

# Racial Preferences in Online Dating across European Countries

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## Abstract

Knowledge about how race governs partner selection has been predominantly studied in the United States, yet it is unclear whether these results can be generalized to nations with different racial and immigration patterns. Using a large-scale sample of online daters in nine European countries, we engage in the first cross-national analysis of race-related partner preferences and examine the link between contextual factors and ethnic selectivity. We provide a unique test of contact, conflict, and in-group identification theories. We show that individuals uniformly prefer to date same-race partners and that there is a hierarchy of preferences both among natives and minority groups. Notable country differences are also found. Europeans living in countries with a large foreign-born population have an increased preference for minority groups. The ethnically heterogeneous Swiss population displays the strongest preference for minorities, with the more homogenous Poland, Spain, and Italy, the least. Anti-immigrant attitudes are related to stronger in-group preferences among natives. Unexpectedly, non-Arabic minority daters belonging to large-size communities have strong preferences for Europeans. The results have implications for immigrant integration policies and demonstrate that Internet dating allows efficient selection by racial divisions, perpetuating country-specific racial inequalities.

## Introduction

In the United States, race is one of the most robust criteria for partner selection (Qian and Lichter, 2007; Kalmijn and van Tubergen, 2010). Preferences for individuals of the same race and reluctance towards different-race partners characterize all romantic relationships, irrespective of their level of commitment (Blackwell and Lichter, 2004). But does racial selectivity continue to govern partner preferences online? The Internet dating market benefits from a large pool of potential partners,

with theoretically lower structural pressures, which should in turn mean that individuals are free to pursue genuine preferences. Moreover, the online environment brings together people from various social groups that in traditional settings might remain underexposed (Sprecher, 2009). Racial boundaries and hierarchies are shown to still prevail among individuals seeking a partner via online dating, both in terms of stated preferences (Feliciano, Robnett and Komaie, 2009; Yancey, 2009; Feliciano, Lee and Robnett, 2011; Robnett and

Feliciano, 2011) and first-stage interactions (Lewis, 2013; Lin and Lundquist, 2013).

Studies examining how race governs partner selection online (as well as offline) outside of the US context remain scarce. Focusing on a single national context and examining only individual characteristics ignores the contextual variations that likely govern partnership markets. Fundamentally different racial histories and immigrant populations across Europe imply that it is uncertain whether previous US-based findings can be generalized (Dribe and Lundh, 2008). Moreover, the few studies that address mixed marriages in the European context mainly examine unions between immigrants and natives, using ethnic and national-origin group divisions, and generally focus on one country (Germany: González-Ferrer, 2005; the Netherlands: Kalmijn and van Tubergen, 2006; Sweden: Dribe and Lundh, 2008). This lack of comparative research is largely attributed to the diversity of ethnic composition between countries, the coding and registering of ethnic categories, as well as different periods of observation (Lucassen and Laarman, 2009).

This study provides the first cross-national analysis of race-related partner preferences of online daters. It does so by examining the nine European countries of Switzerland, Sweden, The Netherlands, Germany, Austria, France, Spain, Italy, and Poland. In contrast to previous research on intermarriage, our focus on an earlier phase of the partnering process (i.e., the preferences that people mention in their dating profile) permits a unique empirical test of how both individual-level attributes and contextual forces shape actual preferences (as opposed to final choices). Previous research examining racial preferences in online dating placed almost exclusive attention to individual characteristics, largely ignoring contextual influences. One exception is the study by Feliciano, Lee, and Robnett (2011), which analyses the impact of one structural indicator (i.e., percentage of group size) on the racial preferences of a single group (i.e., Hispanics). This article extends contextual explanations of online daters' racial selectivity by examining multiple contextual indicators (e.g., minority population size, formal and informal climate towards immigration) on the partner preferences of multiple racial groups. We therefore provide a novel test of classic theories of intergroup relations (e.g., contact theory, group threat theory, in-group identification) within the context of online dating.

This study examines different countries across Europe for several reasons. First, the United States is a classic immigration country with a specific legacy of racial boundaries, whereas ethnic and racial divides within

most European countries became visible only from the second half of the 20th century (Sniderman and Hagendoorn, 2007; Hooghe *et al.*, 2009). European countries previously characterized as homogeneous in terms of national identity, ethnic composition, language or religious faith, such as France or Sweden, are now exhibiting considerable heterogeneity (Israeli, 2008; Meuleman, Davidov and Billiet, 2009).

Second, fueled by rapid large-scale non-Western immigration (Bail, 2008), Europe has experienced increasing tensions between national majorities and a surge in ethnic and culturally diverse minorities, in particular Muslim groups. While the White-Black divide is the historically prominent racial cleavage in the United States, racial issues in Europe are dominated by a Native European-Arab (Muslim) division.

Finally, there are numerous country-specific differences across Europe, generated by the diverse timing and sources of migration, size of immigrant groups, levels of anti-racist attitudes, and citizenship and civic inclusion or philosophies of integration (Favell, 2001; Koopmans *et al.*, 2005; Bail, 2008). Northern and Western European countries (e.g., Sweden, the Netherlands, Germany, Austria, France, and Switzerland) have a long history of migration after World War II, often from Southern European and ex-colonial African, Caribbean, and Asian countries (Triandafyllidou, Gropas and Vogel, 2007). France gained a large population from Northwest and Sub-Saharan Africa, Germany hosted large Turkish communities, while the Netherlands attracted Surinamese, Indonesians, and Moroccans (Semyonov, Gorodzeisky and Glikman, 2012). Evolving from emigration into immigration countries, Spain and Italy started to receive large immigrant populations in the late 1980s from Latin America, North Africa, the Middle East, and Eastern Europe (Bail, 2008). With the fall of European Union borders, Poland has experienced the emigration of its own workers to Western European countries (Triandafyllidou, Gropas and Vogel, 2007), but hosts few immigrants itself.

The current study also benefits from the use of unique data derived from online dating profile information. Although there are existing studies on interracial dating using Internet data in the United States, the majority of assortative mating research has often used the proxy of young newly-wed couples with census (e.g., Mare, 1991; Breen and Salazar, 2011) or survey data (Joyner and Kao, 2005). To understand how racial preferences are formed and how the social distance between racial groups emerges, it is essential to move from the study of 'successful' interracial marriages to the initial

stages of relationship development (Gullickson, 2006; Yancey, 2009; McClintock, 2010). Using online dating profiles and preferences ensures a more direct assessment of individuals' partner preferences. Internet dating information provides a more ecologically valid true-to-life context coupled with an unprecedented scale and level of detail for examining the initiation of romantic relationships. Because an individual's preferences are not exposed to others, we anticipate lower effects of social desirability (Yancey, 2009), which is particularly important when examining racial preferences.

