictions beginning in 1917, large numbers of immigrants fell into either of two broad categories for the first time: those who met the restrictions and were in the United States legally and those who were able to evade detection and entered the United States despite the restriction. The second group came to comprise mainly Mexican immigrants by the 1960s. The practical impact of this complex policy history for our analysis is that, for pre-1917 immigrants, the learning or leaning was likely important across the board; but by the late twentieth century,

some groups (those selected on the basis of occupational qualifications or who entered the United States on student visas, for example) likely already possessed strong English skills, while numerous less skilled immigrants who entered the United States despite restrictions possessed little to no English proficiency. The effect of children as tutors or translators is likely to be more heterogeneous later than earlier.

In general, we focus on household heads between the ages of thirty and sixty, in their prime working years, and typically focus on those with at least one child in their household. Because we are interested in assimilation, we exclude those who immigrated as children (before the age of eighteen), given the well-documented differences in language acquisition between adults and children (see the recent survey in Singleton [2001]). We also generally focus on migrants from non-English-speaking countries, given that assimilation for those already speaking English is likely very different from that of the typical immigrant.

We generate several variables reflecting the household composition at the time of the household head's migration. First, we determine whether the eldest child is himself an immigrant, which indicates that the household head either immigrated with his children or sent for his children to immigrate after he settled. A related variable is whether the eldest child immigrated in the same year as the household head, which we use as a proxy for whether parent and child immigrated together. We also create similar variables for the household head's spouse, though we focus less on these measures in the later analysis.

The variables above likely categorize some individuals as not immigrating with their children when in fact they did, given that the IPUMS only records information about children *in the household*, not all children ever born to an individual. As such, we generally focus on households where either the householder or the spouse (almost always the wife) is no more than thirty-five years of age. This restriction reflects rather conservative bounds on when the mother likely had her first child (say, at age twenty) and the earliest point at which a child might leave the home (say, at age fifteen). As wives are generally four years younger than husbands in both periods, in most cases men in their late thirties will remain in the sample.

In figure 3.1, we graph the share of all individuals from our main analysis sample—those household heads between ages thirty and sixty who immigrated as adults from non-English-speaking countries, have at least one child in their household, and who is under age thirty-six or whose spouse is under age thirty-six—whose eldest child is also an immigrant. Figure 3.1 shows that this share has changed substantially over time. Among immigrant parents during the first Great Migration, their eldest child was very unlikely to have been born abroad. In 1920, for example, well over 70 percent of such householders' eldest recorded child was born in the United States. During

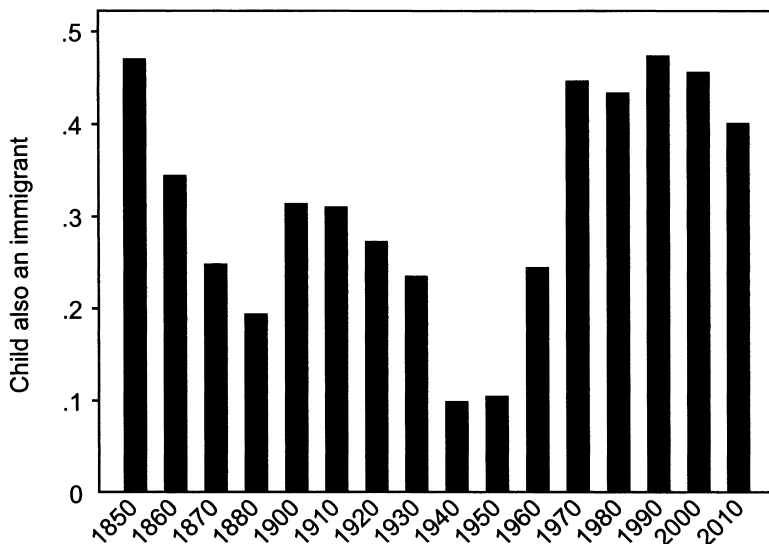


Fig. 3.1 Share of prime-age immigrant household heads with at least one child whose eldest child is also an immigrant

Notes: The sample includes all household heads born abroad who immigrated as adults (at least age eighteen) and who are at the time of the census between ages thirty and sixty. We also limit the sample to households where either the household head or the spouse are more than age thirty-five (to increase the probability that all children are still in the household).

the more recent immigration wave, nearly half of eldest children were born abroad, suggesting that householders had already begun their families in their homelands before moving to the United States.

Figure 3.2 graphs the share of our immigrant household sample whose eldest child immigrated in the same year (and thus presumably with) the householder. Year of immigration is only available for certain years in the IPUMS, and thus we plot this variable for only a subset of the years shown in figure 3.1. Again, the difference in family composition among immigrants in the Great Migration and recent years is striking. Between one-quarter and one-third of our main analysis sample immigrated with their eldest recorded child in recent years, whereas between 1900 and 1930 such an arrangement was the case only about 10 percent of the time.

Because we have far greater detail on the date of migration between 1900 and 1930 and from 1970 onward, we focus on these two periods in much of the regression analysis. Table 3.1 shows summary statistics for three groups in each of the periods. First, we show all prime-age immigrants who arrived as adults who have at least one child in the household. Second, we restrict this sample to those from non-English-speaking countries where either they or their spouse is under age thirty-six, so that readers can see the effect of our sampling restrictions. Finally, we show the sample of natives who meet

all other regression-sample requirements outside of those referring specifically to immigration.

For both the immigrant and the immigrant-regression sample, ages at the time of the census are similar for both time periods. Not surprisingly, the immigrants in the regression sample are younger, given that we are restricting householders or spouses' age, but in both periods the average age for this sample is around thirty-seven, comparable to natives.

As we focus on household heads, all samples are disproportionately male, though less so in the recent period, consistent with the rise of female-headed households over the past several decades. Similarly, marriage rates decrease between the two time periods. In both time periods, the eldest child in the household is roughly ten years old in the regression samples.

