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# In the Name of the Neighbor: The Associations between Racial Attitudes, Intergroup Contacts, Ethnic Diversity, and the Perception of Names in the Dutch Speaking Part of Belgium

Billie Martiniello<sup>1</sup> · Pieter-Paul Verhaeghe<sup>1</sup>

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## Abstract

Correspondence testing is an increasingly used method to measure ethnic discrimination. Hereby researchers make use of names to signal ethnic origin. Nevertheless, it is rather rare that the used names are thoroughly pretested. Names are implicitly or explicitly assumed to contain clear signals of ethnic origin. Besides, individual differences in ethnic perceptions of names are ignored. Therefore, this study aims to analyze how the ethnic perception of Polish, Moroccan, Turkish, and Congolese names differ according to one's negative racial attitudes and intergroup contacts as well as the ethnic diversity of the municipality where one resides. We conducted a survey among 990 ethnic majority members in the Dutch-speaking part of Belgium. People with more negative blatant attitudes find it harder to perceive the ethnic origin of names as compared to people with less negative blatant attitudes. The opposite holds for people with negative subtle attitudes. More ethnic diversity in the municipality where one resides makes it easier to recognize Moroccan, Turkish, and Congolese names, but not Polish names. This implies that the level of ethnic discrimination is probably underestimated among people with blatant racial attitudes, as well as among respondents that live in less diverse areas.

**Keywords** Racial attitudes · Intergroup contact · Ethnic diversity · Names · Ethnic discrimination · Correspondence tests

## Introduction

Discrimination is a widespread phenomenon that has many disadvantages for the targeted groups, but also for society as a whole. This is reflected in the growing attention towards the issue, with an increasing amount of research that aims to measure and understand discrimination. These studies increasingly make use of correspondence tests to measure discriminatory behavior in an objective way (e.g., Flage, 2018; Quillian & Midtbøen, 2021). Correspondence tests are seen as the golden standard to measure discriminatory behavior (Gaddis, 2018; Verhaeghe, 2022) and are often used on the labor (e.g., Heath & Di Stasio, 2019) and housing (e.g., Flage, 2018; Quillian et al., 2020) market. In these tests, two fictive rental candidates or job applicants apply to real rental advertisements or job openings. Both candidates have

similar profiles, except for the studied ground of discrimination—the use of names to signal ethnic origin. Based on the research subject's response (e.g., realtors or employers), discriminatory behavior can be uncovered (Verhaeghe, 2022).

Most research publications using this methodology more specifically aim to uncover ethnic discrimination. In order to do so, names are often used as the only signal of the ethnic origin.<sup>1</sup> Names can be important markers and can constitute, among other elements, the basis of symbolic and social boundaries (Gerhards & Kämpfer, 2017). Depending on the context or situation that is studied, names can function as a primary and physically invisible signal of a person's ethnic origin (Tuppat & Gerhards, 2021). Consequently, the test person is given a “typically ethnic minority sounding name” whereas the control person is given a “typically ethnic majority sounding name” (Bertrand & Mullainathan, 2004; Carpusor & Loges, 2006; Verhaeghe, 2022). This practice is — implicitly or explicitly — built upon three premises. The first premise consists of the idea that research subjects are at all times successful at perceiving signals of ethnic origin in names (Gaddis, 2017a, 2017b,

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<sup>1</sup> When talking about ethnic origin, we do not refer to the belief of a shared history or cultural, religious, or linguistic heritage, but to the migration background of a person (either the person or his/her parents is born elsewhere).

Martiniello & Verhaeghe, 2022). The second premise entails the idea that names only reflect signals of ethnic origin (besides gender), and thus also that the research subject's response is solely driven by these ethnic signals. This premise is referred to as the excludability assumption (Butler & Homola, 2017). However, different from the American context (Gaddis, 2017a, 2017b), in Europe, names are not always good signals to determine ethnic origin (Martiniello & Verhaeghe, 2022). Besides, names are found to contain also other signals, like religiosity, social class, educational level, and generational status (Gaddis, 2019a, 2019b; Martiniello & Verhaeghe, 2022). A third — and until now overlooked — premise comprises the absence of individual differences in the perception of names. In other words, it is expected that everyone perceives the same signals in names.

The aim of this research is to look into the third premise. We therefore analyze whether there are individual differences among ethnic majority members in the perception of ethnic minority names and how these can be explained. For this purpose, we consider one's racial attitudes and intergroup contacts as well as the objective ethnic diversity of the municipality where one resides. This research could provide a better methodological understanding of research methods that aim to uncover discrimination and that use names as signals of ethnic origin. If — for example — people with more negative racial attitudes are less able to assess the ethnic origin of names than people with less negative racial attitudes, then the level of ethnic discrimination is underestimated.