In this study, we focus on stated racial preferences for dating partners with a similar (in-group) or different (out-group) racial background. We distinguish between five mutually exclusive categories, which refer to the majority population of Europeans (i.e., the 'native' Caucasian population) and four minority racial groups of non-European origin (i.e., Hispanic, Arabic, African, and Asian), irrespective of birthplace.

## Theoretical Framework

### In-group Partner Preferences

Core theories to explain interracial partnering draw from work on in-group preferences (Kalmijn, 1998; Fu, 2001) and social distance between racial groups (Bogardus, 1947; Blumer, 1958). According to Kalmijn (1998), individuals' predilections for members of their own group reflect expectations for cultural similarity and advantages of being matched to a partner with similar values (e.g., mutual behavioral confirmation, certainty of having common interests and lifestyles). Individuals' cultural capital is highly dependent on their racial background. Chiswick and Houseworth (2011) argue that choosing a partner with similar cultural resources enables a more effortless attainment and transmission of cultural 'goods' to the next generation. A strong sense of community and identity within one's own racial group also fuels feelings of separation and unrelatedness towards members of other groups, producing intergroup social distancing and a hesitancy to engage in close interactions with racially dissimilar individuals (Bogardus, 1947). Based on these mechanisms, we expect strong same-race preferences among all groups.

### Racial Hierarchy of Out-groups

Research on social distances between ethnic and national groups has documented the existence of a ranking system of out-groups (Hagendoorn, 1995). The dominant group perpetuates stereotypical and social distance

rankings, but minority groups also appear to consent and reaffirm such hierarchies, although to a lesser extent. By perpetuating negative out-group evaluations, the dominant group benefits by reinforcing its high ranking position and demoting groups that might threaten the status quo (Blumer, 1958). Minority groups distance themselves from similarly positioned groups at the lower end of the scale to preserve a positive social identity (Hagendoorn, 1995). Evidence of social distance rankings of ethnic out-groups has been found in the Netherlands (Hagendoorn and Sniderman, 2001), Sweden (Snellman and Ekkehammer, 2005), and the former Soviet Union (Hagendoorn *et al.*, 1998). Owing to their culturally and demographically dominant position, Europeans rank first alongside in-group members, whereas Africans and those from the Middle East are positioned at the bottom of the hierarchy (Hagendoorn *et al.*, 1998). Africans are equally (least) preferred as partners as Arabs, owing to similar cultural traits (e.g., patriarchal norms, religion) and recent migration history (Snellman and Ekkehammer, 2005). Hispanic and Asian groups generally hold an intermediate position, similar to their ranking in the United States (Bonilla-Silva, 2004). This relates to the lengthier time spent in the host country and language and cultural resemblance to the White majority for Hispanics (Snellman and Ekkehammer, 2005) or ex-colonial relations for Asians (Verkuyten and Kinket, 2000). Based on this evidence, we anticipate that racial preferences across all European countries will be hierarchical, with the European and own group being the most preferred, followed by Hispanics and Asians ranked in the middle, and African and Arabic individuals as least preferred.

### Country-level Determinants of Racial Preferences

Blau (1977, 1994) provides a structural interpretation of in-group preferences and intergroup relations by stating that opportunities to initiate relations with out-group members are the product of structural configurations. Interpersonal choices are highly structurally driven and contingent on opportunities for interaction. This line of research has largely focused on the constraining role of structural settings on partner choices. The current study is able to shift the focus to an earlier stage of mate selection and examine which racial groups are most preferred as opposed to most chosen. As opposed to assessing how contextual forces constrain partner choices, we are able to evaluate how they shape actual preferences. We explore two contextual aspects that are often associated with racial openness, namely, minority group size and climate towards immigration. In doing so, we draw on

various theoretical approaches and mechanisms related to contact with out-groups, in-group identification, or perceived group threat.

### Size of Minority Population(s)

First, we focus on the racial preferences of the majority group and anticipate that a large minority population (as a whole) reduces natives' racial selectivity. According to contact theory (Allport, 1954), frequent interactions with out-group members provide dominant group members the tools to understand other cultural lifestyles, which reduce tendencies to stereotype and discriminate. Numerous studies found a robust association between heterogeneous contexts and increased incidence of interracial unions, suggesting that 'melting pot' environments attract familiarity and openness for intergroup contact (e.g., Lievens, 1998; Bratter and Zuberi, 2001). Owing to increased exposure to out-groups (Allport, 1954; McLaren, 2003), we predict more openness in natives' racial preferences in countries with a sizeable minority population.

Large-sized minority populations could, however, also be a source of social anxiety and prejudice among the majority group (Blalock, 1967). Conflict theory (Coser, 1956; Blumer, 1958; Putnam, 2007) suggests that the dominant group may experience the growth in minority group size as a threat to economic resources (Quillian, 1995) or cultural values (Schneider, 2008). This prompts a strong loyalty to one's own group, hinders interracial trust, and results in racial segregation. Based on these mechanisms, we put forth a competing hypothesis, stating that large minority populations increase the racial selectivity of majority members.

Second, we focus on minority members and propose that their relative group size (i.e., the size of their own group in relation to the total population) has a particular impact on non-natives' racial preferences. Members of larger minority groups can identify better with the in-group and are subject to more control from third parties (Kalmijn, 1998; Kalmijn and van Tubergen, 2006). A sizeable ethnic community is more able to enforce norm conformity and group solidarity, condemning members' contact with out-groups (Vervoort, Flap and Dagevos, 2011). Despite the absence of significant others regulating the partner search process in online dating (Rosenfeld and Thomas, 2012), previous research shows that close relationships formed online tend to be assimilated into a person's offline social circle of friends and family (McKenna, Green and Gleason, 2002). Internet daters likely form online contacts guided by the anticipation of third parties' scrutiny. We anticipate that the

larger the group, the stronger the in-group identification and influence of third parties and the more prominent the inclination towards same-race partnering among minority daters.