We also examine ethnic isolation in the two periods, using county as the most detailed geographic unit available in both periods. In the early period, the average immigrant in our regression sample lived in a county with a 17.9 percent immigrant share. This share drops slightly to 16.6 percent in the recent period. Similarly, the average immigrant in the earlier period had a slightly higher share of immigrants from the same country in his county

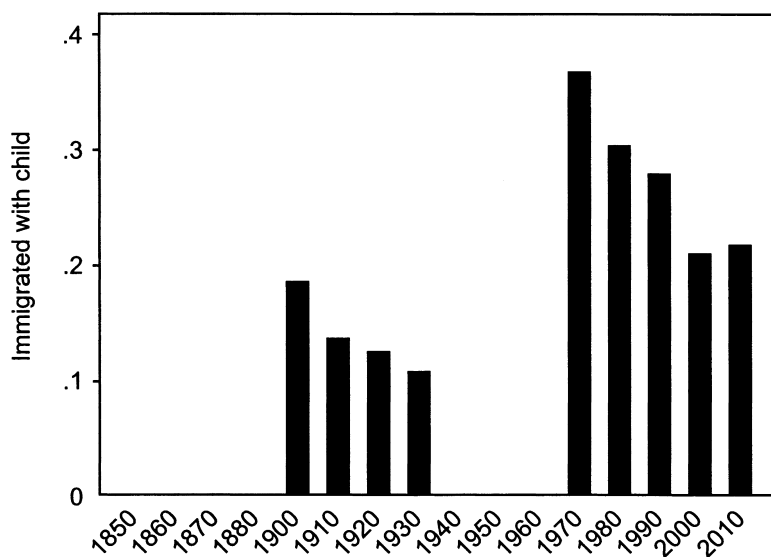


Fig. 3.2 Share of prime-age immigrant household heads with at least one child who immigrated with eldest child

Notes: The sample includes all household heads born abroad who immigrated as adults (at least age eighteen) and who are at the time of the census between ages thirty and sixty. We also limit the sample to households where either the household head or the spouse are more than age thirty-five (to increase the probability that all children are still in the household). Year of immigration is only available for selected years, so we can only determine whether a child immigrated with his parent for this subset.

Table 3.1 Summary statistics, immigrant parents from 1900 to 1930 versus 1970 to 2010

	1900–1930			1970–2010		
	(1) Immigr.	(2) Reg. samp.	(3) Native	(4) Immigr.	(5) Reg. samp.	(6) Native
Age	44.93 (8.218)	37.27 (4.679)	36.62 (4.772)	43.68 (7.970)	36.35 (4.108)	35.71 (3.807)
Male	0.910 (0.287)	0.968 (0.177)	0.945 (0.228)	0.714 (0.452)	0.737 (0.440)	0.726 (0.446)
Married	0.875 (0.331)	0.958 (0.200)	0.933 (0.251)	0.766 (0.424)	0.805 (0.396)	0.777 (0.416)
Age of eldest child in household	15.49 (7.700)	9.247 (5.074)	9.672 (5.143)	14.88 (7.792)	9.443 (5.537)	10.20 (5.404)
Immigrant share of county	0.174 (0.0763)	0.179 (0.0790)	0.134 (0.0729)	0.172 (0.105)	0.166 (0.103)	0.0986 (0.0768)
Share of county from same homeland	0.0464 (0.0513)	0.0462 (0.0541)		0.0376 (0.0530)	0.0383 (0.0521)	
Age at arrival	25.99 (7.026)	24.05 (5.064)		28.91 (8.027)	25.95 (5.691)	
Years since migration	18.94 (8.956)	13.21 (5.748)		14.77 (8.793)	10.40 (5.873)	
Eldest child of HH head is an immigrant	0.280 (0.458)	0.241 (0.432)		0.437 (0.514)	0.382 (0.501)	
Eldest child immigrated same year as HH	0.136 (0.346)	0.102 (0.304)		0.248 (0.439)	0.219 (0.420)	
Spouse is also an immigrant (conditional on being married)	0.851 (0.356)	0.869 (0.337)		0.866 (0.341)	0.875 (0.330)	
Spouse immigrated same year (conditional on being married)	0.332 (0.471)	0.301 (0.459)		0.412 (0.492)	0.388 (0.487)	
Speaks English	0.875 (0.331)	0.827 (0.378)		0.925 (0.263)	0.923 (0.267)	
Occupational earnings score, 1950 basis	49.54 (26.25)	49.44 (24.61)	45.10 (31.08)	46.58 (28.49)	45.78 (28.49)	54.26 (27.06)
Share of all prime-age immigrants	0.252	0.0835		0.246	0.0977	
Observations	78,000	25,873	231,852	148,988	57,155	722,301

Notes: Columns (1) and (4) sample includes all immigrant parents between ages thirty and sixty who arrived as adults (at least age eighteen) and who are household heads. Columns (2) and (5) restrict this sample to those from non-English-speaking homelands and who are either under age thirty-six or whose spouse is under age thirty-six. Columns (4) and (6) include natives who otherwise meet the conditions in columns (2) and (5). The bottom of the table shows the share of all prime-age immigrants for which this group accounts. As in the regression tables, IPUMS person-weights are always used.

than does his counterpart today, which Lazear (1998) and others suggest could retard assimilation.² But the comparison to natives is instructive—immigrants in the early period were not more concentrated, there were just

2. Conversely, ethnic segregation might promote income growth, as Edin, Fredriksson, and Aslund (2003) find using random assignments of immigrants to different districts in Sweden.

significantly more numerous. The average *native* in the early period lived in a county that was 13.4 percent immigrant, compared to 9.8 percent today.

Even though we restrict the sample to those who immigrated after age eighteen, there is a small difference in age at arrival between the two periods. In the earlier period, the average householder in our regression sample arrived at age twenty-four, whereas that age had climbed to twenty-six in the more recent sample. Not surprisingly, given the similarities in average age, the earlier arrival among immigrants in the earlier period translates to longer time since arrival—thirteen years versus ten years in the more recent period.

