Gendered Pathways to Proficiency:

The Impact of Family and Paid Work on English-Language Acquisition*

By Diana Worts and Monica Boyd

Department of Sociology, University of Toronto

Abstract

Move1 step1 Recent immigrants to North America typically hail from regions where the main language is not English. As a result, host-nation language acquisition has become the focus of much research attention. step2 Within this tradition, however, few studies examine how the process of learning a new language may differ for women and men. Move2 step1 Yet there are reasons to anticipate that language trajectories will be gendered if they respond to a sexual division of labor that assigns caregiving to women and breadwinning to men. step2 We investigate this possibility using data from Statistics Canada's Longitudinal Survey of Immigrants to Canada. Our analysis models change in men's and women's English-language capabilities over a three-and-a-half year period, using the fixed-effects estimates from a series of growth models. step3 The results demonstrate an overall pattern of decelerating growth in proficiency over time. They also show an initial female disadvantage that, despite its reduction over time, does not disappear during the observation period. Beyond this, we find that employment has the same impact on language trajectories for both sexes, while children have differential effects. step4 We discuss these results in the context of the gender differences in exposure to paid and family work that characterize this sample of recent immigrants.

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INTRODUCTION

Since the 1960s, recent arrivals to North America typically hail from regions where the main language is not English. This represents a shift in origins relative to earlier immigration waves and, as such, poses new challenges for both newcomers and host societies. Gaining proficiency in the receiving nation's language(s) is now a crucial component of immigrants' social and economic incorporation (Davila & Mora 2004; Dustmann & Fabbri 2003; Grondin 2007; Leslie & Lindley 2001; Schellenberg & Maheux 2007; Shields & Wheatley-Price 2002). In the wake of these new challenges, understanding the processes of language acquisition and identifying groups for whom it may be problematic have become the foci of much research attention.

The general factors associated with proficiency are now well documented. They include demographic characteristics that reflect both the ability to learn and the 'distance' between the mother tongue and the new language (e.g., age and national origins), pre-migration factors that signal literacy (e.g., educational attainment and prior schooling in the host nation), selection factors that may sort on pre-existing language skills (e.g., immigrant class of admission and principal applicant status), and post-migration factors that imply both immigrant investment in their new home and available opportunities or incentives to learn its language (e.g., language and other post-migration training, employment, and the presence of children) (Chiswick & Miller 1995 and 2001; Duleep & Regets 1999 and 2002; Hou & Bieser 2006; Remnick 2004; Stevens 1994 and 1999).

Though obviously useful in illuminating the characteristics and conditions that promote linguistic integration, this research typically does not consider whether or how patterns may differ for women and men (but see Akresh 2007; Carliner 2000; Espenshade and Fu 1997; Espinosa and Massey 1997; Hou & Bieser 2006 for suggestive work). Yet there are a number of reasons to expect that gender may shape knowledge of the destination-nation language among recent immigrants. At the very least, women begin at a disadvantage: They are more likely to be admitted on the basis of

family ties or humanitarian concerns than are men, and consequently are less likely to have been selected on the basis of language skills (Carliner 2000; Kilbride et al. 2008). Nevertheless, language learning occurs *over time* and as a result of various exposures and incentives in the receiving nation, and a range of longer-term scenarios is possible. Women may learn more quickly after arrival and eventually catch up to men; they may gain skills at more or less the same rate as men and fail to overcome their early disadvantage; or they may fall increasingly behind men over time.

Of central concern in this regard are the potential consequences of the gender division of labor that prevails in North America: Women tend to assume the lion's share of responsibility for domestic tasks and child rearing while men typically assume primary responsibility for household income (Coltrane 2000; Hochschild and Machung 1989). This arrangement is, moreover, not only characteristic of receiving nations: A less-studied feature of the post-1960s immigrant population is that its members typically comes from countries where the gender division of labor is even more "traditional" than that in North America (Blau et al. 2008). The manifestations of these gendered work roles may have both positive and negative consequences for women's ability to learn a new language.