### Climate towards Immigration

Finally, we propose that differences in racial preferences are also related to country-level variation in formal tolerance and the normative climate towards out-groups (Jacobson and Heaton, 2008; Kalmijn and van Tubergen, 2010; Chiswick and Houseworth, 2011). We include anti-immigrant sentiment and inclusiveness of migrant integration policies to gauge attitudes and regulations towards external groups. An extensive body of literature examining Western European countries provides evidence for rising levels of anti-minority and anti-immigrant attitudes (e.g., McLaren, 2003; Semyonov, Raijman and Gorodzeisky, 2006; Weldon, 2006). The threat of out-groups strongly influences social cohesion and intergroup contact (Schneider, 2008). A tense societal climate surrounding immigration and a restrictive migrant integration regime most likely enhances people's tendencies to date same-race partners and to dismiss contact with people from other racial backgrounds. We consider these indicators of direct relevance to native Europeans' racial preferences only. Anti-immigrant sentiment and restrictive integration policies capture opposition to immigration among the native group and can illustrate how Europeans' aggregated normative values and legal sanctions exert pressure over their own members. In addition, previous research on immigrants' intermarriage patterns reveals that integration policies play no role in minorities' choices for an exogamous partner (Huschek, de Valk and Liefbroer, 2012).

## Data, Measurement, and Analytical Methods

### Data and Sample

We analyse anonymized profile and preference information of users registered at the eDarling online dating site (a detailed description of the data and selectivity issues is provided in the [Supplementary Material](#)). In an agreement with the company, data were accessed for all users in September 2011. We focus on initial profile information, and more precisely the selection criteria that users impose in terms of race, as well as their socio-demographic data records when they first fill out their profile. We perform the analyses on a total pooled sample of 58,880 heterosexual members<sup>1</sup> drawn from an original sample of 876,658 heterosexual site users. To

avoid computational problems, the European group was under-sampled by extracting a random sample of Europeans that equals the size of the largest minority group. Random-sampling the sub-population of Europeans (without also extracting a random sample of racial minorities) is comparable with the common practice of over-sampling small sub-populations in studies of race relations (Waksberg, Judkins and Massey, 1997) or in studies of intermarriage (e.g., Kalmijn and van Tubergen, 2006). Given that the main goal of our article is the examination of racial preferences cross-nationally, random-sampling sub-populations of minority groups would have drastically reduced the representation of minority groups in certain countries (e.g., Poland). Sampling the sub-population of Europeans while retaining the full sample of minority groups copes with computational limitations, and provides a better estimation of the partner preferences of racial minorities across countries.

## Measurement of Variables

### Individual-level variables

We constructed five dependent variables that capture preferences for specific racial groups. The use of broad racial categories across all countries allows us to easily engage in cross-national comparisons. When describing their own race, individuals are asked to place themselves in one of the following seven categories: European, African, Asian, Arabic, Indian, Hispanic (Latin American), or other. In relation to the race(s) of their potential match, users can select between one or as many of the following possibilities: European, African, Asian, Arabic, Indian, Hispanic, other, or any (i.e., it does not matter).<sup>2</sup> When filling in the dating profile, users were offered the same list of racial choices in all nine countries, both in terms of own racial background and preferred race for partner. The question regarding partner's race 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 racial categories. Furthermore, the choices made by members are kept hidden from other users. The Indian and Asian categories were recoded into a broader Asian category. We exclude online daters who identify themselves as belonging to 'other' racial backgrounds because it is not possible to ascertain membership to any group. We construct five dichotomous outcome variables defining preference for specific racial groups, where a value of 1

indicates whether the user is willing to date Europeans, Hispanics, Arabs, Africans, or Asians. In combination with the variable describing one's own racial background, we can assess both in-group and explicit out-group preferences.

### Country-level variables

In this study we examine several country-level variables.<sup>3</sup> To measure minority population size as a whole, we rely on *size of foreign-born population*, which is a national-level indicator of the proportion of foreign-born residents relative to the size of the total population. The data are provided by the Eurostat Statistical Database (2011a) and computed by the authors. In the absence of specific statistics or survey-based data on ethnicity or race, examining the foreign-born segment of the population provides the best approximate evaluation of how large the out-group population in each country is within Europe (for a similar approach, see Strabac, 2011).

Secondly, we compute minorities' *relative group size* as a proportion relative to the total population of the number of residents belonging to each minority racial group, measured for each country. We use data on the number of non-natives from the 2011 European Union Labour Force Survey (EU-LFS, European Commission, 2011). The EU-LFS is a large household sample survey providing quarterly results on labour participation of people aged  $\geq 15$  years as well as those outside of the labour force. We selected the data on respondents' country of birth (defined as the country of residence of the mother at the time of birth) for each country. For Germany, we used information on nationality (which corresponds to the country issuing the passport) given lack of data of country of birth. For the Netherlands, we used 2011 data on nationality provided by Statistics Netherlands. For Poland, we relied on 2001 census data on citizenship provided by Eurostat. Although the Polish census figures are slightly outdated, we opted for this measurement, as it provides a unique amount of information about the racial composition in Poland.

The country of origin/nationality categories were recoded into broader racial categories. Owing to the prevalence of Arabic backgrounds in Northern Africa, for instance, foreign residents originating from these countries were clustered into one Arabic group, including also those from Near and Middle East. Foreign residents from other African countries were grouped into the African category. The population born in Latin America was coded as Hispanic, while residents coming from East, South, and South East Asia were grouped

under the Asian category. Based on these aggregated categories, we constructed country-level group-size measures for each minority racial group by computing the percentage of Hispanics, Asians, Africans, and Arabs of the total number of respondents/citizens in each country. We acknowledge that the measures are not optimal in gauging the actual racial composition of countries because they do not account for second-generation immigrants, naturalization (i.e., foreign-born citizens that already acquired the nationality of a European country), or native-born minority groups (e.g., the Roma population in Poland). However, the EU-LFS data are the only reliable up-to-date European cross-national source of information on foreign-born populations. Moreover, given our interest in relative country differences in population composition instead of precise absolute measures, we are confident that the EU-LFS offers the best proxy indicators that are currently available (Schlueter and Wagner, 2008).