As demonstrated in figures 3.1 and 3.2, the eldest child is far less likely to be an immigrant or to have immigrated with the householder in the early years as in the more recent years. As noted above, householders are less likely to be married, but conditional on being married they are equally likely to be married to another immigrant (84 versus 86 percent in the early versus later period). As with children, in the more recent period the householder was also far more likely to have arrived with his spouse (39 percent did so as opposed to 30 percent earlier).

We tend to focus on two outcome variables in the regression analysis. Readers should note that we are somewhat limited in terms of finding outcome variables that are recorded in both periods—for example, wages and income are only recorded beginning in 1940. Our first outcome is the occupational score, based on the 1950 income distribution. As table 3.1 shows, immigrants have a higher score than natives in the earlier period, though this difference is completely accounted for by residential location—immigrants tend to live in urban areas where wages are higher—and once urbanicity controls are added immigrations have significantly lower scores than natives.

The second outcome variable is whether an immigrant reports speaking English. This variable was coded somewhat differently in 1900–1930 and in 1970–2010, with immigrants in the former group being asked only whether they speak at all and the latter group being asked whether they speak at all, speak well, or speak very well. To make both measures binary, we code “Speaks English” as one if an immigrant reports speaking English, regardless of how well. Our recoding suggests that immigrants today report better English skills. However, given how differently the question is asked in the two periods, we focus on within-time-period comparisons.

At the bottom of table 3.1, we show the share of all prime-age immigrants for which our samples account. The first set of restrictions (that an immigrant had come to the United States as an adult and that they have at least one child) leaves a sample that accounts for one-quarter of all immigrants in both periods. The additional assumptions (that an immigrant comes from a non-English-speaking family and be under age thirty-six or have a spouse under that age) leave a sample that accounts for roughly 9 percent of all prime-age immigrants in both periods. It is important to emphasize that our work obviously speaks to the subset of immigrants who arrive as adults

and who eventually have children, and should not be generalized to other immigrant populations.

3.4 Regression Results on Assimilation

3.4.1 Basic Regression Results

Table 3.2 reports regression results on assimilation, separately for the two periods. All regressions include census-year fixed effects as well as the controls listed in the table.

Columns (1) to (5) examine the early period. The effect of being an immigrant on occupational score is strongly negative. Assimilation, as proxied by the coefficient on the years since migration (*YSM*) variable, is sizable. For example, taken literally, the coefficients in column (1) suggest that an immigrant who arrives at the age of twenty will have caught up with a native of similar demographic background by the age of forty-seven.

In column (2) we add birthplace fixed effects (which subsumes the main effect of being an immigrant). In this case, the coefficient on *YSM* is slightly smaller, though still positive and highly significant.

As the relationship between our outcomes and years since migration is unlikely to be linear over very large ranges, it is useful to make sure the relationship is not being driven by outliers. Moreover, immigrants who arrive with children are much more likely to be relatively recent arrivals (or else their children would be out of the household and thus not make our sampling restrictions), so not putting some restriction on the *YSM* variable means we are confounding the effect of *YSM* with having immigrant children in the household. As such, column (3) restricts the sample to those who arrived no more than fifteen years before the census record. This restriction substantially increases measured assimilation rates.³

Given that the gender composition of householders change between our two periods, it is useful to examine men in isolation (column [4]). Not surprising, given that men are the large majority of the sample in this period, the coefficient barely changes.

Column (5) examines English skills, so natives are no longer an appropriate control. The coefficient on years since migration suggests that the probability an immigrant reports speaking English increases by 2.3 percentage points a year.

Columns (6) through (10) perform the parallel analysis on the 1970–2010 sample and suggest far more limited assimilation—and in some specifications, regression—in the more recent period. In column (5), the coefficient

3. The effect of limiting the *YSM* variable is quite robust. The same drastic decrease in measured assimilation for the recent period occurs when the cutoff is twenty or ten as opposed to fifteen years.

Table 3.2 Measures of assimilation

	1900–1930			1970–2010						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Occ. score			Speaks Eng.			Occ. score			Speaks Eng.
Immigrant	-6.579*					-11.25*				
	[0.343]					[0.176]				
Years since migration	0.240*	0.165*	0.241*	0.251*	0.0234*	0.189*	0.319*	-0.00388	-0.00536	0.00760*
	[0.0176]	[0.0176]	[0.0679]	[0.0690]	[0.00101]	[0.00992]	[0.0102]	[0.0305]	[0.0338]	[0.000356]
Age	1.279*	0.796*	0.858*	0.836*	-0.00284	2.870*	2.603*	2.544*	2.385*	-0.00901**
	[0.119]	[0.116]	[0.123]	[0.125]	[0.00777]	[0.0855]	[0.0842]	[0.0880]	[0.0934]	[0.00400]
Age squared	-0.0191*	-0.0121*	-0.0127*	-0.0124*	-0.0000437	-0.0364*	-0.0334*	-0.0323*	-0.0306*	0.0000797
	[0.00151]	[0.00147]	[0.00156]	[0.00158]	[0.000103]	[0.00114]	[0.00112]	[0.00118]	[0.00124]	[0.0000537]
Male	26.97*	23.84*	23.88*		0.133*	17.32*	17.15*	17.62*		0.0693*
	[0.317]	[0.311]	[0.327]		[0.0187]	[0.0762]	[0.0754]	[0.0777]		[0.00320]
Urban	26.79*	23.07*	23.67*	24.55*	0.0118***	-1.815*	-1.872*	-1.700*	-1.466*	-0.00992*
	[0.130]	[0.134]	[0.145]	[0.148]	[0.00711]	[0.100]	[0.0997]	[0.105]	[0.129]	[0.00308]
Mean, dept. var.	44.59	44.59	43.69	44.65	0.757	54.25	54.25	54.71	59.25	0.915
Includes natives?	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
Yrs. since migration	All	All	Under 25	Under 25	Under 25	All	All	Under 25	Under 25	Under 25
Gender	Both	Both	Both	Men	Both	Both	Both	Both	Men	Both
Observations	214,590	214,590	189,899	182,484	14,633	675,231	675,231	638,916	481,447	39,250

