Ethnic preferences in online dating: A 24 country international comparison

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Short abstract:
This paper provides the first global analysis of ethnic-related partner preferences of online daters. We do so by examining 24 countries in North America, Australia, New Zealand, Europe, and – uniquely, South America and Africa. Examining preferences for partners with a similar (in-group) or different (out-group) ethnic background, we ask if the size of the minority population and immigration climate (attitudes, policies) play a role. We do this at the national and then more fine-grained regional level. We find a preference for in-groups, hierarchy of preferences amongst majority and minority groups and gender differences. Daters in countries with a large foreign-born population have an increased preference for minority groups. Anti-immigrant attitudes and restrictive migrant policies are associated with stronger in-group preferences for majority groups. Fine-grained regional analysis show differences by gender and in largely white homogenous counties (e.g., US). We reflect on the implications of our results for immigrant integration policies.

INTRODUCTION

Ethnicity (or race as it is termed in the US), has been shown as one of the most important factors in partner selection Qian and Lichter, 2007; Kalmijn and van Tubergen, 2010). These endogamous preferences and ethnic hierarchies have likewise been shown to shape online dating preferences (e.g., Feliciano, Robnett and Komaie, 2009; Yancey, 2009; Feliciano, Lee and Robnett, 2011; Robnett and Feliciano, 2011; Potarca and Mills, 2015) and interactions (Lewis, 2013; Lin and Lundquist, 2013).

The aim of this paper is to provide the first global cross-national analysis of ethnic-related partner preferences of online daters. We do so by examining 24 countries in North America (US, Canada), Australia, New Zealand, Northern Europe (Denmark, Norway, Finland, Sweden), Western Europe (France, Switzerland, Netherlands, Belgium, Germany, Austria, Ireland), Eastern Europe (Hungary, Poland, Slovakia, Czech Republic), Southern Europe (Spain), and – uniquely, South America (Chile) and Africa (South Africa). We focus on stated preferences for dating partners with a similar (in-group) or different (out-group) ethnic background. We ask if the size of the minority population or climate towards immigration play a role in partner preferences. We do this at the national level and then extend our analyses to a more fine-grained regional level.

We extend the literature in several key ways. First, we go beyond a single country comparison to engage in a rare 24 country global analysis that spans North and South America, Europe and Africa. Second, the majority of assortative mating research has often used the proxy of young newlywed couples with census (e.g., Mare, 1991; Breen and Salazar, 2011) or survey data (Joyner and Kao, 2005), which differs from our focus on the earlier phase of dating and partnering. Third, with only a few exceptions (Potarca and Mills 2015; Feliciano et al. 2011), studies have ignored the local or national contextual influences such as the ethnic composition of the local population. By examining ethnic population composition, but also anti-immigrant attitudes and formal migration rules, we extend work to empirically examine how contextual influences impact intergroup relations. Fourth, by examining such a broad range of countries we attempt to parse out whether preferences are shaped by particular immigrant histories or groups. These countries experienced diverse timing, composition, size and origin of immigrants which shape opinions and integration (Favell, 2001; Bail, 2008; Koopmans *et al.*, 2005).

This paper is timely since many racial and ethnic divides have become increasingly prevalent due to changes in the influx of migrants and higher levels of heterogeneity in regions that were previously dominated by a homogeneous in-group population. Host countries such as Sweden that were previously recognized for their tolerance of host migrants have recently experienced a political backlash and growth of the far right. In Europe, the US and Australia, the public debates are increasingly shaped by attention to non-Western immigration and in particular Muslim or Latin American groups (Bail, 2008).

Our theoretical framework relies on theories about in-group partner preferences that are often related to cultural resources and sense of community and identity (Bogardus, 1947; Blumer, 1958). We also draw on theories of distances between ethnic and national groups examining a ranking system of out-groups (Hagendoorn 1995). For societal and regional comparisons we draw on Blau's (1997, 1994) classic structural interpretation of in-group preferences and intergroup relations as a product of structural opportunities and draw on work examining the size of the minority (out-group), immigration climate and integration policies.

DATA AND ANALYTICAL METHODS

Data
Our data is taken from anonymized profile and preference information of users registered on the eDarling online dating site. In the agreement with the company, data were accessed for all users from 24 countries of the first 4,000 customers registered in each country starting in January of 2014. We also selected registered paying members, since they can establish contact with others and initial analyses showed differences. In the completed paper we also provide a more detailed description of the data selectivity against national statistics.