*Anti-immigrant attitudes* are measured by aggregating responses from the fifth round of the European Social Survey (ESS, 2010<sup>4</sup>), using the responses to the questions ‘Would you say it is generally bad or good for [country]’s economy that people come to live here from other countries?’, ‘Using this card, would you say that [country]’s cultural life is generally undermined or enriched by people coming to live here from different countries?’, and ‘Is [country] made a worse or a better place to live by people coming to live here from other countries?’ All three questions have 11-point answer scales ranging from 0 to 10 where low values refer to negative assessments of the consequences of immigration. After validating the consistency of items (i.e., Cronbach’s alpha values >0.80), a mean score was computed based on the answers to the three questions. To simplify the interpretation of results, the scores have been transposed so that high scores indicate higher anti-immigrant attitudes.

Lastly, *inclusiveness of migrant integration policies* is measured via the Migrant Integration Policy Index (MIPEX, Niessen, Huddleston and Citron, 2007). MIPEX gauges the different policies towards the integration of migrants based on the following dimensions: labour 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.

### Background variables

*Education.* Each of the nine countries has a country-specific categorization for education, which we

harmonize and group following the International Standard Classification of Education (ISCED). We differentiated between three educational levels, which range between the reference category of low (ISCED levels 0: ‘pre-primary education’, 1: ‘primary education or first stage of basic education’, and 2: ‘lower secondary or second stage of basic education’), medium (ISCED 3: ‘(upper) secondary education’ and 4: ‘post-secondary non-tertiary education’), and high (ISCED 5: ‘first stage of tertiary education’ and 6: ‘second stage of tertiary education’).

The other control variables include sex (male: reference group); age, recoded into a six-category variable (<20 years: reference category, 21–30, 31–40, 41–50, 51–60, and >60 years); religion, which distinguishes between Christian (reference group), 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 control for the importance of match’s ethnicity, which is measured via an item that asks ‘What importance do you give to the ethnicity of the person you are searching for?’ on a 7-point scale ranging from 1 (‘not at all important’) to 7 (‘very important’). Furthermore, we include a binary variable for long-term dating intentions, with 1 indicating a strong preference for a long-term relationship, and 0 referring to a low preference. Finally, we control for user’s type of membership, which is non-premium or premium, distinction which is described in more detail in the [Supplementary Material](#).

The online daters provide no detailed description of their ethnic/racial background (i.e., country of origin, parents’ background, generation of immigration, length of stay, legal status). The users are requested to provide self-descriptions, which can only be filled in the language of the country of residence (using a different language automatically deletes the profile). This could act as a proxy for language proficiency and screens for individuals who are reasonably integrated into a country.

### Methods of Analyses

Using the `runmlwin` command (Leckie and Charlton, 2013) in Stata, we estimate a multilevel logistic regression model for the preferences for the five racial groups (level 1), measured for each online dater, and thus nested in individuals (level 2). The five binary outcomes are considered as repeated measures or, equivalently, as a multivariate outcome. This analytical approach takes the dependency of the repeated binary outcomes into account and offers the possibility to estimate covariate effects for all outcomes (and test whether these effects

are equal). Our data also present an additional level of nesting (i.e., individuals nested in nine European countries). Using multilevel analyses that account for the three levels of nesting would lead to biased estimates owing to the limited number of upper-level units (Bell *et al.*, 2014) and having only nine countries makes the results vulnerable to outliers and influential cases (Maas and Hox, 2005). To overcome this shortcoming, we engage in a country fixed-effects model that includes distinct country dummies. Using two-level logistic regression modelling, we first estimate single and interaction effects of racial background and country (while also controlling for education, gender, age, religion, marital history, importance of partner's race, long-term dating intentions, and type of membership). Based on this model, we predict probabilities of preferring each racial group, by own racial background, for each country. Comparable with the two-stage regression, we use the estimated preference probabilities for the nine countries (obtained through the previous model) as dependent variables in a simple linear OLS (ordinary least squares) regression analysis with each of the following country-level predictors: foreign-born population size, anti-immigrant attitudes, inclusiveness of migrant citizenship policies, and relative group size. For ease of interpretation of results, we graph a scatter plot with a fitted regression line for each country-level predictor.

## Results

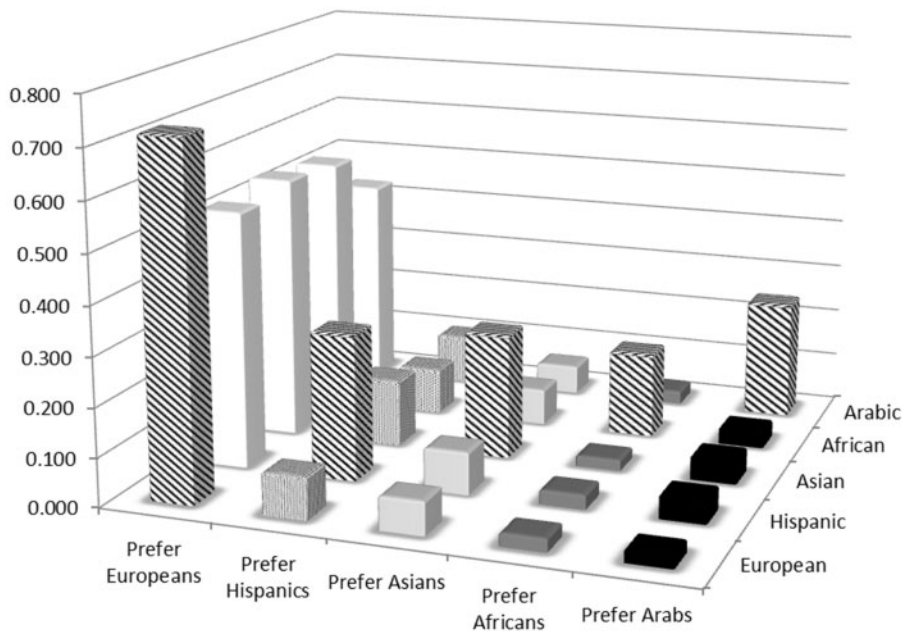
Figure 1 graphs the predicted probabilities of racial preferences by own race, based on a multivariate logistic regression model (the model estimates and the statistical significance of predicted probabilities are fully reported in Supplementary Tables S3 and S4, respectively, in the Supplementary Material). Same-race preferences are patterned across the diagonal. The data indicate that daters tend to prefer partners of the same racial background.<sup>5</sup> Furthermore, a hierarchy of preferences emerges among both Europeans and minority groups. Europeans are the most preferred group and generally less willing to be matched with those from other races. In fact, unlike initially predicted, online daters of all racial backgrounds are more open to dating Europeans than their own group. Apart from this unexpected result, the data confirm that after Europeans and own group, Hispanics and Asians hold intermediate rankings, and that finally, Arabs and Africans are the least preferred.