Notes: All immigrant observations are household heads between the ages of thirty and sixty with at least one child in the household, who are under age thirty-six or whose spouse is under age thirty-six, who immigrated from non-English-speaking countries, and who immigrated as adults. Natives in the sample meet all these conditions as well, outside those related to immigration. “Occ. score” is the occupational earnings score using the 1950 income distribution. “Speaks Eng.” is an indicator variable for speaking English at any level (in earlier years, there is only a yes/no answer allowed for this question, whereas in later years respondents are asked how well they speak). “Years since migration” is coded as zero for nonimmigrants. All regressions include fixed effects for census year. “Urban” is an indicator for living in a city large enough to be recorded in the census.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

on years since migration is slightly smaller than that of column (1). Taking the results literally, it would take an immigrant today roughly sixty years to catch up with natives with similar background characteristics. Adding birth-place fixed effects in column (6) increases the *YSM* coefficient substantially.

However, the assimilation effects in this recent period appear entirely driven by outliers in the *YSM* variable. Excluding those who migrated more than fifteen years prior to the census record substantially affects the point-estimate, and it flips sign and becomes negative (though insignificant).⁴ Because of our focus on assimilation while the child is ostensibly still in the house, we generally retain this restriction throughout the rest of the chapter, though we return later to why this restriction might be so consequential in the later years.

As in the earlier period, including only men in column (9) does not change the results appreciably.

In the final column of table 3.2 we examine English skills. While immigrant household heads from this era appear to gain English skills each year in the United States, they do so at roughly one-third the rate of their counterparts from 1900 to 1930.

In summary, assimilation (either in earnings score relative to natives or in terms of English skills) for the earlier period is substantial and robust. In the later period, it is far more sensitive to specification and disappears when we restrict the sample to those who are relatively recently arrived. Our results on limited assimilation in the current period is consistent with Borjas (2013).

3.4.2 Controlling for Year-of-Arrival Effects

As noted by Borjas (2002) and others, years since migration can conflate two effects—time in the United States as well as differences in “cohort quality” related to year of arrival. For example, a positive coefficient on years since migration could signify either the assimilation effects of time in the United States or higher quality of earlier cohorts (or, of course, some mix of both).

In table 3.3, we repeat the analysis in table 3.2 but add fixed effects for year of arrival. Natives are required to identify the census year effects and as such we only examine the earning score outcome, not English proficiency. Comparing the coefficients in the first four columns of tables 3.2 and 3.3 suggest that much of the positive effect attributed to years since migration may be coming from declining cohort quality. While the effect is still positive in the early period, it is reduced by about half, depending on the specification. These results are consistent with Abramitzky et al. (2012)—they find that once cohort quality and selective return migration are accounted for, assimilation during the Great Migration appears minimal.

4. This result is robust to choosing ten or twenty years instead of fifteen as the maximum value of *YSM*.

Table 3.3 Measures of assimilation (with year-of-arrival fixed effects)

	1900–1930			1970–2010				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Years since migration	0.0846* [0.0221]	0.0712* [0.0218]	0.154*** [0.0879]	0.168*** [0.0895]	-0.0288** [0.0138]	0.183* [0.0139]	-0.156* [0.0478]	-0.169* [0.0538]
Age	1.278* [0.119]	0.795* [0.117]	0.854* [0.124]	0.832* [0.125]	2.880* [0.0854]	2.599* [0.0843]	2.541* [0.0880]	2.379* [0.0934]
Age squared	-0.0190* [0.00151]	-0.0121* [0.00147]	-0.0127* [0.00156]	-0.0124* [0.00158]	-0.0366* [0.00114]	-0.0334* [0.00112]	-0.0322* [0.00118]	-0.0306* [0.00123]
Male	26.94* [0.317]	23.82* [0.311]	23.89* [0.327]	24.55* [0.148]	17.39* [0.0762]	17.18* [0.0754]	17.64* [0.0777]	
Urban	26.77* [0.130]	23.04* [0.134]	23.67* [0.145]	24.55* [0.148]	-1.783* [0.100]	-1.937* [0.0999]	-1.755* [0.105]	-1.495* [0.130]
Mean, dept. var.	44.59 Yes	44.59 Yes	43.69 Yes	44.65 Yes	54.25 Yes	54.25 Yes	54.71 Yes	59.25 Yes
Includes natives?	All	All	Under 25	Under 25	All	All	Under 25	Under 25
Yrs. since migration	Both	Both	Both	Men	Both	Both	Both	Men
Gender	214,590	214,590	189,899	182,484	675,231	675,231	638,916	481,447
Observations								

Notes: All immigrant observations are household heads between the ages of thirty and sixty with at least one child in the household, who are under age thirty-six or whose spouse is under age thirty-six, who immigrated from non-English-speaking countries, and who immigrated as adults. Natives in the sample meet all these conditions as well, outside those related to immigration. “Occ. score” is the occupational earnings score using the 1950 income distribution. “Speaks Eng.” is an indicator variable for speaking English at any level (in earlier years, there is only a yes/no answer allowed for this question, whereas in later years respondents are asked how well they speak). “Years since migration” is coded as zero for nonimmigrants. All regressions include fixed effects for census year. “Urban” is an indicator for living in a city large enough to be recorded in the census.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

We find similar evidence of declining cohort quality in the recent period. With year-of-arrival fixed effects, the coefficient on years since migration is close to zero or negative. Interpreted literally, the negative years since migration coefficients in columns (5), (7), and (8) of table 3.3 suggest that, as their time in the United States increases, these immigrants are not assimilating but are instead moving farther away from the native born. This finding likely results from our selection criteria: all of the immigrants in our sample arrived after age eighteen, so they are for the most part at ages when they arrive that are consistent with having received most, if not all, of their education prior to arrival. With human capital that is poorly matched to that in demand in the United States at arrival, they are running farther and farther behind natives as time in the United States increases, as the skills of the latter are more appropriate to the US labor market. Mora and Dávila (1998) find that years since migration has a similarly negative effect when they focus exclusively on immigrants who received all of their education abroad.