On the negative side, recently-arrived women may be less involved in the labor market than their male counterparts, restricting both their exposure to the new tongue and the economic incentives to improve skills that typically accompany employment (Carliner 2000; Espenshade & Fu 1997; Espinosa & Massey 1997). The problem may be compounded by the presence of children – especially young ones – who typically decrease women's labor force participation (Chiswick, Lee, & Miller 2005). In addition, gender ideologies may offer disincentives for women to learn the host-nation language. In many sending nations women hold the role of "cultural maintainer" in their families – a job likely to take on heightened significance in a foreign setting. This function, too, will be more salient if children are present, as the younger generation must be taught the language and

traditions of the homeland if they are to carry them forward (Alba 1990; Kilbride et al. 2008; Nicassio 1985; Phinney 1990). Finally, in situations where workplace opportunities and incentives are limited – truer for women than for men – children may serve as interpreters and reduce a parent's need to learn the language (Chiswick, Lee, & Miller 2005). Children's ages will matter in this regard. School-aged children will be more capable interpreters than pre-schoolers; and children still living at home after graduation, typically more engaged with the outside world themselves, may be the most competent interpreters.

On the positive side, involvement with children may actually offset any existing disadvantages and deterrents by exposing women to the new language and affording them incentives to learn. Young children, especially, learn quickly (Chiswick, Lee & Miller, 2005), and by school age they may be in a position to serve as teachers to their parent(s). If women are primary caregivers they may benefit from this opportunity more than men. In addition, parenting young children calls for interaction with institutions, such as (pre-)schools and the healthcare system, where basic proficiency may be required (Kilbride et al. 2008). Pre-schoolers, who cannot negotiate these relationships on their own, should give rise to more sustained parental engagement with these institutions. Again, a gender division of labor suggests that such duties may fall more to women than to men and thus provide differential opportunities and incentives to learn the host language.

In sum, while the impact of selection criteria suggests that male and female immigrants may begin their lives in their new land with different levels of familiarity with the host-nation language, the experiences and imperatives associated with a sexual division of labor suggest that women's and men's receiving-nation language skills may grow by different means and/or at different rates.

Although gender differences in language skills at a given point in time can be assessed using cross-sectional data, measuring differences in growth over time properly requires the use of longitudinal data (Hou & Bieser 2006). A longitudinal approach is also useful when one of the key

explanatory variables (in this case, employment) bears a reciprocal relationship to language skills (Chiswick & Miller 1995 and 2003). Under these circumstances the sequencing of the two variables is important, and their order is best sorted out using data gathered at several time points. Despite the value of longitudinal analyses, data (un)availability means that few studies of language acquisition adopt such a perspective. Fewer still use methods designed to cope with the features of panel data.

In this paper we use Statistics Canada's Longitudinal Survey of Immigrants to Canada (LSIC) to model change in English language scores over time among recent immigrants to Canada. Focusing particular attention on whether and how the process differs for men and women, we ask: 1) whether initial proficiency and/or the speed of learning differ for male and female immigrants, 2) whether any such patterns can be attributed to a gender division of labor, and 3) whether division-of-labor effects exist over and above sex differences in other factors known to be associated with proficiency. To answer these questions, we use a method that accommodates the unique attributes of panel data – growth analysis. Our study advances existing research in several ways. First, it explicitly models gender differences in the process of language acquisition as a product of activities associated with a division of labor by sex. Second, it incorporates a number of important control variables, including two (time spent in English-taught education and time spent in language training) that are essential to understanding language acquisition but are typically unavailable in studies of this kind. Finally, it uses a type of data (longitudinal) appropriate to assessing change over time, and a method suited to handling its properties.

DATA AND METHOD

Data. Statistics Canada's LSIC is a three-wave survey conducted between April 2001 and November 2005 and released in April 2007. These data are not publicly available, and can be accessed only by qualified university researchers whose research proposals have been adjudicated and approved by Statistics Canada and the Social Sciences and Humanities Research Council. The

LSIC target population was immigrants who arrived in Canada between October 1, 2000 and September 30, 2001, were age 15 or older at the time of landing, were processed abroad and applied through a Canadian Mission Abroad[1], and were still in Canada at the time of the interview. Respondents were interviewed at approximately six months after their arrival in Canada, approximately two years after arrival, and approximately four years after arrival. Interviews were conducted in one of 15 languages, covering roughly 93 percent of the new immigrant population. In total, over 7,700 respondents participated in all three waves, representing a natural population at wave 3 of approximately 157,600 individuals.