Figure 2 graphs the predicted probabilities of racial preferences by own race for each of the nine countries, based on significant interactions of race and country in a

multivariate logistic regression model. The statistical significance of the predicted probabilities is reported in Supplementary Table S5 in the Supplementary Material. Figure 2 also reveals striking country differences. Italy, France, and Austria have the highest same-race preferences among Europeans, whereas Sweden scores the lowest. Minority members generally display the highest in-group preferences in the Netherlands and France. In Switzerland, minority members, particularly Hispanics and Asians, appear to have the highest probabilities of preferring Europeans. Europeans in Switzerland have the highest probabilities of preferring minority members. The lowest probabilities of preferring Europeans among minority racial groups are in Poland. Finally, the native Polish, Spanish, and Italians are the least willing to date minority members.

To enhance our understanding of country differences, we provide bivariate scatter plots in which we explore each association between country effects and various national-level indicators of racial composition and immigration patterns. Given country variations in Europeans' in-group and out-group preferences, as well as minorities' in-group preferences and willingness to date Europeans,<sup>6</sup> we run a regression analysis with each of these specific estimates as dependent variable and relevant country-level factors as predictors. We test national differences in Europeans' in-group and out-group preferences against the country-level size of the foreign-born population, anti-immigrant sentiment, and inclusiveness of migrant integration policies. We additionally examine minorities' in-group preferences and specific preferences for the European majority in relation to their relative group size.

The top row of Figure 3 graphs Europeans' in-group preferences, as well as willingness to date specific minority groups, in association with the size of the foreign-born population in each country. Results reveal that increases in the share of the foreign-born group are related to both a decrease in the Europeans' in-group preferences and a systematic increase in their out-group preferences. We observe the existence of two poles: Switzerland with a large foreign-born group and high preferences for minorities among Europeans, and Poland with a small fraction of the foreign-born population and a corresponding low preference for minorities among the majority group. We also see a middle cluster of countries with an intermediate level of the size of the foreign-born group and where Europeans have moderate preferences for minorities (i.e., Germany, Austria, the Netherlands, and France). With the exception of minority groups where there are language similarities and colonial ties (i.e., Hispanics), Spain is similar to Italy in



**Figure 1.** Predicted probabilities of preferences for specific groups, by own race ( $n = 58,880$ ). Notes: Numbers are based on a multivariate logistic regression model, controlling for education, gender, age, religion, marital history, importance of partner's race, long-term dating intentions, type of membership, and country. Patterned columns across the diagonal indicate same-race preferences.

having an intermediate size of the foreign-born group, but having relatively low preferences for minorities among the native population. Finally, despite being more similar to Western European countries in terms of preferences for non-Arabic minorities, Sweden actually clusters with the Southern European group when it comes to low levels of preference for dating Arabs among its native population.

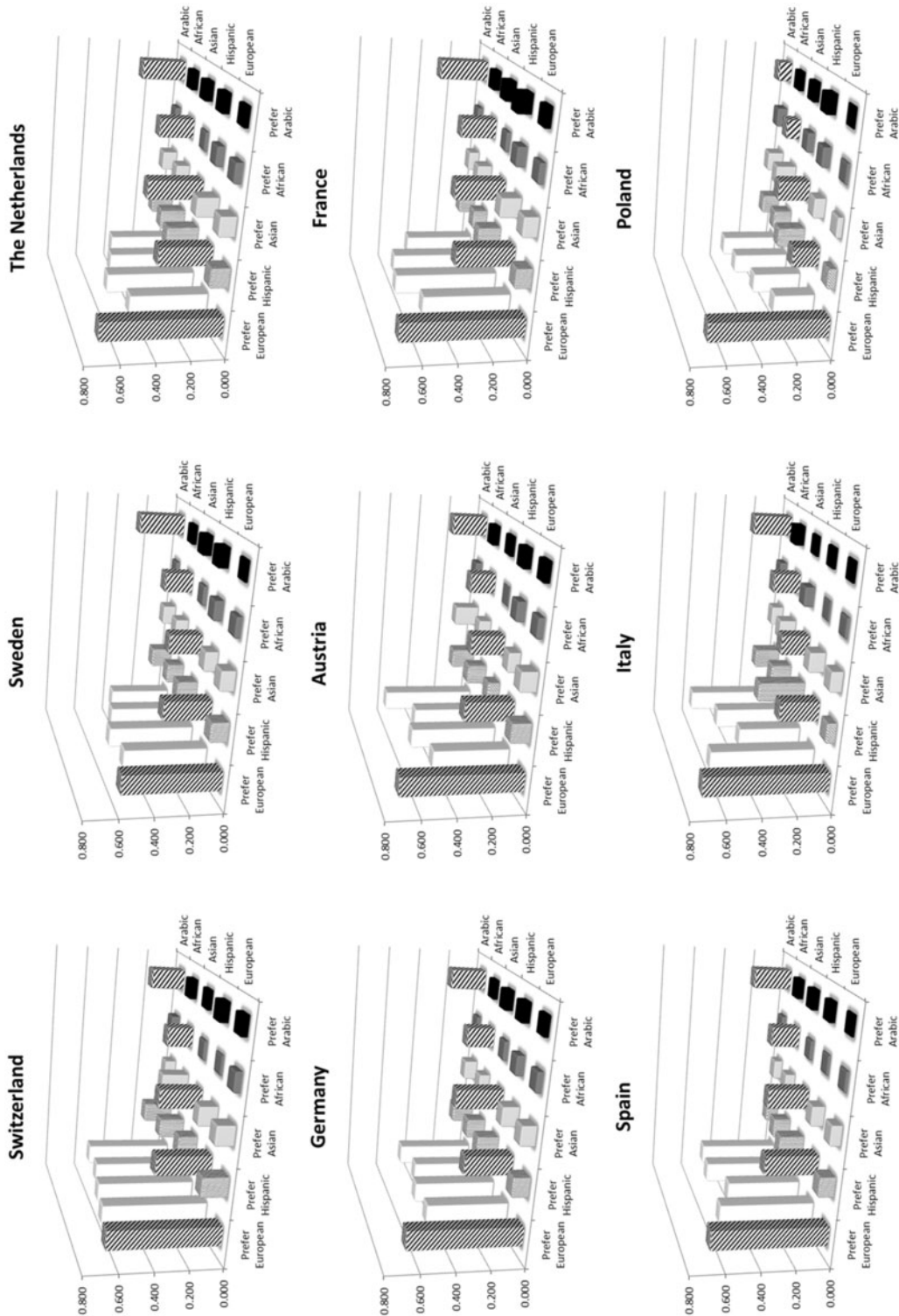
The second row of [Figure 3](#) relates Europeans' racial preferences to the level of anti-immigrant attitudes in each country. Results show that in countries such as Italy and France, with a pronounced anti-immigrant climate, Europeans have higher in-group preferences. There is no systematic association, however, between negative attitudes towards immigration and the out-group preferences of Europeans. Nonetheless, Italy scores high on the anti-immigrant sentiment scale and consistently displays the lowest preferences for minority groups among the native population. Lastly, despite having the most positive climate towards immigrants, Sweden shows intermediate levels of preferences for Hispanics, Asians, and Africans, as well as relatively low preferences for Arabs among the European group.