In summary, once cohort quality is controlled for, we find very slower assimilation in the earlier period and little if any assimilation in the current period. Note that because we cannot control for selective return migration, these results likely overstate the progress that immigrants make relative to similar natives.

3.5 The Role of Children in the Assimilation of Their Parents

3.5.1 Basic Results

Tables 3.4 and 3.5 explore how assimilation varies with whether the householder had started his family before immigrating. Table 3.4 is the analogue of table 3.2 in that it does not include cohort fixed effects and since it compares groups of immigrants to each other, we no longer use natives as a comparison group. Table 3.5 uses natives as a control in order to identify cohort effects (and thus drops regressions with speaking English as the outcome). The main difference between these tables and the ones in the previous section is that they now include controls for family composition as well as interacts those family composition controls with the *YSM* variable to examine how family composition covaries with assimilation.

Like the earlier tables, the first half of the columns in tables 3.4 and 3.5 focuses on the Great Migration period. Column (1) of table 3.4 suggests that, with respect to occupational score, immigrant parents who arrived with a child experienced similar assimilation patterns to immigrant parents who began their families in the United States. The main effect of arriving with a child is negative and marginally significant and the effect on the assimilation rate (the *Arrive with a Child* \times *YSM* interaction term) is positive but insignificant. Assimilation with respect to English is potentially more affected—the main effect of arriving with a child is significantly negative but assimilation

Table 3.4 Relationship between assimilation and family composition

	1900–1930			1970–2010				
	(1) Score	(2) Speaks	(3) Score	(4) Speaks	(5) Score	(6) Speaks	(7) Score	(8) Speaks
Eldest child immigrated same year as HH	-2.203*** [1.191]	-0.0970* [0.0209]	-2.043*** [1.078]	-0.124* [0.0189]	-0.757 [0.539]	-0.0297* [0.00592]	-1.221** [0.553]	-0.0544* [0.00605]
Eldest child of HH is an immigrant								
Eldest child in household arrived same year x <i>YSM</i>	0.0719 [0.143]	0.00765* [0.00250]			-0.0985 [0.0706]	0.00275* [0.000764]		
Eldest also an immigrant x <i>YSM</i>			0.131 [0.115]	0.0103* [0.00202]			-0.198* [0.0632]	0.00368* [0.000683]
Years since migration	0.161** [0.0671]	0.0208* [0.00118]	0.132*** [0.0783]	0.0176* [0.00137]	0.0510 [0.0427]	0.00555* [0.000455]	0.0625 [0.0483]	0.00390* [0.000519]
Mean, dept. var.	48.66	0.761	48.66	0.761	46.16	0.925	46.16	0.925
Obs.	14326	14293	14326	14293	39142	36153	39142	36153

Notes: All observations are household heads between the ages of thirty and sixty with at least one child in the household, who are under age thirty-six or whose spouse is under age thirty-six, who immigrated from non-English-speaking countries, and who immigrated as adults and no more than fifteen years before the census record. All regressions include birthplace fixed effects. “Occ. score” is the occupational earnings score using the 1950 income distribution. “Speaks Eng.” is an indicator variable for speaking English at any level (in earlier years, there is only a yes/no answer allowed for this question, whereas in later years respondents are asked how well they speak). All controls included in table 3.3 are included but not reported.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

Table 3.5 Relationship between assimilation and family composition (adding natives and year-of-arrival fixed effects)

	1900–1930		1970–2010	
	(1)	(2)	(3)	(4)
Eldest child immigrated same year as HH	–1.860 [1.286]		–0.0746 [0.496]	
Eldest child of HH is an immigrant		–1.424 [1.045]		–0.464 [0.464]
Eldest child in household arrived same year x <i>YSM</i>	0.0694 [0.138]		–0.133** [0.0583]	
Eldest also an immigrant x <i>YSM</i>		0.0444 [0.0924]		–0.263* [0.0433]
Years since migration	0.0991** [0.0479]	0.0828 [0.0545]	–0.00793 [0.0310]	–0.00445 [0.0337]
Mean, dept. var.	44.14	44.14	54.44	54.44
Obs.	201,388	201,388	653,291	653,291

Notes: All immigrant observations are household heads between the ages of thirty and sixty with at least one child in the household, who are under age thirty-six or whose spouse is under age thirty-six, who immigrated from non-English-speaking countries within fifteen years of the census record, and who immigrated as adults. Natives in the sample meet all these conditions as well, outside those related to immigration. “Occ. score” is the occupational earnings score using the 1950 income distribution. “Speaks Eng.” is an indicator variable for speaking English at any level (in earlier years, there is only a yes/no answer allowed for this question, whereas in later years respondents are asked how well they speak). “Years since migration” is coded as zero for nonimmigrants. All regressions include fixed effects for census year and birthplace fixed effects. “Urban” is an indicator for living in a city large enough to be recorded in the census. All controls included in table 3.3 are included but not reported.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

is significantly faster. This effect could be consistent with the parent at first relying on his child to learn the language and broker for the family, but then later having the child teach the language to him. (Similarly, Baker and Benjamin [1997] argue that husbands rely on their wives to take paying jobs while the husbands invest in human capital). Similar patterns arise in columns (3) and (4) where instead of comparing parents who immigrated with their children to other parents, we compare parents whose children are also immigrants (but perhaps came to the United States later) to other parents.

As in tables 3.2 and 3.3, the patterns are quite different in the more recent period. Most notably, the interactions with years since migration are either negative or they are positive but substantially smaller in magnitude than in the earlier period. In column (5), while parents who arrive with children start out with an advantage when occupational score is the outcome, they assimilate at slower rates than other parents. In fact, while other parents make some progress (the coefficient on *YSM* is positive), parents with children regress. In column (6), while parents who arrive with children learn English

slightly faster, the advantage is substantially smaller than in the 1900–1930 period. The same patterns emerge in the final two columns where, as in columns (3) and (4), we compare parents whose children are also immigrants (but perhaps came to the United States later) to other parents.