Canada is a bilingual country, with both English and French as official languages; however, the use of French dominates only in Quebec, one of the nation's ten provinces, which contains approximately 23 percent of the population and 17.5 percent of new immigrants (Statistics Canada 2007 and 2008). Not surprisingly, by far the majority of respondents lived in English Canada for the duration of the survey and would have been exposed only or primarily to English. For this reason, we focus on the acquisition of English-language skills only. Our sample is therefore restricted to those who resided in English Canada (i.e., not in Quebec) throughout the observation period[2] and those whose mother tongue and language most often used at home at the wave 1 interview was not English. We also include only those who remained in Canada at the wave 3 interview and were therefore most invested in, and most capable of, learning English (Cortes 2004). The analysis is further restricted to respondents who were of working age throughout (at least 25 years at wave 1 and under 65 years at wave 3), to permit us to study the effects of employment on language acquisition. The sample so defined consists of just over 4,000 individuals. In the person-period

[1] Individuals who applied from within Canada were excluded as they might have been in Canada for some time before officially "landing," and thus had quite different integration characteristics from recently arrived immigrants.
[2] Complete residence histories are available, enabling us to determine the province(s) of residence over the entire 4-year period.

(long format) dataset used for the growth analysis, this translates to over 12,000 records – or 4,000-plus cases times 3 observations per case.

Measures. The dependent variable is a *language proficiency score* developed by Statistics Canada analysts. The score is composed of a range of self-assessed and objective measures.[3] The original variable is scaled 0 through 1. In our models it has been re-scaled 0 through 10 in order to showcase our findings, which focus on change over small increments of time (months).

The most important independent variable is *gender*, reflecting our interest in male-female differences in English language trajectories and the factors that influence them. The variable is coded in the usual way, as a dummy: female and male (reference). Also of central concern to our research questions are measures of the gendered tasks that may differentially influence change in language skills over time: the presence of *children in key age groups* and *wave 1 employment*. The child age categories (assessed at the wave 1 interview and referring to children present in the household) are: no children (reference), pre-school only (under age 4), school-aged only (ages 4-17), young adult only (age 18-plus), pre-school plus school-aged (ages 0-3 plus ages 4-17), and school-aged plus young adult (ages 4-17 plus age 18-plus). Wave 1 employment is a categorical recoding of the proportion of days the respondent was engaged in paid work during the period from arrival to the wave 1 interview. The categories are no employment (reference), moderate employment, and high employment. The cut-point between low and high employment is the median value for those who were employed for some or all of wave 1. Because the variable considers only employment that occurred in Canada prior to the first interview, we know that language skills followed from, rather than led to, employment levels.

[3] LSIC documentation includes the following description, for inclusion with analyses that use this variable:

> The English and French linguistic ability scores are measures that were developed a posteriori from several LSIC questions. The goal of these scores is to measure the respondent's ability to function in each of the two official languages. These measures take into account the respondent's reported ability to speak, read and write in these two languages, the ability to do certain daily life activities in these languages, as well as the use of these languages at work and while studying to obtain their highest education level.

The analyses control for a number of other variables known to be associated with language skills among recent immigrants. Entry factors such as *principal applicant status* and *immigrant admission class* are important determinants of language skills overall. In Canada (as in Australia) principal applicant refers to the primary applicant. In addition, three classes of admission exist: economic (based on employment qualifications, including language skills), family (based on kinship), and humanitarian (based on refugee status). Studies show that principal applicants, regardless of their admission class, and those admitted in the economic class are more proficient in English than other immigrants. There is also evidence that refugees' host-nation language skills increase more rapidly than those of economic immigrants (Chiswick, Lee, & Miller 2006; Cortes 2004). Here, principal applicant status is a single dummy (yes/no) and immigrant class of admission is a set of dummies: economic (reference), family, refugee, and all others.

Also included are measures of the ease or difficulty with which immigrants are likely to learn the new language: *age* and *national origins*. Age is a well-known determinant of language acquisition, with the young having a distinct advantage over their older counterparts (Remnick 2004; Stevens 1999). National origins are here a proxy for linguistic distance, or the degree of difference between the newcomer's native tongue and English. Chiswick and Miller (2005) have shown that linguistic distance, as measured by country of origin, is related to English language proficiency. In this study age is coded in years and national origins as a set of dummies: western/northern European (reference), southern European, other European, Arab, west Asian, south Asian, east/southeast Asian, African, and all others.