The bottom row of [Figure 3](#) plots Europeans' in- and out-group preferences in connection to each country's migrant integration policies' index value (MIPEX).

The bottom-left graph shows that in a country such as Sweden, with strongly inclusive policies, the European majority has the lowest probability of same-race preferences. However, when looking at specific preferences for minorities among the native population, the high degree of inclusiveness in Sweden is only associated with moderate levels of preferences for Hispanics, Asians, and Africans, and low preferences for Arabs. Furthermore, despite their more restrictive integration policies, the Swiss context is consistently related to high levels of preferences for minority groups among Europeans.

Turning to the patterns of racial preferences among minority groups, we plot ([Figure 4](#)) minorities' in-group preferences and preferences for Europeans against their relative group size in each country. It shows that minority groups belonging to larger groups, such as Africans and Arabs in France, have higher same-race preferences (top panel, [Figure 4](#)). Contrary to expectations, the increase in relative group size at the country level is also linked to higher probabilities of preferring Europeans among minorities, particularly for Hispanics in Spain, Asians in Switzerland, and Africans living in France or Switzerland (bottom panel, [Figure 4](#)). For Arabs residing in France, however, a larger group size is associated with a rather low probability of preferring majority members.





**Figure 2.** Predicted probabilities of preferences for specific groups, by own race, per country ( $n = 58,880$ ). Notes: Numbers are based on a multivariate logistic regression model with significant interaction effects of race and country, controlling for education, gender, age, religion, marital history, importance of partner's race, long-term dating intentions, and type of membership. Patterned columns across the diagonal indicate same-race preferences.

Europeans' racial preferences, anti-immigrant sentiment, and migrant integration policies  
by size of foreign-born population, anti-immigrant sentiment, and migrant integration policies

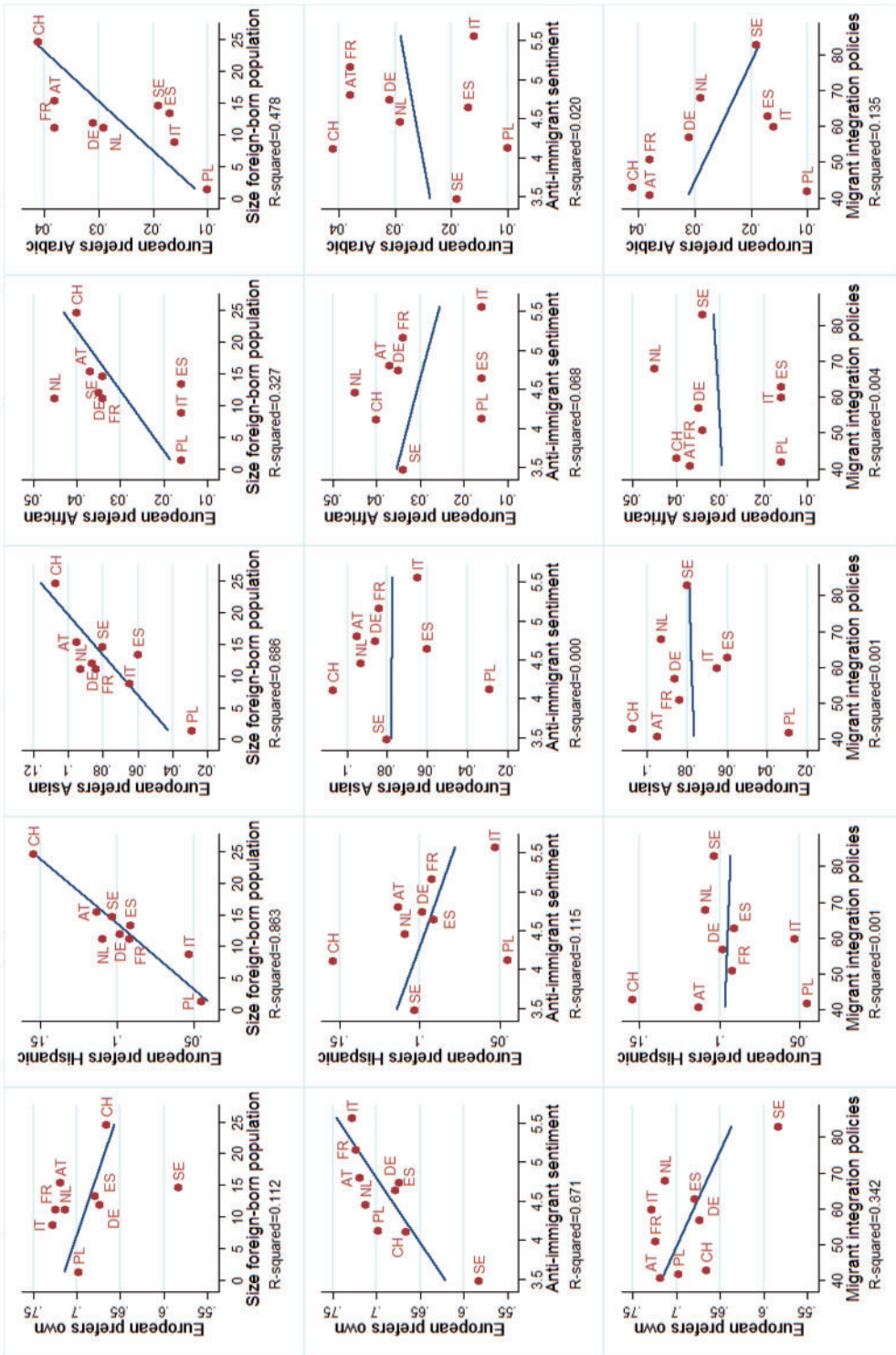
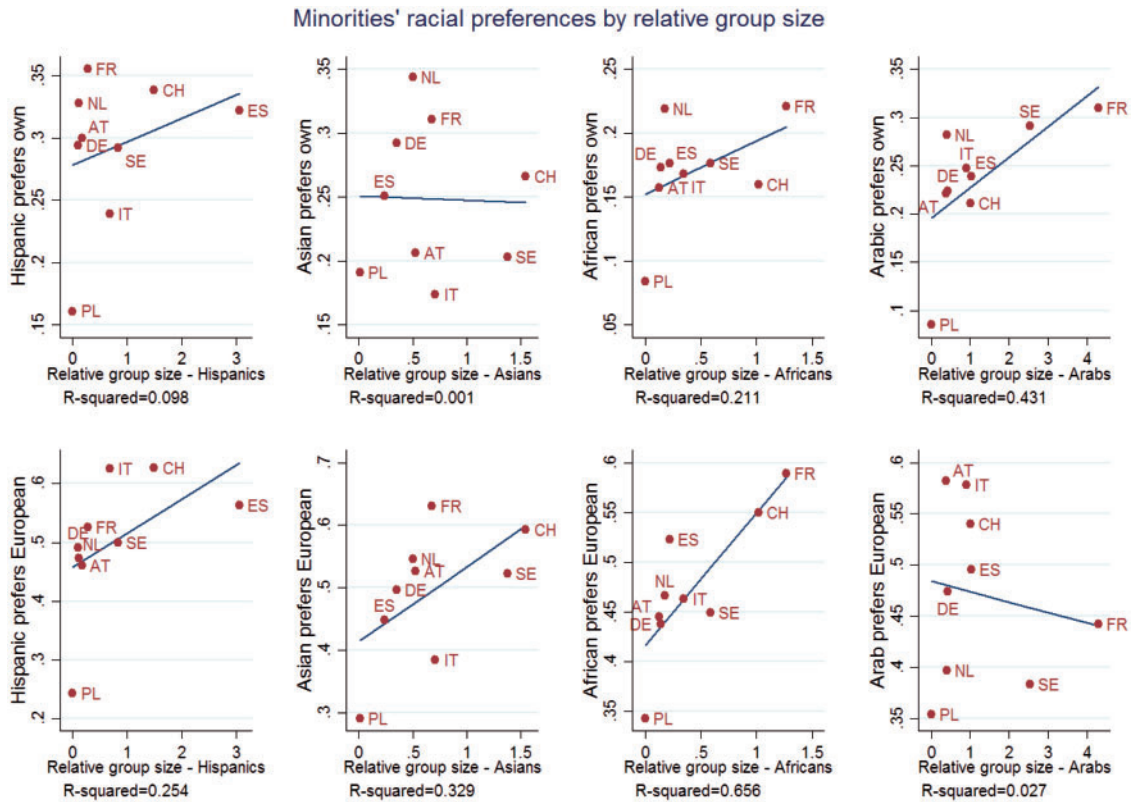