Table 3.5 repeats the analysis for occupational score, but includes natives and cohort-arrival fixed effects. The results are very similar—the presence of immigrant children retards assimilation much more in the recent period than during the Great Migration.

3.5.2 Can We Separate Treatment and Selection Effects?

An important question is whether the presence of children has a true treatment effect on their parents' assimilation, or whether parents arriving with children are differentially selected. We make an imperfect attempt to separate these two stories by using variation in the age of children at arrival.

The learning/leaning mechanism requires children to fall in a certain age range—too young, and they would be unable to perform any meaningful household functions involving translation; too old, and they would have no advantage over their parents in terms of learning the language. Newport (2002) reviews the research on the so-called “critical period”—after infancy but before puberty—when humans are best positioned to learn a second language. Bleakley and Chin (2004) use this idea to construct an instrument for language skills based on age at arrival and estimate a large wage premium for English language skills.

We thus make the rather arbitrary assumption that parents whose eldest child is between the ages of six and twelve at arrival have the greatest scope to either “lean” or “learn,” though our results are not sensitive to changing the cutoffs by one year in either direction. Note that we choose a maximum age that is slightly above most “critical period” thresholds based on the idea that there would often be younger children who fall in the critical-period threshold if the eldest child is twelve. As such, our regression sample is now limited to those migrants who arrived with a child and the variable of interest is a dummy for arriving with an eldest child between six and twelve interacted with *YSM*. Our implicit assumption is that while arriving with children may be driven by differences in selection, their exact age has at least some random component.

Table 3.6 shows striking differences between the two time periods. In the Great Migration period, arriving with an eldest child in this specified age range promotes assimilation with respect to both the earnings score and English language skills, though only the language skills are statistically significant. Immigrants arriving with an eldest child in this age range gain English skills 49 percent more quickly than do immigrants arriving with an eldest child outside this range.

By contrast, arriving with an eldest child in this age range is associated with slower assimilation in the recent period. Again, the results on earnings score are not significant, but those arriving with an eldest child between ages

Table 3.6 Relationship between assimilation and immigrant children's ages

	(1) Score	(2) Speaks	(3) Score	(4) Speaks
Arrive with eldest child age 6–12 x <i>YSM</i>	0.124 [0.298]	0.0115** [0.00561]	-0.178 [0.128]	-0.00441* [0.00154]
Years since migration	0.191 [0.165]	0.0234* [0.00313]	-0.0899 [0.0800]	0.0127* [0.000958]
Observations	2300	2398	10353	10399

Notes: All observations are household heads between the ages of thirty and sixty with at least one child in the household, who are under age thirty-six or whose spouse is under age thirty-six, who immigrated from non-English-speaking countries the same year as their eldest recorded child, and who immigrated as adults and no more than fifteen years before the census record. All regressions include birthplace fixed effects. “Occ. score” is the occupational earnings score using the 1950 income distribution. “Speaks Eng.” is an indicator variable for speaking English at any level (in earlier years, there is only a yes/no answer allowed for this question, whereas in later years respondents are asked how well they speak). All controls included in table 3.3 as well as a dummy for arriving with an eldest child between six and twelve years of age are included but not reported.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

six and twelve acquire English 34 percent more slowly than adults arriving with an eldest child outside this age range.

3.5.3 Robustness Checks and Additional Specifications

One of the most significant differences between migrants today and in the earlier period is growth in immigration from Mexico. Fully one-quarter of our immigrant sample in the recent period are from Mexico, whereas that share was less than three percent during the Great Migration.

Table 3.7 replicates table 3.3 but excludes Mexicans (in both periods). The coefficients from the early period barely move, consistent with minimal Mexican migration during the period. More importantly, the coefficients in the recent period are also largely unaffected. Even after Mexicans are excluded, assimilation appears slower in the recent years (in every specification, the main effect of *YSM* is larger during the Great Migration) and the effect of children on assimilation is negative, or is positive, but smaller than that of the earlier period.

We experimented with additional specifications that we do not report but are available upon request. Family-composition effects might change as a function of the gender composition of children.⁵ As such, the propensity

5. Goldin (1979) investigates the determinants of child labor in 1800s Philadelphia. She finds that immigrant and nonimmigrant parents in the 1800s were very similar with respect to sending their sons to work, but immigrant households were much more likely than their native counterparts to send their daughters to work as well (though these daughters were still less likely to work than their brothers).

Table 3.7 Relationship between assimilation and family composition (excluding Mexicans)

	1900–1930			1970–2010				
	(1) Score	(2) Speaks	(3) Score	(4) Speaks	(5) Score	(6) Speaks	(7) Score	(8) Speaks
Eldest child immigrated same year as HH	-2.578** [1.305]	-0.121* [0.0226]			-0.733 [0.640]	-0.0214* [0.00488]	-1.081 [0.665]	-0.0360* [0.00506]
Eldest child of HH is an immigrant			-2.159*** [1.138]	-0.136* [0.0197]				
Eldest child in household arrived same year x <i>YSM</i>	0.152 [0.157]	0.0117* [0.00271]			-0.161*** [0.0886]	0.00270* [0.000666]		
Eldest also an immigrant x <i>YSM</i>			0.146 [0.121]	0.0122* [0.00210]			-0.258* [0.0794]	0.00300* [0.000595]
Years since migration	0.222* [0.0696]	0.0222* [0.00120]	0.194** [0.0809]	0.0189* [0.00140]	0.0525 [0.0535]	0.00384* [0.000397]	0.0699 [0.0599]	0.00273* [0.000447]
Mean, dept. var.	49.69	0.786	49.69	0.786	51.69	0.963	51.69	0.963
Obs.	13,522	13,496	13,522	13,496	28,051	25,487	28,051	25,487

Notes: All observations are household heads between the ages of thirty and sixty with at least one child in the household, who are under age thirty-six or whose spouse is under age thirty-six, who immigrated from non-English-speaking countries *excluding Mexico*, and who immigrated as adults and no more than fifteen years before the census record. All regressions include birthplace fixed effects. “Occ. score” is the occupational earnings score using the 1950 income distribution. “Speaks Eng.” is an indicator variable for speaking English at any level (in earlier years, there is only a yes/no answer allowed for this question, whereas in later years respondents are asked how well they speak). All controls included in table 3.3 are included but not reported.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

of parents to learn or lean might depend in interesting ways on the gender composition of their children, and these differences may have changed over time with changing gender roles and expectations of daughters (see Goldin 2006). Somewhat surprisingly, there is no differential effect of the gender of the eldest child. In neither the Great Migration nor the recent period are parents more or less likely to lean or learn if they have a son as opposed to a daughter.

