Does mother tongue make for women's work? Linguistics, household labor, and gender identity

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ABSTRACT

This paper studies the formation and persistence of gender identity in a sample of U.S. immigrants. We show that gender roles are acquired early in life, and once established, persist regardless of how long an individual has lived in the U.S. We use a novel approach relying on linguistic variation and document that households with individuals whose native language emphasizes gender in its grammatical structure are significantly more likely to allocate household tasks on the basis of sex and to do so more intensively. We present evidence of two mechanisms for our observed associations – that languages serve as cultural markers for origin country norms or that features of language directly influence cognition and behavior. Our findings do not appear to be driven by plausible alternatives such as selection in migration and marriage markets, as gender norms of behavior are evident even in the behavior of single person households.

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1. Introduction

Attitudes and beliefs, often originating among historical populations and perpetuated over time, have been shown to influence a range of current outcomes, including women's relative socio-economic position (Alesina et al., 2013; Fernández, 2011; Voigtlander and Voth, 2012). Economic research often models cultural forces through concepts of group identification, defined along dimensions such as nationality, ethnicity, religion, and gender (Akerlof and Kranton, 2000; Benabou and Tirole, 2011; Clots-Figueras and Masella, 2013). While gender is one of the most salient features of an individual's identity, research has generally not focused on quantifying the acquisition and development of gender identities within the household, a sphere characterized by substantial sex-based divisions in behavior.[1] Studying identity is challenging because observed behavior is both a manifestation of factors like bargaining, incentives, selection effects, and institutional constraints, as well as of how individuals cognitively process their environment.

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[1] An exception is Fernández et al. (2004), which documents that female labor force participation in the U.S. was bolstered by growing numbers of men raised in households where their mothers worked. Typically, economic research on gender within the household examines bargaining power and resource control rather than identity and preferences, or is focused on these differences outside the household (i.e. in market outcomes or in political participation).

To study the formation and persistence of gender norms, we examine the allocation of time on the basis of sex within the household among a sample of U.S. immigrants. Specifically, we connect gender roles in the household, as evidenced by sex-specific task specialization, to the intensity of gender distinctions encoded in the grammatical structure of a migrant's native language. This paper contributes to the literature on economics and gender identity and has implications for research examining the association between language and behavior. In terms of gender, we empirically demonstrate that gender norms of behavior are established early in life and that once established, these roles persist, even in the face of competing cultural influences. In terms of language, our results suggest that the grammatical structure of a particular language contains meaningful information about individual behavior and society at large.

In the first section of our empirical analysis, we study task specialization and the allocation of time to household labor as a function of the linguistic background of immigrants. We document that among first generation immigrants in the U.S., those who emigrate from countries where the predominant language has clearly delineated gendered marking in its grammatical structure are significantly more likely to allocate tasks on the basis of sex and to do so more intensively, reinforcing stereotypical gender roles. On the extensive margin, gender marked males are significantly less likely than non-gender marked males to engage in activities like cooking, cleaning, laundry, and care for elderly, while gender marked females are less likely than non-gender marked females to devote time to household finances, shopping, and vehicle repair. These differences remain even after including country fixed effects, controlling for common determinants of time use behavior, labor market participation, and home country characteristics. In other words, even conditional on country of origin, employment status, and earnings, the division of labor in household tasks is more skewed along sex-based lines among gender marked speakers.

In a second set of exercises, we study the formation of gender identity and examine its persistence over the life cycle. Skewed gender norms are only visible for individuals arriving from countries with gender marked languages and who migrate after childhood, suggesting that gender roles are acquired only at key developmental stages in life. We then examine gender identities as a function of duration of residence in the U.S. Our results suggest that once gender norms are established, time allocation and task specialization are persistently skewed over an individual's lifetime. External influences, such as continued exposure to U.S. culture, if they occur after childhood, appear insufficient to alter established gender identities within the household.

Quantitatively, the skewed division of non-market labor we identify is economically meaningful. In comparison to linguistically non-gender marked households, gender-marked female immigrants devote 9% more time to housework, while gender-marked male immigrants spend 28% less time on housework. As a unit, couples in households with individuals exposed to grammatical gender marking behave similarly to those without gender marking, devoting roughly the same total amount of time tasks like to cooking or cleaning. This means that the behavioral differences we observe represent *allocative* changes in the division of household labor – a shift in favor of a more distinct set of gender roles in the undertaking of a broad range of tasks.

A set of plausible alternative explanations for the relationships we observe could involve labor market specialization, intra-household bargaining, or selection in the marriage and dating market. This does not appear to be the case. We find similar effects after controlling for determinants of migration including the relative labor market conditions for women in an immigrant's home country. We also document evidence of stronger gender norms even in the allocation of time among the subset of single male and female households. Similarly, when we restrict to the sample of households where both individuals actively participate in the labor market, gender roles in household labor remain skewed on the basis of linguistic characteristics.

This paper sheds new light on the development and persistence of gender roles through the use of gender marking variations across native languages. Our analysis is thus grounded in and has broader implications for research which studies of the interplay between language, gender, and behavior. Evolutionary linguists have argued that both cultural forces and cognitive biases have combined to create linguistic variations (Baronchelli et al., 2013). In terms of culture, grammatical gender may act as a marker, reflecting historical gender norms in a society. For example, the linguist Johansson (2005) argues that sex-based linguistic distinctions may have emerged from selective evolutionary pressure on communication needs related to tool making, reproduction, and the division of labor, suggesting that these forces became embedded in linguistic structure. In terms of cognition, recent research by cognitive psychologists (Boroditsky et al., 2003; Boroditsky and Gaby, 2010; Vitevitch et al., 2013) and economists (Chen, 2013) suggests that a language's structure is not independent of its social meaning and has the potential to directly influence behavior by altering a speaker's cognition. With regards to linguistic gender, languages which require speakers to frequently make sex-based distinctions may reinforce cognitive distinctions between masculine and feminine spheres and influence related behavior.

The patterns we observe could result either from language serving as a cultural marker, or from language having a direct effect on cognition and behavior. We examine multiple pieces of evidence on this point, and while we cannot distinctly prove one mechanism over the other, we are never able to rule out the possibility of language as having a cognitive effect. We undertake a number of exercises to help explain the robust relationship between linguistic gender and gender norms we observe. First, we show that there is an association between gender in language and gender roles across four distinct measures of gender marking. Finding qualitatively similar effects for each linguistic feature makes it less likely that the observed association can simply be explained by other omitted country specific factors, because the set of countries in which people speak languages with particular gendered features varies by measure. Second, we document that that the greater the intensity of gender marking in one's language (i.e. the more pervasive the use of gender in speech), the larger the associated gender inequality in household tasks. Third, we show that each of these grammatical rules only matter when