Additionally, this study contributes to a broader theoretical understanding of what shapes the ethnic perception of names from the perspective of ethnic majority members. Research has focused on name-changing practices in European countries among migrant or ethnic minority groups, which is strongly driven by stigmatization and discrimination (e.g., Bursell, 2012; Khosravi, 2012). Some belonging to the ethnic minority group change their name to resemble a name of the ethnic majority (Bursell, 2012; Khosravi, 2012) or give their children “typically” ethnic majority names (Gerhards & Hans, 2009; Gerhards & Tuppat, 2020; Sue & Telles, 2007). These studies are based on the idea that people's negative attitudes towards a particular ethnic group are extended to the name a person carries. These studies mainly focus on the reasons and strategies of name-changing practices from the perspective of migrants and ethnic minorities. However, how one's racial attitudes are related to these perceptions from the viewpoint of the ethnic majority remains a blind spot. It is also unknown how one's intergroup contacts as well as the objective ethnic diversity of the municipality where one resides relate to the perception of ethnic signals in names. Nevertheless, whether ethnic majority members do or do not discriminate based on a person's name depends on their perception of ethnic origin through the name.

To fulfill this aim, we conducted an online survey in April 2021 among a non-probability sample of 990 ethnic majority

respondents in Flanders, the Dutch-speaking part of Belgium. We find that people with more negative blatant attitudes are less and people with more subtle attitudes are more successful in perceiving ethnic origin in names (as compared to people with less negative blatant and subtle attitudes). Besides, people living in more ethnically diverse municipalities recognize non-European (here Moroccan, Turkish, and Congolese) names more easily. People with more close intergroup contacts find it harder to identify European (here Polish) names as such. Consequently, the level of measured ethnic discrimination is underestimated when people with negative blatant racial attitudes or living in diverse areas (when testing discrimination towards non-European minority groups) or having close intergroup contacts (when testing discrimination towards European minority groups) are tested. Also, if people do not correctly interpret the origin of names, discrimination is measured to some extent, but rather based on the distinction between whether or not the name originates from the tested country (Belgian vs. non-Belgian in our case). It is in this case also complicated to state that ethnic and no other forms of discrimination are measured, like gender or class discrimination.

## Theoretical Framework

Ethnic discrimination is increasingly uncovered by using the field experimental technique of correspondence testing. Ethnic minorities are generally found to be treated in an unequal and adverse way on the labor market (e.g., Baert, 2018; Heath & Di Stasio, 2019; Quillian & Midtbøen, 2021; Zschimt & Ruedin, 2016) and housing market (e.g., Flage, 2018; Quillian et al., 2020). Most European studies find that this adverse treatment is strongest for people of Moroccan or Turkish origin — which is tested by using Muslim names — as compared to people of European descent — which is tested by using names that are common in the considered ethnic group (e.g., Acolin et al., 2016; Ahmed & Hammarstedt, 2008; Andersson et al., 2012; Baldini & Federici, 2011; Bursell, 2014; Le Gallo et al., 2019; Ramos et al., 2021). However, discrimination towards people of Sub-Saharan African descent is also significantly present (e.g., Verhaeghe & Ghekiere, 2021). In American studies, most discrimination is found towards African Americans and Hispanics (e.g., Bertrand & Mullainathan, 2004; Hanson et al., 2011; Hogan & Berry, 2011; Roscigno et al., 2009).

Nevertheless, the names used to signal the intended ethnic origin are rarely tested beforehand in a thorough manner. Generally, the choice of names is based on popular names, birth record data, or names used in previous research (Gaddis, 2017a). This practice poses the problem that it remains unknown whether the used names are good signals of the intended ethnic origin, whether they also signal other characteristics (Butler & Homola, 2017), and whether the names are ethnically perceived in the same way by different individuals.

The first two questions have been subject to research. In the American context, people appear to be successful at recognizing the ethnic origin in names (Gaddis, 2017a, 2017b). This is, however, less the case in the European context. A study in Belgium showed that people make a distinction between names as of Belgian origin or not rather than perceiving a specific ethnic origin (Martiniello & Verhaeghe, 2022). This was explained by the more specific attention to the precise ethnic origin in Europe (e.g., Moroccans, Chinese, or Polish) as compared to the American context, where the emphasis lies on the broader distinction between Caucasians, African Americans, Hispanics, and Asians. Additionally, names are found to signal other characteristics besides ethnic origin, like religiosity, educational level, generational status, and social class (Gaddis, 2019a, 2019b; Martiniello & Verhaeghe, 2022). Consequently, the question that remains unanswered is whether there are individual differences in the ethnic perception of names and how this can be explained.