The models also incorporate measures of pre-migration factors reflecting literacy – *educational attainment prior to arrival* and *pre-migration schooling received in Canada*. Education, regardless of where it is obtained, has been shown to be strongly correlated with English language skills (Carliner 2000; Chiswick & Miller 2001). For those who received some of their pre-migration

education in Canada, familiarity with the language would have been essential to successful completion. The first of these variables is coded as less than high school (reference), high school diploma, some post-secondary education, college or trade school diploma or certificate, Bachelor's degree, Master's degree, and professional or Doctorate degree. Education received in Canada prior to immigration is coded as a single dummy (yes/no).

We also control for post-migration factors reflecting immigrant investment and host-nation opportunities and incentives: *time spent in English-taught courses* and *time spent in language training*. These variables are seldom available to researchers, although they have obvious relevance to the process of language acquisition. Where gender is the focus they are especially important, as there is some evidence that family responsibilities and cultural restrictions mean women are less able than men to take advantage of such learning opportunities (Beiser & Hou 2000; Kilbride et al. 2008). For both variables, LSIC collected complete histories that allow us to develop uniquely sensitive measures – that is, the number of hours spent in each type of course. Both variables are assessed prior to the wave 1 interview, and thus are known to precede the growth of language skills.

Analysis. The analyses are both descriptive and statistical. They include gender-specific point estimates of host-nation language proficiency at each observation point, and multivariate modeling of the process of language acquisition for women and men. The multivariate analysis makes use of the repeated measures structure to derive growth estimates – or the intercept and slope parameters that describe initial status and changes in proficiency over time for each gender. This technique is preferred to OLS regression in studies that use panel data because repeated observations from the same individual are not independent and variances are often not constant, thus violating OLS assumptions. Growth models correct for this by estimating fixed effects (the intercept and slope parameters, as well as the covariate effects), while also taking into account the

possible correlation of errors within individuals over time and the random variation in growth parameters between individuals (Johnson n.d.; Wolfinger and Chang 1995).

Growth analyses always include a measure of time. In this study time is scored in months, with the earliest wave 1 interview (5 months post-immigration) representing the initial time point and the latest wave 3 interview (51 months post-immigration) representing the final time point. The growth models were estimated using SAS PROC MIXED. Fit statistics for a model with only time as a predictor indicated that the best specification included a quadratic function of change (i.e., time squared, which models any acceleration or deceleration in growth that occurs over time).[4] The analysis is based on this nonlinear model of language growth among immigrants. To facilitate the interpretation of results, all control variables are centered on their sample means and continuous measures are also standardized. (Modeling strategies are based on Singer 1998 and Littel et al. 1996.)

RESULTS

Descriptives: Earlier observations that family and work characteristics differ for women and men prove true for this group of recent immigrants. In Table 1 the sample is divided by gender, children's ages, and wave 1 employment level, showing both sample proportions and mean language scores at each interview for the sub-groups so defined. While the sample is approximately evenly split by gender, there are differences between women and men with respect to the distribution of children's ages, wave 1 employment, and language scores. Men were more likely than women to be childless at the wave 1 interview, while women were more likely than men to have children in only the oldest age group. Women were also far more likely than men to have been unemployed during the period leading up to the first interview, while men were far more likely to

[4] Results of the fit assessment, which also include investigation of the best specification of error and covariance matrices, are available on request from the first author.

have been in the high employment group. These gendered distributions will prove important if work and family tasks have distinct impacts on the growth of language skills.

Table 1: Sample Proportions and Mean Language Scores Each Wave, by Gender, Child Ages, and Wave 1 Employment

	Wave 1		Wave 2		Wave 3	
	Sample Proportion (1)	Mean Score (2)	Sample Proportion (3)	Mean Score (4)	Sample Proportion (5)	Mean Score (6)
Women						
Child Ages						
Pre-School Only						
School-Aged Only						
Young Adult Only						
School-Aged & Young Adult						
Pre-School & School-Aged						
Wave 1 Employment						
High Employment						
Low Employment						
Unemployed						
Men						
Child Ages						
Pre-School Only						
School-Aged Only						
Young Adult Only						
School-Aged & Young Adult						
Pre-School & School-Aged						
Wave 1 Employment						
High Employment						
Low Employment						
Unemployed						

Statistics Canada confidentiality regulations restrict the release of frequencies and cross-tabulations to a one-time event. Descriptive tables will be made available only once the paper is accepted for presentation. The results are, however, described in the text.