Neither are their differential effects based on the sex of the parent. Whereas women were very unlikely to be household heads in the Great Migration, there are enough female householders in the recent period to meaningfully compare men and women. We find no significant differences in how children affect assimilation measures for mothers versus fathers.

In summary, we draw three conclusions from this and the previous two sections. First, immigrant parents are substantially more likely to immigrate with their children today than they were during the Great Migration. Second, the correlation between years in the United States and assimilation outcomes such as occupational score and English skills was substantially more positive in the earlier period. In fact, for some samples and specifications, it appears that time in the United States is correlated with worse outcomes in the more recent period. Finally, the leaning tendency of immigrant parents appears to dominate today, whereas the learning tendency appears to have dominated earlier. In short, immigrants today are more likely to arrive with children and those children appear to retard the assimilation process more today than they did in 1900–1930.

It is important to emphasize that these relationships are correlations and not necessarily causal. We try to separate the selection effect of arriving with children and the treatment effect by using variation in the age of children, but as we discuss in the next section, important caveats to any causal interpretation remain.

3.6 Discussion

Why does assimilation among immigrant parents appear slower in the more recent period? We presented some suggestive evidence that children may retard the assimilation process, but here we emphasize some alternative explanations and limitations to our analysis (though surely many other caveats exist).

First, figure 3.2 shows not only that the share of immigrant parents who arrive with children is much lower in the earlier period (a fact we have been emphasizing) but that, in both periods, *it declines over time*. In 1900, the share of our immigrant sample arriving with children is about 20 percent, but falls to 10 percent by 1930. Similarly, in 1970 the share is 35 percent, falling to about 20 percent in 2010. If immigrants who arrive with children are of higher quality (that is, the “selection effect” of children is positive

even if the “treatment effect” is negative), then this pattern might explain the declining cohort quality we find in both periods.

Second, the presence of children at arrival likely affects the ability of the immigrant householder to return to his native country. As noted earlier, our results cannot control for selective return migration, which Abramitzky, Boustan, and Eriksson (2012) have shown to be empirically important. It seems plausible that adults who arrive on their own would be more able to return to their homelands if, say, they have trouble finding work in the United States, and thus the coefficient on years since migration is positively biased for this group because of selective return migration. If adults that arrive with their families are more or less “stuck” in the United States, then comparing them to this first group, as our regressions do, might bias us toward finding that children seem to “retard” the assimilation process. If differential selective migration due to children was larger in the more recent period—as one might expect it would be, given that it is easier to return to Mexico today than, say, Poland in 1910—then it could also explain the much more negative effect of children in the recent period.

These caveats notwithstanding, in sum our evidence points to the possibility that while children once promoted their parents' assimilation, they now impede it. Taking the point-estimates literally and using the difference between arriving with children of a “useful” age versus arriving with children of other ages as our causal estimate of arriving with children, arriving with a child slows language acquisition by 1.59 percentage points per year in the current period relative to the earlier period (−0.44 to 1.15 percentage points, from table 3.6). Parents are 11.7 percentage points more likely to immigrate with children in the current period (0.219–0.102, from table 3.1). As such, taking both the difference in the effect of arriving with children from today versus earlier and the increased tendency to arrive with children today than earlier, our effects suggest a $1.59 \times 0.117 = 0.186$ percentage points per year slowing of language acquisition in the current period relative to the earlier one. From table 3.2, we see that the difference is 2.26 percentage points (0.234–0.0076), so our effects explain about 8.2 percent of the difference in language acquisition rates among immigrant parents between the two periods.

Section 3.3 suggested circumstances when parents might lean versus learn. One such circumstance is when the consumption value of the mother language is quite high—for example, if parents can have a high quality of life without learning English. It is interesting to consider how this factor may have changed over the two time periods.

One difference we note between the two periods is that immigration is much more concentrated with respect to country of origin or mother language than before. As noted, over one-fourth of our recent sample hails from Mexico, and an additional 13 percent from other parts of Latin America. The previous period has nowhere close the level of language concentration

(German being the largest group and less than half the concentration as we see today with Spanish) or country-of-origin concentration (the Herfindahl index, with respect to origin country in the current period, is larger by a factor of nine than that in the earlier period). It is also possible that, even for smaller language groups, technology facilitates consumption activities in the mother tongue (one can Skype with relatives back home, read online newspapers from the home country, etc.) compared to the options available during the Great Migration.

The model also suggests that the leaning versus learning tendency will depend on how much parents value labor market returns. Characterizations of the early immigration period tend to emphasize economic incentives as the main motivation for migration, and thus these migrants may have found leaning on their children and thus sacrificing their wage growth relatively unattractive. In contrast, policy changes suggest that the current period may be characterized more by noneconomic migration motives, such as family reunification and political asylum. This more recent period may have selected for migrants who are less motivated by labor market opportunities (and thus more likely to lean).

Finally, the model also predicts that parents are less likely to learn and more likely to lean when children's ability to teach them English declines. Indeed, there are reasons to believe that children's ability to teach their parents English may have diminished in the current period, making parents less likely to learn. We have documented that children in immigrant families in the current period are more likely to have been born in the origin country and arrive with their parents—thus they might tend to regard English as their second language, relative to children of immigrant parents who are themselves US-born. Children of the current generation of migrants may themselves have more challenges assimilating, and thus may be less useful as tutors to their parents.