Measures
Individual level variables
Respondents could identify with and state preferences between seven ethnic groups: European, African, Asian, Arabic, Indian, Latin American, Other. For the desired ethnic group of their partner, respondents also had the option to select "No Preference". To measure in- and out-group preferences, respondents were coded as desiring a partner of the same ethnicity (and given a value of 1) if their identified ethnic group equalled their desired ethnic group. In contrast, respondents were given a value of 0 if their identified ethnicity did not match their desired partner ethnicity or if they responded no preference.

The question regarding partner's desired ethnicity asks: 'Of which ethnicity (or origin) do you want the person you are searching for to be?' The phrasing of the questions refers to ethnicity (or origin), but the choices presented to the users do not contain ethnic divisions (specific to each country), but broad categories. Furthermore, the choices made by members remain hidden from other users. Here we show basic results, but for the final paper we will test different specifications.

Control variables
In the final paper as controls we will likely include the respondent's own *educational level* (harmonized by following ISCED), *sex, age, religion* (Christian, Muslim, Buddhist, Atheist, Non-religious believer and other denominations). *Marital history* is a categorical variable of: never married (reference category), divorced, separated, and widowed. We also include dichotomous binary variable for *long-term dating intentions*.

National and regional level variables
In the final paper we will examine several country and regional level variables with a basic indication showing preliminary indications only this is extended abstract. To measure the minority population in a country, we use the *size of foreign-born population* of the proportion of foreign-born residents relative to the size of the total population. Here we use the WorldBank Migration Outlook database where foreign-born population was calculated by dividing the total migrant stock (# of citizens born in country other than the one they reside in) by the total population.

We also compute minorities' *relative group size* as a proportion relative to the total population of the number of residents belonging to each minority group, measured for each country. Here we use sources such as the number of non-natives from Labour Force Surveys (e.g., EU LFS) or similar surveys that provide information on the country of birth or nationality

(e.g., Germany, Netherlands), or citizenship (e.g., Poland) dependent on the data available for each country. The measure of *anti-immigrant attitudes* is taken from various sources such as the European Social Survey (for Europe), often by creating an index from multiple responses.

The level of *national inclusiveness of migrant integration policies* is measured using the Migrant Integration Policy Index (MIPEX, Niessen, Huddleston and Citron, 2007) for Europe and comparable measures for other countries. MIPEX gauges the different policies towards the integration of migrants based on the following dimensions: labor market mobility, education, political participation, long-term residence, access to nationality, and anti-discrimination. Higher scores represent more inclusive migrant integration policies on a scale from 0 to 100.

Regional level variables
For a selection of countries we will also run multilevel models and include regional level measures. This includes: *size of foreign-born population, relative group size* at the county or lowest- possible regional level.

In this extended abstract we provide a preliminary indication of some first findings using the United States as an example. Here *ethnic homogeneity* is measured as the proportion in a county identifying as non-Hispanic White (2015 US Community Survey). Additional regional levels controls will also be added including the *proportion urbanized in a county*.

Analytical methods
In this extended abstract we only show some preliminary descriptive results. In the full paper we will engage in multivariate five-response logistic regression models to examine preferences of ethnic groups. Employing multilevel analyses for 24 countries is not possible due to the number of upper level units and countries that make the results vulnerable to outliers or influential cases. We therefore will engage in country fixed-effect models that include distinct country intercepts. In the regional level models, however, we will be able to engage in more sophisticated multilevel modelling techniques.

PRELIMINARY RESULTS
Figure 1 shows the mean importance individual's assign to a prospective partner's ethnicity. Due to a legacy of racial segregation and apartheid, South Africa stands out well above all other countries. Other countries where ethnicity of the partner is rated as important include the Czech Republic, Austria, Slovakia, Finland, and Spain – all relatively ethnically homogeneous countries.

Figure 2 shows the proportion of respondents in a country desiring a partner of the same ethnicity as their own. The figure shows a massive spread in the rates, which range from less than 20% in Chile to more than 80% in Slovakia. Across all countries, patterns of endogamy appear strongest for women; the exception is Chile where no significant differences are observed. One initial observation that we aim to explore further is that the countries where endogamous preferences are strongest (Slovakia, Hungary, Czech Republic, Russia, Poland) are all relatively ethnically homogenous in Eastern Europe. To see whether ethnic heterogeneity might be driving endogamous preferences, we overlay the proportion of the population that is foreign born (Figure 8). As can be seen, for men there is a strong correlation between endogamous preferences and the proportion of the population that are foreign born ($r = 0.56$, $p <$

0.01); this correlation does not reach significance for women. Countries where this trend is reversed are Switzerland and Chile. We aim to explore and untangle this further.