Table 1 also gives an initial picture of how language scores changed over time for women and men in the sample. Looking at men and women as a whole, we note that, for both sexes, mean language scores increased progressively over the observation period. At the same time, men were, on average, more proficient at each wave – although women seem to have made greater gains over time. Turning to the sub-groups, there is a general pattern of decelerating growth over time and a consistent pattern of women's mean scores being lower than men's in the corresponding cell. In addition, for both sexes, having older children seems to have greatly reduced proficiency, especially in the later period – although this could well be the by-product of older respondent ages. Among men, proficiency was greatest when there were both pre-schoolers and school-aged children at wave 1, whereas among women mean scores were highest for those without children at wave 1. This pattern is suggestive of the importance of labor force involvement, since both these groups are likely to have been more fully employed. Still, women who had only pre-schoolers at wave 1 display an interesting pattern. Despite fairly low initial scores, they actually matched their childless

counterparts by wave 2; however, they lost ground at wave 3. For wave 1 employment, both women and men who were more fully employed made accelerating gains over time – although the uneven spacing of waves suggests a *de facto* linear pattern of growth. Both men and women who were unemployed prior to the first interview experienced faster average gains over time than their employed counterparts – in all likelihood because their low initial scores meant they had more "room to grow".

While these descriptives are suggestive of gendered patterns – for example, that employment had similar effects for men and women but children's ages did not – they do not statistically test for gender differences in overall trajectories or in the pathways to proficiency. Nor do they assess whether gender distinctions can be attributed to work and family experiences, or are simply the by-product of sex differences in other characteristics known to be associated with language acquisition – for example, age, education, language training, or immigrant class. We address these questions using the fixed effect estimates from three sets of gender-specific growth models. The first set considers overall growth parameters, the second the effects of children, and the third the effects of wave 1 employment.

Table 2: Growth Model Estimates for Fixed Effects (Unconditional Model), Separately for Women and Men

	Women	Men
Intercept	5.01690 †	6.41950 †
Slope	0.03971 †	0.02842 †
Quadratic	-0.00049	-0.00035

† Denotes a significant difference *between women and men* in the size of the effect.
Additionally, *within* each gender-specific model all effects are highly significant (i.e., non-zero).

Unconditional model: Model 1 (Table 2) estimates overall language growth parameters by gender, without taking into account children and their ages, or wave 1 employment. It shows that women began at a disadvantage, made some initial gains, but did not catch up with their male

counterparts by over the period of study. The mean initial language score (represented by the intercept) was considerably lower for women than it was for men, and this difference is highly significant. In addition, although proficiency increased over the observation period for both sexes (represented by the slope), growth was more rapid among women. This difference is also significant; however, its magnitude is not such that women caught up with men over the period of observation. The speed of the increase slowed over time for both sexes (represented by the negative quadratic term) but here the gender difference is not significant.

Was this baseline pattern of nonlinear growth and overall female disadvantage related to the division of labor by sex – that is, to differential effects of involvement in family and paid work? We address this question using models for the effects of the presence and ages of children, and for time spent in paid work during the period immediately preceding the wave 1 interview.

The presence and ages of children: Model 2 (Table 3, columns 1 and 2) focuses on the impact of family responsibilities on these gender-specific language trajectories. Having children generally placed women at an initial disadvantage. Relative to having no children, all child age categories suppressed women's starting scores (effects on the intercept), and the impact was always greater for women than it was for men. Gender differences in the effects of children on the intercept are significant for school-aged children, young adult children, and the combination of pre-schoolers and school-aged children. Also worthy of note is the large negative coefficient, for both sexes, associated with the presence of older children – very likely the product of other factors such as older respondent ages. Although children generally had a negative impact on language scores, especially for women, even women without children were at a disadvantage. Without controlling for other factors associated with language skills, initial scores for women with no children at wave 1 (represented by the intercept term), were significantly lower for women than they were for men.