3.7 Conclusion

In this chapter, we present evidence of the vastly different family composition at arrival between immigrant householders of the Great Migration and those today. To our knowledge, these differences have not been reported or analyzed by past research. We also document that assimilation among immigrant parents appears slower today than in 1900–1930, and that the presence of children at arrival appears to retard this process more today than it did then. In fact, children appear to have promoted their parents' assimilation in the early period but appear to impede it today. Put differently, parents used to learn from their children but not appear more inclined to lean on them.

We see these initial results as suggesting several areas for future work and we highlight two such areas below. First, as noted earlier, we found that limiting the sample to relatively recent arrivals (those who immigrated

no more than fifteen years before their census record) had a large effect on measures of assimilation in the recent period. We speculate that two factors may explain this result. First, many of those who arrived more than fifteen years before their census record would have immigrated before 1965, when US immigration policy was based more on family connections. Even controlling for country of origin, that policy may have selected for individuals who could assimilate more quickly. Second, it might be the case that the tendency to lean on children in the later period means that much of parents' assimilation process is delayed until children leave the house, and thus, limiting the sample to adults who have recently arrived could have a large effect on the coefficient estimates.

Second, because educational data in the early years of the census is limited, it is difficult to investigate whether immigrants that arrive with children are positively or negatively selected relative to immigrants arriving without children during the Great Migration. Using data from the home countries, as in Abramitzky, Boustan, and Eriksson 2012, might help to document selection patterns with respect to family composition during this earlier period.

References

- Abramitzky, R., L. P. Boustan, and K. Eriksson. 2012. "Europe's Tired, Poor, Huddled Masses: Self-Selection and Economic Outcomes in the Age of Mass Migration." *American Economic Review* 102 (5): 1832–56.
- Baker, M., and D. Benjamin. 1997. "The Role of the Family in Immigrants' Labor-Market Activity: An Evaluation of Alternative Explanations." *American Economic Review* 87 (4): 705–27.
- Barde, R., S. B. Carter, and R. Sutch. 2006. "International Migration." In *Historical Statistics of the United States, Earliest Times to the Present*, millennial ed., edited by S. B. Carter, S. S. Gartner, M. R. Haines, A. L. Olmstead, R. Sutch, and G. Wright. Cambridge: Cambridge University Press.
- Becker, G. S. 1962. "Investment in Human Capital: A Theoretical Analysis." *Journal of Political Economy* 70 (5): 9–49.
- Berman, E., K. Lang, and E. Siniver. 2003. "Language-Skill Complementarity: Returns to Immigrant Language Acquisition." *Labour Economics* 10 (3): 265–90.
- Blau, F. D., L. M. Kahn, J. Y. Moriarty, and A. P. Souza. 2003. "The Role of the Family in Immigrants' Labor-Market Activity: An Evaluation of Alternative Explanations: Comment." *American Economic Review* 93 (1): 429–47.
- Bleakley, H., and A. Chin. 2004. "Language Skills and Earnings: Evidence from Childhood Immigrants." *Review of Economics and Statistics* 86 (2): 481–96.
- Borjas, G. J. 1995. "Ethnicity, Neighborhoods, and Human-Capital Externalities." *American Economic Review* 85 (3): 365–90.
- _____. 2002. "Self-Selection and the Earnings of Immigrants." *International Library of Critical Writings in Economics* 151:332–54.
- _____. 2013. "The Slowdown in the Economic Assimilation of Immigrants: Aging and Cohort Effects Revisited Again." NBER Working Paper no. 19116. Cambridge, MA.

- Edin, P.-A., P. Fredriksson, and O. Åslund. 2003. "Ethnic Enclaves and the Economic Success of Immigrants—Evidence from a Natural Experiment." *Quarterly Journal of Economics* 118 (1): 329–57.
- Ferrer, A., D. A. Green, and W. C. Riddell. 2006. "The Effect of Literacy on Immigrant Earnings." *Journal of Human Resources* 41 (2): 380–410.
- Friedberg, R. M. 2000. "You Can't Take It with You? Immigrant Assimilation and the Portability of Human Capital." *Journal of Labor Economics* 18 (2): 221–51.
- Goldin, C. 1979. "Household and Market Production of Families in a Late Nineteenth Century American City." *Explorations in Economic History* 16 (2): 111–31.
- _____. 1994. "The Political Economy of Immigration Restriction in the United States, 1890 to 1921. In *The Regulated Economy: A Historical Approach to Political Economy*, edited by Claudia Goldin and Gary D. Libecap, 223–58. Chicago: University of Chicago Press.
- _____. 2006. "The Quiet Revolution That Transformed Women's Employment, Education, and Family." NBER Working Paper no. 11953, Cambridge, MA.
- Kuziemko, I. Forthcoming. "Human Capital Spillovers in Families: Do Immigrants Learn from or 'Lean on' Their Children?" *Journal of Labor Economics*.
- Lazear, E. P. 1999. "Culture and Language." *Journal of Political Economy* 107 (S6): S95–S126.
- Mora, M. T., and A. Dávila. 1998. "Gender, Earnings, and the English Skill Acquisition of Hispanic Workers in the United States." *Economic Inquiry* 36 (4): 631–44.
- Newport, E. 2002. "Critical Periods in Language Development." In *Encyclopedia of Cognitive Science*, edited by L. Nadel. New York: Macmillan.
- Perlmann, J., and R. Waldinger. 1997. "Second Generation Decline? Children of Immigrants, Past and Present—A Reconsideration." *International Migration Review* 31 (4): 893–922.
- Portes, A., and R. G. Rumbaut. 2001. *Legacies: The Story of the Immigrant Second Generation*. Berkeley, CA: University of California Press.
- Schultz, T. 1961. "Investment in Human Capital." *American Economic Review* 51 (1): 1–17.
- Singleton, D. 2001. "Age and Second Language Acquisition." *Annual Review of Applied Linguistics* 21:77–89.
- Zhou, M. 1997. "Segmented Assimilation: Issues, Controversies, and Recent Research on the New Second Generation." *International Migration Review* 31 (4): 975–1008.