Figure 3. Scatter plots of country-specific predicted probabilities of Europeans' same-race preferences, and Europeans' preferences for Hispanics, Asians, Africans, and Arabs, by three country-level indicators ( $n=9$ ). Notes: The linear fit is based on OLS regression estimates. The top row of graphs illustrates Europeans' racial preferences, by size of foreign-born population. The second row illustrates Europeans' racial preferences, by anti-immigrant sentiment. The bottom row illustrates Europeans' racial preferences, by MIPEX. Country abbreviations: AT = Austria, CH = Switzerland, DE = Germany, ES = Spain, FR = France, IT = Italy, NL = The Netherlands, PL = Poland, and SE = Sweden.



**Figure 4.** Scatter plots of country-specific predicted probabilities of racial preferences and relative group size of each minority population ( $n=9$ ). Notes: The linear fit is based on simple OLS regression estimates. The top panel illustrates minorities' same-race preferences. The bottom panel shows minorities' preferences for Europeans. Country abbreviations: AT = Austria, CH = Switzerland, DE = Germany, ES = Spain, FR = France, IT = Italy, NL = The Netherlands, PL = Poland, and SE = Sweden.

## Discussion

Online dating is one of the fastest growing ways in which individuals in many countries meet a partner (Hogan, Li and Dutton, 2011) and, therefore, serves as a more immediate gauge or thermometer of wider race relations and integration in a country. There is currently little knowledge about race relations in connection to both intermarriage patterns and online dating choices outside of the United States. Focusing on a single country fails to acknowledge the pivotal role played by contextual differences and country-specific racial backgrounds. Using online dating profile information, we examined the level of in- and out-group preferences in online dating across nine European countries. We first found that one's own racial background has a substantial influence on the preferred races of potential partners. Across all contexts, a clear hierarchy of racial preferences emerged, ranking Europeans and one's own group on top, Hispanics and Asians in an intermediate position, followed by Africans and Arabs.

Social distances are perpetuated by native Europeans but also racial minority groups, which in the need to distinguish themselves from similarly low-ranked groups paradoxically concede to a biased hierarchy of out-groups. There are similarities with previous US-based research using census or online interaction data, such as pronounced in-group preferences (Qian and Lichter, 2007; Lewis, 2013) and racial hierarchies (Fu, 2001; Lin and Lundquist, 2013). However, as opposed to the American context, preferences for the majority group generally exceed same-race preferences, indicating a much more dominant ranking position of the European majority group and a greater inclination towards assimilation among minorities. This nonetheless could also signify that the dating website attracts minority members with a greater openness towards dating Europeans to begin with.