Table 3: Growth Model Estimates for Fixed Effects, Conditional on Child Ages & Wave 1 Employment, Separately for Women and Men

	Model 2		Model 3		Model 4[(a)]	
	Women (1)	Men (2)	Women (3)	Men (4)	Women (5)	Men (6)
Child Age Effects (on intercept)						
No Children (rg = conditional intercept)	6.05940 †	6.89180 †			5.91950	6.18870
Pre-School Only	-0.50740	0.05065 ns			-0.39800	-0.16250 ns
School-Aged Only	-0.86500 †	-0.47240 †			-0.39420	-0.46320
Young Adult Only	-3.62290 †	-2.97640 †			-0.72080	-1.29760
School-Aged & Young Adult	-2.09960	-1.84500			-0.14830 ns†	-1.01700 †
Pre-School & School-Aged	-0.76720 †	0.16140 ns†			-0.39460 ns†	0.18390 ns†
Child Age Effects (on slope)						
No Children (rg = conditional slope)	0.02525	0.02920			0.02757	0.03661
Pre-School Only	0.03887 †	-0.01080 ns†			0.02417 †	-0.00806 ns†
School-Aged Only	0.01836 †	-0.00126 ns†			0.00643 ns	-0.00134 ns
Young Adult Only	0.00396 ns	-0.00056 ns			0.01212 ns	-0.01219 ns
School-Aged & Young Adult	0.01829 ns	0.00322 ns			0.00600 ns	-0.00431 ns
Pre-School & School-Aged	0.02780	0.00752 ns			0.00705 ns	0.00199 ns
Child Age Effects (on quadratic)						
No Children (rg = conditional quadratic)	-0.00026	-0.00036			-0.00036	-0.00043
Pre-School Only	-0.00066 †	0.00023 ns†			-0.00043 ns†	0.00018 ns†
School-Aged Only	-0.00023 ns	0.00006 ns			0.00002 ns	0.00009 ns
Young Adult Only	-0.00028 ns	-0.00018 ns			-0.00014 ns	0.00024 ns
School-Aged & Young Adult	-0.00034 ns	-0.00019 ns			0.00002 ns	0.00006 ns
Pre-School & School-Aged	-0.00033 ns	-0.00011 ns			0.00005 ns	-0.00002 ns
Employment Effects (on intercept)						
Unemployed (rg = conditional intercept)			4.21980 †	4.89200 †	4.99990	5.07570
Moderate Employment			1.87320	2.24690	1.13190	1.36330
High Employment			1.95910	2.31630	1.18450	1.38490
Employment Effects (on slope)						
Unemployed (rg = conditional slope)			0.06262 †	0.07532 †	0.06170	0.06710
Moderate Employment			-0.05176	-0.06578	-0.04856	-0.05734
High Employment			-0.06072	-0.07490	-0.05255	-0.06454
Employment Effects (on quadratic)						
Unemployed (rg = conditional quadratic)			-0.00082	-0.00097	-0.00081	-0.00080
Moderate Employment			0.000705	0.00084	0.00066	0.00074
High Employment			0.000939	0.00103	0.00084	0.00092

(a) Effects are net of all controls (and of employment for the child age model or children's ages for the employment model)

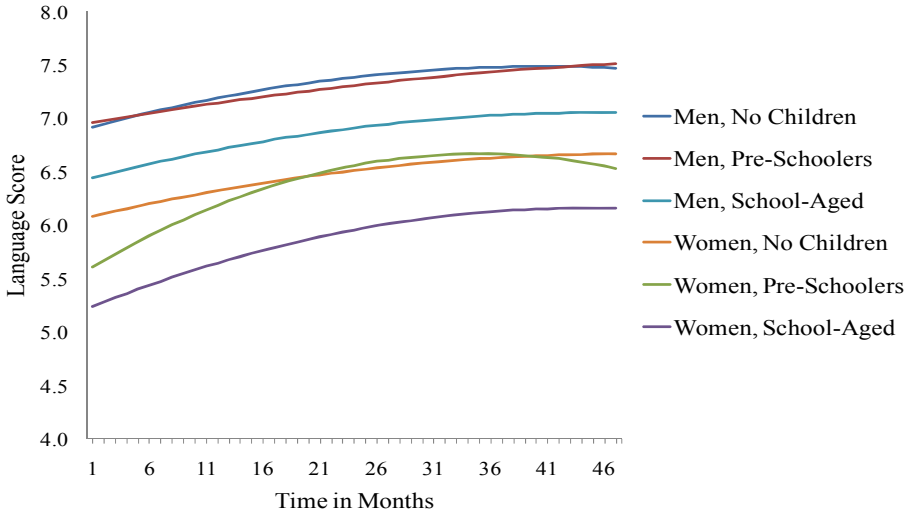
† Denotes a significant between-gender difference in the size of the effect. Effects are significant within gender unless noted.