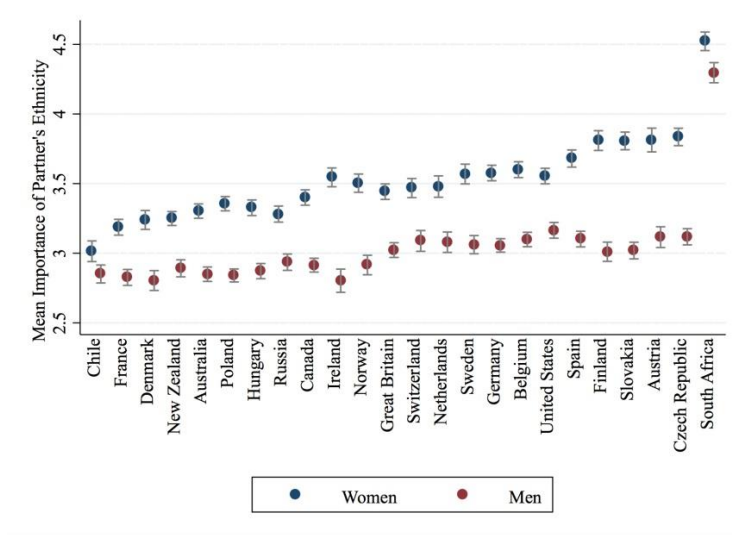Figure 1: *Mean Importance of Partner Ethnicity, by Country and Gender*

Figure 2: *Proportion Desiring Partner of Same Ethnicity, by Country and Gender*
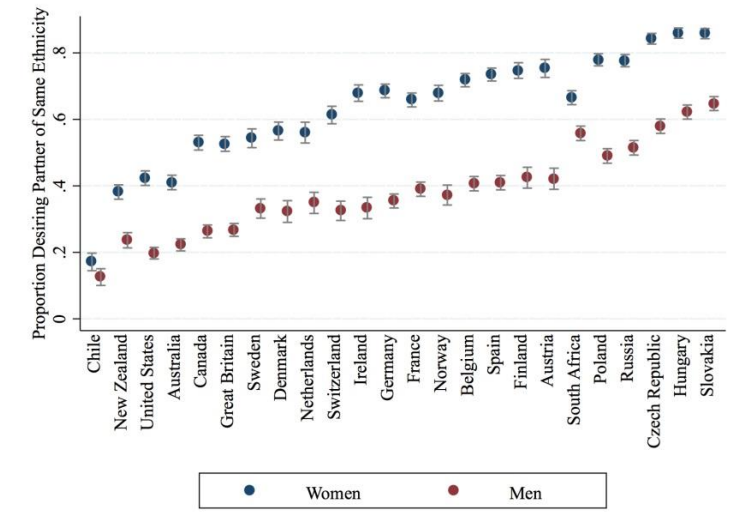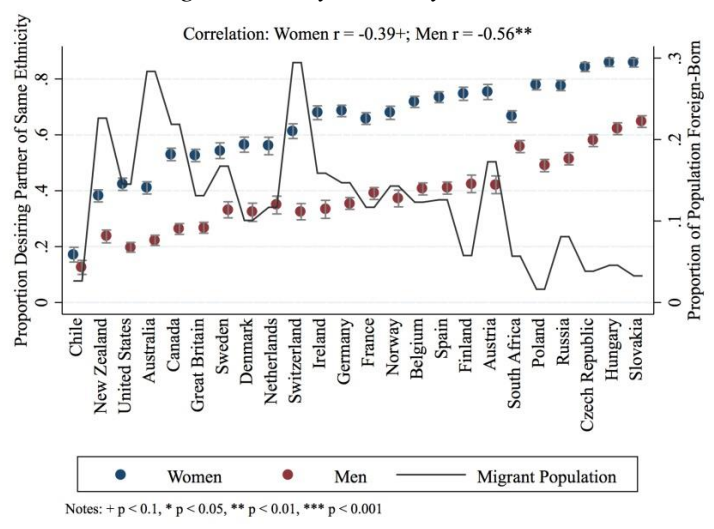
Figure 3: *Proportion Desiring Partner of Same Ethnicity with Proportion of Population that is Foreign-Born, by Country and Gender*

Regional level analyses

Country level analyses test the impact of national migration and integration policies, but the partnership market is likely more interesting to examine at a more fine-grained level. An initial analysis of several countries shows that this is indeed the case. Figure 4, for instance, shows the strong East and West Germany legacy and divide but also the striking openness to partners from another ethnicity in the highly urbanized and cosmopolitan capital of Berlin.