The current study significantly extends previous research by showing that previous American results of racial patterns of assortative mating cannot be easily

generalized to other nations. Although racial hierarchies are consistent across all countries, clear differences emerge across countries, due to their distinct immigrant populations, anti-immigrant climate, or citizenship and civic integration regimes. The national marriage market plays a considerable role in shaping the in- and out-group preferences of native Europeans. The size of the immigrant population within a country influences the levels of exposure and affinity for external groups (Allport, 1954; Blau, Becker and Fitzpatrick, 1984) and, through that, the willingness to interracially date. Europeans living in countries with a large foreign-born population have lower levels of in-group preferences and increased preferences for minority groups. This indicates that for the majority group, geographical proximity and familiarity with out-groups play a considerable role in alleviating racial divides in romantic relationships, validating contact theory. Our finding diverges from the heightened nativism and anti-immigrant hostility noticed among Whites in the United States in the context of increased foreign-born population (e.g., Jiménez, 2008). The attitudinal climate towards immigrants is another significant factor shaping the racial partnering preferences of the native population. As previously shown, a tense social climate surrounding immigration and the perceived threat of out-groups influence intergroup contact (Schneider, 2008). Negative attitudes towards immigrants at the country level are related to pronounced preferences for one's own group among Europeans. Furthermore, no clear association between migrant integration policies and Europeans' racial dating preferences is found.

Structural characteristics of national partnership markets also have an impact on the partner preferences of minority groups. Arabic members belonging to large communities are more inclined to express same-race preferences, as well as lower preferences towards Europeans. This indicates that increased group size among Arabs strengthens ethnic identity. Heightened same-race preferences among Arabs might also be related to stricter religious norms against partnering non-Muslims (Lievens, 1998). This demonstrates that in contrast to the 'race obsessed American case', the cultural gaps separating ethno-racial groups in Europe are more often driven by religious disparities in values and practices than differences in racial phenotype (Lucassen and Laarman, 2009: p. 58). We also found that Africans living in countries with a high concentration of their own group (e.g., France) have strong preferences for both in-group members and natives, but low preferences for other minority groups as additional analyses (not reported) reveal. This illustrates that increased minority

group size can reinforce racial solidarity and endogamous norms, while promoting social distances towards lower-ranked out-groups. However, it can also breed openness towards majority members. Previous research also reveals that African minorities in France have a higher propensity to marry natives than in other Western European countries, which is explained by colonial links and pre-migration socialization into French culture (Lucassen and Laarman, 2009). Nonetheless, the relatively high preference of dating Europeans among other types of minority members belonging to large-size communities (e.g., Hispanics in Spain, Asians in Switzerland) might once again reflect the selectivity of non-Arabic minority daters who seek alternative partnership markets to have access to European potential candidates.

There is a marked pattern of isolation of dating Arabs living in Sweden (i.e., Europeans' lower preferences for Arabs, Arabs' lower preferences for Europeans), despite the country's rather large foreign-born population and its distinctively positive climate and inclusive policies towards immigrants. This is suggestive of the growing cleavage and tensions (The Guardian, 2010; The Economist, 2013) between the native Swedes and isolated Muslim communities during recent years. Tensions are fueled by large-scale Arabic immigration to Sweden, which has been accommodating large numbers of refugees and asylum seekers from conflict-stricken countries (e.g., Syria, Iraq, Afghanistan, Somalia). Switzerland, on the other hand, despite its restrictive migrant integration regime, displays high levels of preferences for minorities among Europeans, as well as pronounced preferences for natives among its minority groups. This echoes the finding by Carol (2013) who reported that natives and migrants in Switzerland are more open towards intermarriage than in other more accommodating countries. These patterns may be attributed to the high educational attainment and employment rate of both its native- and foreign-born population (Eurostat, 2011b) or the greater cultural resemblance of migrants with the native group (Carol, 2013). However, the high racial openness encountered among Swiss daters should be interpreted in light of the selectivity of online daters (see *Sample Representativeness* in Supplementary Material). Finally, Poland, which is yet to experience significant immigration, is a unique and highly homogenous country, with small fractions of racial groups and restrictive policies of migrant integration, which in turn breed the lowest levels of interracial openness in partner preferences.

This study also had several limitations. First, we recognize that more refined racial and ethnic categories

(beyond European for instance) would be more desirable, but we are restricted by the categories available in our data. Second, we acknowledge the potential selectivity of minority members choosing a mainstream dating website as opposed to a dating platform specifically targeted at their own group. This could overstate the racial openness of minority groups, particularly towards Europeans. Third, the small number of countries limits the possibilities of examining the factors associated with the differences in racial preferences and hierarchies across national contexts in more detail. Finally, future research should examine the impact of contextual factors at a local or neighbourhood level to directly test third-party influences. Nonetheless, our analyses take existing assortative mating research a significant step further and reveal a sizeable influence of contextual factors on racial partner preferences, and not just final choices or recorded successful outcomes. Internet dating does not appear to dissolve ethnic and racial divisions in mate selection but rather enables an efficient selection process that can perpetuate country-specific racial inequalities.

### Notes

- 1 Although the website also hosts daters with same-sex preferences, we examine only heterosexual members owing to expected differences between the racial preferences of heterosexuals, gay men, and lesbians. Interracial partnering is generally found to be more prevalent among same-sex couples than opposite-sex unions (Jepsen and Jepsen, 2002).
- 2 Additional analyses (available on request) indicate that website users who mention they are willing to date ‘any’ race differ from those who have specific preferences. They are more likely to belong to racial minority groups, are male, higher educated, and less interested in long-term dating. Previous studies consider such non-preference as inaccurate, as subsequent dating behavior illustrates (Hitsch, Hortaçsu and Ariely, 2010), or as a form of ‘nonresponse for daters in a hurry’ (Feliciano, Lee and Robnett, 2011: p. 198). Given these selective differences and the focus of our study on racial preferences towards specific out-group partners, we chose not to report or further examine daters lacking any such preferences. Therefore, the conclusions of this study are to be read with reference to online daters with explicit racial preferences.
- 3 The correlation coefficients of these can be found in [Supplementary Table S2](#) in the [Supplementary Material](#).

- 4 Due to the lack of information for Austria and Italy in the [ESS \(2010\)](#) data set, the same measures are taken from the data set corresponding to the second round of the ESS (2004).
- 5 This is particularly noticeable among the highly educated non-Hispanic minorities, as well as European, African, and Arabic women. Conversely, Asian women have lower preferences for dating same-race partners than their male counterparts. For more results regarding educational level and gender, see [Supplementary Material](#).
- 6 There are also several differences in minorities’ preferences for other minorities. For instance, in Italy, Asians prefer Hispanics more than their own group, and in Switzerland, Africans prefer Asians more than same-race partners. However, we opt to focus on natives’ same- and different-race preferences as well as minorities’ preferences for their own group and Europeans given that they yield more striking country differences and are illustrative of the most central racial division (i.e., the majority–minorities divide).

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### Supplementary Data

[Supplementary data](#) are available at [ESR](#) online.

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