Despite their initial disadvantage, women with younger children did make gains over time. The presence of both pre-school and school-aged children – especially the former – was associated with significantly greater growth increases over time (i.e., increases in the slope) for *women* than for men. At the same time, the female benefit associated with pre-schoolers was relatively short-lived. The presence of very young children at wave 1 actually suppressed growth over time for women

(the negative impact on the quadratic term), while they had a non-significant impact on the quadratic term for men.

Figure 1 illustrates the effects of having a child in the age groups with gender-differentiated patterns of change over time, as well as for those who had no children. It shows the initial gains for women with young children – so much so that they surpassed women without children at about the 21-month mark – and their subsequent leveling off and decline in scores. It also makes evident the consistent overall proficiency advantage held by men, even among those who did not have children.

Figure 1: Language Scores over Time, by Gender & Child Ages



Some of these gendered patterns hold even after controlling for gender differences in other characteristics known to be associated with language acquisition, while others do not (see Model 4, Table 3, columns 5 and 6). Net of other factors, the presence of pre-schoolers still increased the growth in language skills over time (the positive effect on the slope) for women only. Likewise, this family configuration continued to be associated with decelerating growth over time (the negative effect on the quadratic) for women only. Thus, having young children initially offered women a pathway toward increasing their English-language skills. But their gains relative to men were short-lived and ultimately reversed themselves. Also remaining after controlling for other factors is the large negative influence on starting scores, for both women and men, of having only older children.

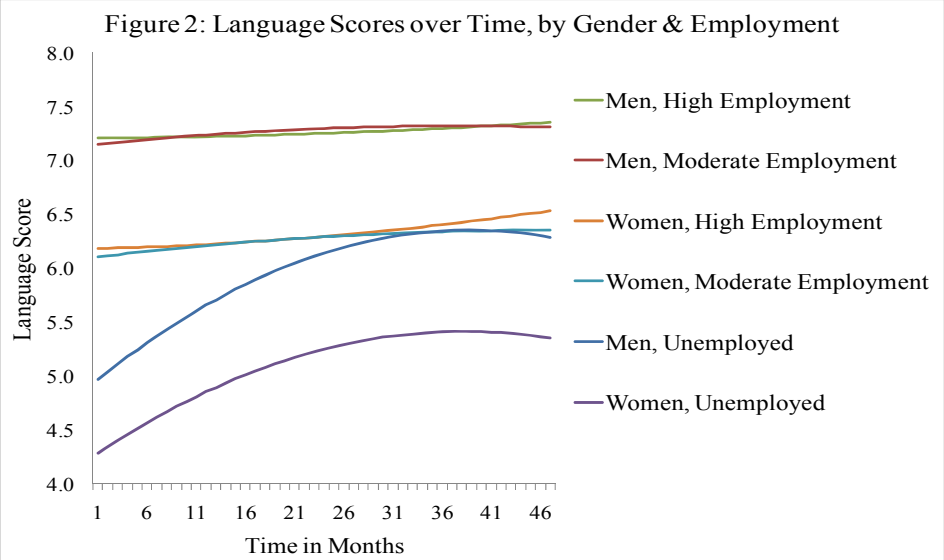
Importantly, the gender difference in the size of this effect is no longer significant once we control for other factors. Also non-significant once controls are included in the model is the difference in initial scores between women and men *without* children, confirming that the gap for this group was the by-product of gender differences in other variables that predict language scores. (Results not shown here indicate that the major contributors were prior education and immigrant class.) Thus, it is clear that, all else being equal, immigrant women without children were in the strongest position, relative to other women, to acquire host-nation language skills, while those with only young adult children were in the weakest position. Women with very young children were the only group to make real gains relative to men – but those returns proved to be only temporary.

Wave 1 employment: Whereas having pre-school-aged children differentially influenced men's and women's language trajectories, wave 1 employment had very similar effects for both sexes. Columns 3 and 4 of Table 3 display, for women and men respectively, results from a model for the effects of wave 1 employment on language acquisition, without controls. Whether employment was at moderate or high levels, its influence on the slope was not statistically different for women and men (in both cases, a reduction[5] in growth over time relative to the unemployed). Wave 1 employment, regardless of the level, also eliminated the deceleration in growth that otherwise occurred. Again, the gender difference in the magnitude of this effect is not significant. By contrast, without controls, being *unemployed* during the 6 months preceding the first interview did affect language trajectories differently for women and men. It was associated with significantly higher male starting scores (the intercept) and significantly faster growth over time (the slope) for men.