Figure 4: Ethnic homophily preferences by Region, Germany

US County-Level Endogamy Analyses

Figure 5 plots the predictive margins of the proportion of individuals within a US county desiring a partner of the same ethnicity (y axis) over the level of ethnic homogeneity in a given county (x axis). Ethnic homogeneity is measured here as the proportion in a county identifying as non-Hispanic White. All estimates control for the respondent's education and the proportion urbanized in a county.

We see a steep upward trend in the proportion desiring partner of the same ethnicity, suggesting that in more homogenous counties individuals are more likely to express endogamous preferences. This seems particularly true for women. For both sexes, the trend attenuates at around 65% homogeneity, suggesting the effect is not linear.

Figure 5: Proportion desiring partner of same ethnicity by US county, over % Non-Hispanic White in county

Notes: Models control for the respondent's education and the proportion urbanized in a county.
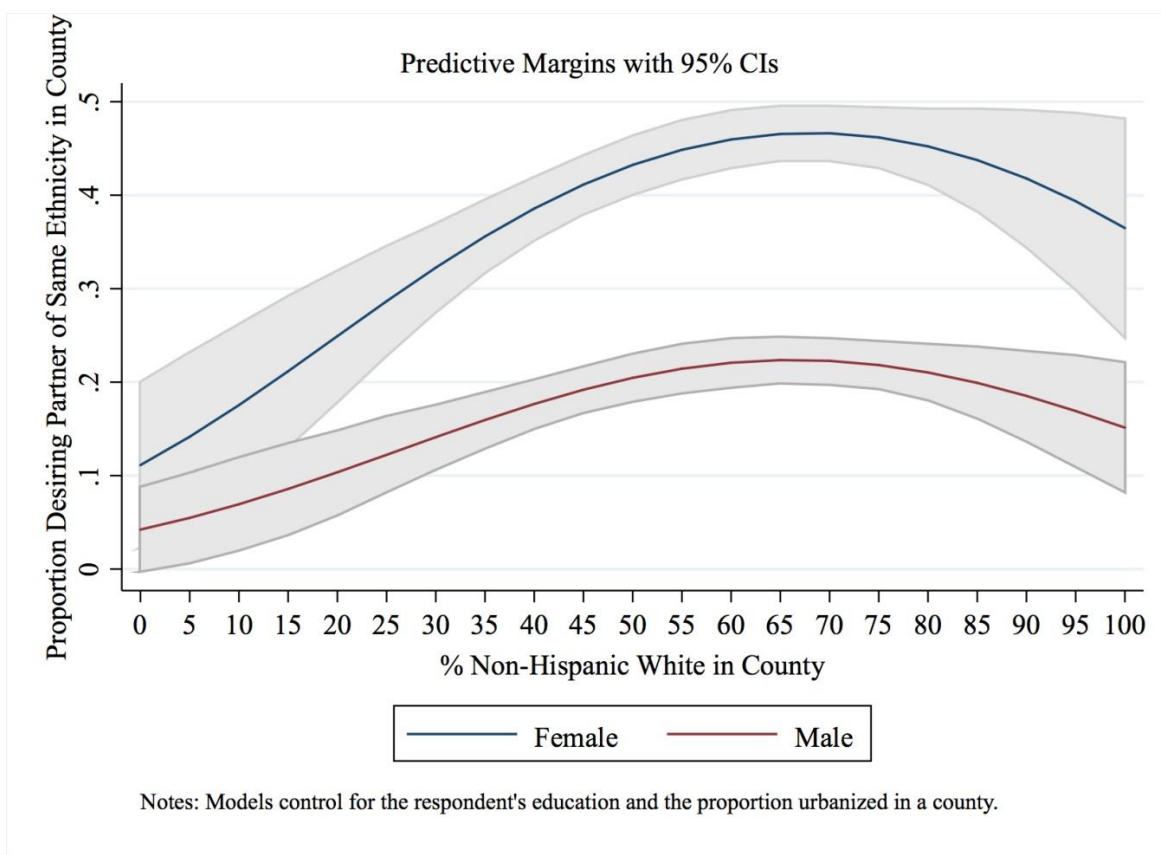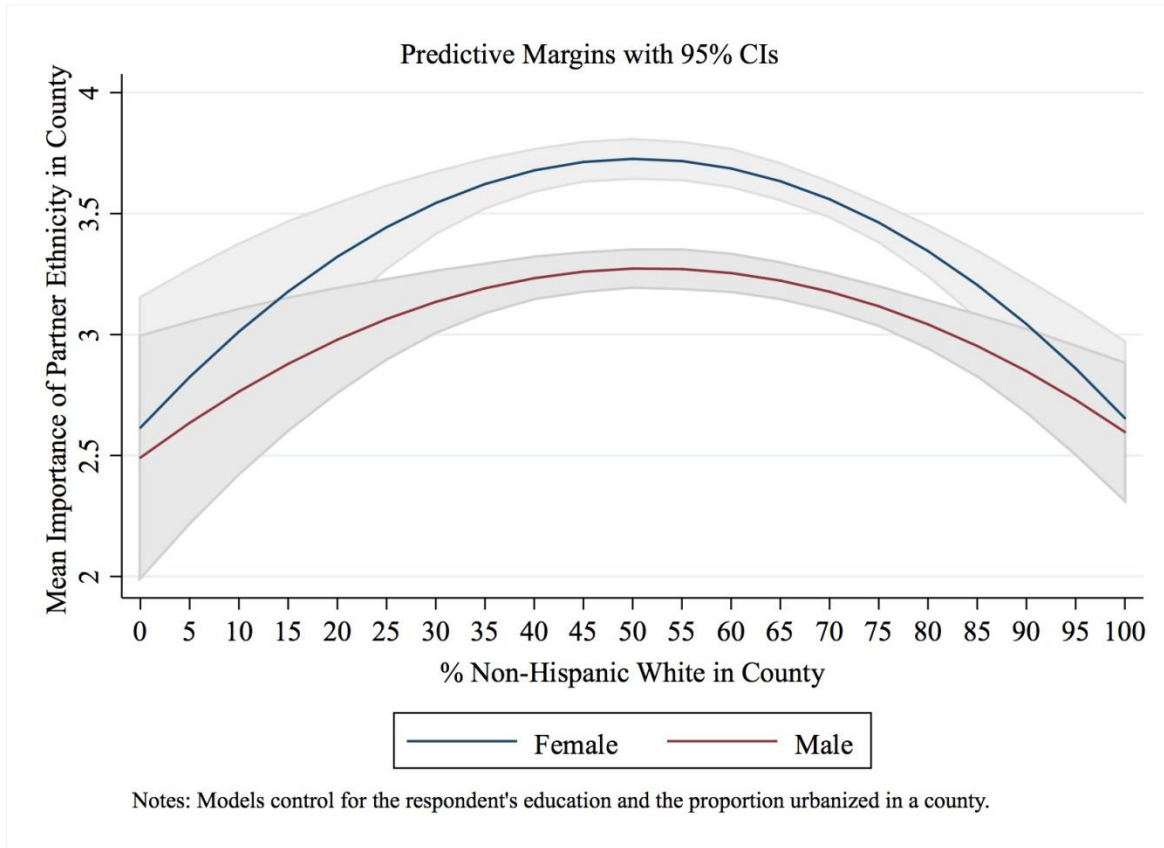
Figure 6 plots the mean importance assigned to a partner's ethnicity by county over the level of ethnic homogeneity in a county. A similarly steep trend can be seen for women, which peaks at around 50% homogeneity. However, this trend reverses at around 55% homogeneity. This may suggest the presence of an omitted variable driving preferences in predominantly white counties.

Further exploration is still needed; including regional-level analyses from other countries. Here we will be able to test strong thresholds and breaks based on within-country differences and legacies of migration or segregation.

Figure 6: Mean importance of partner ethnicity by US county, over % Non-Hispanic White in county

Predictive Margins with 95% CIs

Notes: Models control for the respondent's education and the proportion urbanized in a county.

This brief extended abstract provides an indication of some of the promising results that we aim to pursue further in more advanced multivariate and multilevel models.

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