Figure 2 depicts these effects of wave 1 employment. The male initial advantage (the gap between corresponding male and female trajectories at the point where they cross the Y axis) is

[5] As noted earlier, slower growth is not surprising given the much higher initial scores of those who were employed, which left them with less "room to grow" over time than the unemployed.

evident for all groups – although it is significant only for the unemployed. In this model without controls the gap is also seen to widen over time for the unemployed (the product of a significant gender difference in the effect of unemployment on the slope). Also visible is the fact that for those employed prior to the first interview – whether at moderate or high levels – the patterns of change over time (slope and quadratic effects) are not significantly different for women and men.



These findings hold after controlling for other factors associated with language skills (Table 3, columns 5 and 6), with one important exception: Once other variables are taken into account, all three growth parameters (the intercept, slope, and quadratic) are no longer significantly different for men and women who were not employed during wave 1. In other words, all else being equal, employment – or the lack thereof – affected initial English language skills and the growth in proficiency over time in ways that were essentially indistinguishable for women and men.

DISCUSSION

This study examines the process of acquiring host-nation language skills among recent immigrants. Speculating that the process might be different for males and females as a result of a gender division of labor that assigns caregiving to women and breadwinning to men, we ask

whether family and paid work shaped language trajectories differently for male and female immigrants. Our growth analysis finds, for both sexes, a general pattern of decelerating growth in English-language proficiency over time. Beyond this, we find evidence of gender differences in both overall patterns and the influence of gendered work. Men as a group began the observation period significantly more proficient than women; women as a group made significantly greater gains over time but did not catch up to men. When we consider the impact of gendered work, we find that, net of other factors, employment shaped language trajectories in ways that were indistinguishable for women and men. Family responsibilities, by contrast, had differential effects. Of particular interest is the finding that having young children offered women some initial gains in learning the language. The gains were, however, fleeting, as women in this position also experienced significantly greater deceleration in growth over time than their male counterparts. Future studies will need to investigate the reasons for these later losses after such a promising start. It is quite possible that women with only pre-schoolers typically had only one child and later expanded their families. As family responsibilities grew they may have faced increasing constraints on their access to the exposure that normally occurs through employment – and even to the exposure presumably gained earlier through engagement with institutional settings in their role as care providers. The finding that men with pre-school and school-aged children (i.e., those in the stage likely to follow the pre-schoolers-only phase) were in a much better initial position than women is supportive of this notion. A future research agenda will need to investigate the possibility that once women with only pre-school children acquire additional family responsibilities they lose the advantage they once had with respect to learning a new language.

The results of our analysis also need to be considered in light of the gender differences in exposure to work and family responsibilities outlined in Table 1. Men in this sample were much more likely than women to be childless. Our growth analysis shows that children, regardless of their

ages, suppressed initial scores – especially for women but also to a considerable extent for men. Thus, an uneven distribution of children by gender places women, as a group, at an initial linguistic disadvantage. Also important is the observation that immigrant women were considerably more likely than men to have children in only the oldest age group. This child age category imposed the greatest penalty, regardless of gender, on initial scores, so an uneven distribution left more women behind at the starting gate. A similar logic applies to employment. Although its influence was similar for both sexes, exposure was quite different. Women were far more likely than men to have been unemployed during the period preceding the first interview. This would have placed them at a severe initial disadvantage that, despite rapid skills growth over time, would not be eliminated over the period of observation.

Taken together, our results indicate that a gender division of labor shaped immigrants' English-language learning both at the point of entry and over the first four years of life in the new land. Although women in the earliest stages of family building made some short-lived gains relative to their male counterparts, overall women disproportionately bore the linguistic costs associated with child rearing. Moreover, men's greater involvement in paid work, combined with the reciprocal relationship between host-nation language skills and employment identified by other researchers (Chiswick & Miller 1995 and 2003), suggests that the gap between male and female immigrants may be difficult to close over the longer term. Decreasing the language gap calls for the development of new and innovative pathways to proficiency. Our findings suggest that one option may be greater attention to language training programs that specifically target women and are compatible in culturally-sensitive ways with the demands of their family roles.

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