This study looks into how the ethnic perception of minority names differs between ethnic majority members based on their racial attitudes and intergroup contacts as well as the objective ethnic diversity of the municipality where they live. Prejudices refer to negative attitudes towards particular ethnic target groups which entail both negative emotions (antipathy) and poorly founded generalizations (stereotypes) (Quillian 2006). In recent decades, these prejudices have diminished or remained stable in the USA and most European countries (Ceobanu and Escandell 2010; Heath and Richards 2019; Moberg et al. 2019). However, there are still large educational and age differences in these attitudes, with older and lower-educated people tending to be more negative towards ethnic minorities and migrants. Moreover, because of an increasing anti-racism norm in society, critics state that people might become reluctant to openly express their prejudices in surveys (Berinsky 1999) such that only the blatant attitudes have declined, but not the more subtle, hidden forms of racial attitudes (Bonilla-Silva 2004; Moberg et al. 2019). Notwithstanding those critics, other studies have empirically shown that people with more negative implicit or explicit attitudes towards ethnic minorities tend to discriminate more on the labor and consumer market, as measured with correspondence tests (Rooth 2010; Zussman 2013).

Several theories state that racial attitudes are related to intergroup contact and the objective ethnic diversity of someone's surrounding. The intergroup contact theory follows a behavioral pathway (Laurence & Bentley, 2018) and states that intergroup contact is likely to reduce negative attitudes (Allport, 1954). There are some facilitating conditions to foster this process: the ethnic minority and majority ought to have a similar group status, share their objectives, cooperate to reach these objectives, and be supported by the existing norms and rules to engage in intergroup contact, and, finally, the intergroup contact should contain a friendship potential (Pettigrew,

1998). The latter is found to be especially helpful (e.g., Ellison et al., 2011; Pettigrew et al., 2011). This so-called friendship potential is related to the concept of contact-valence, which refers to the quality of the contact and can be either positive or negative (Laurence et al., 2018). For intergroup contact to be successful at reducing negative attitudes, the contact-valence should be positive: negative contact can even reinforce negative attitudes (Thomsen & Rafiqi, 2018).

Next to the quality of the intergroup contact (contact-valence), the type and frequency of the contact are also relevant. People who report more frequent intergroup contact have more positive racial attitudes as compared to people with less frequent or no contact at all (Laurence & Bentley, 2018). Besides, a distinction can be made between close and superficial contacts. The effect of superficial contacts — real-life encounters in shops, pubs, etc. — is, like close contacts, found to depend on the subjective contact experience. Where positive superficial contacts can reduce negative racial attitudes, negative contacts can strengthen them. Some research only found a direct effect of close contacts on racial attitudes, but argue that superficial contacts can have an indirect effect by creating opportunities to form friendships and thus close contacts (Ellison et al., 2011).

Besides the proposition that intergroup contacts correlate to racial attitudes, the former might also directly be linked to the perception of names. The underlying idea is that people who have more intergroup contacts (un)consciously learn about each other (Pettigrew, 1998), possibly leading them to better distinguish between ethnic groups. Therefore, we hypothesize that:

**H1:** People with more close interethnic contacts will be more successful in the correct perception of the ethnic origin of names as compared to people with less close interethnic contacts and;

**H2:** People with more superficial interethnic contacts will be more successful in the correct perception of the ethnic origin of names as compared to people with less superficial interethnic contacts.

Although the intergroup contact theory proposes that intergroup contacts influence racial attitudes, the relation might be the other way around. People with more negative racial attitudes might avoid intergroup contacts (Pettigrew, 1998). However, we argue that this might be different depending on the type of negative racial attitudes a person holds. People with more blatant — and thus overt — negative racial attitudes might avoid intergroup contacts openly. On the contrary, people with more subtle — covert — negative attitudes are not always self-aware that they hold these negative attitudes, which is based on the “color-blind” ideology (Bonilla-Silva, 2004). People holding on to subtle racial attitudes usually do not view themselves as racist or prejudiced and are generally in favor of egalitarianism (Dovidio & Gaertner, 2004). Therefore, this newer form of negative racial attitudes is expressed in more hidden ways, such as small but negative or

stereotyping remarks during an everyday conversation for example (Essed, 2002). It follows that, although people with more subtle racial attitudes have more intergroup contacts, they might focus more on ethnic differences during these conversations than people with no negative racial attitudes. This could lead to a better perception of ethnic origin in names. We hypothesize that:

**H3:** People with more negative blatant racial attitudes will be less successful in the correct perception of the ethnic origin in names as compared to people with less negative blatant racial attitudes and;

**H4:** People with more negative subtle racial attitudes will be more successful in the correct perception of the ethnic origin in names as compared to people with less negative subtle racial attitudes.

Although living in a diverse society leads to more intergroup contact opportunities (Semyonov & Glikman, 2009), it increases the likelihood for both positive and negative encounters. Thus, living in a more diverse society leads to both positive and negative effects on racial attitudes, which can eventually lead to a certain level of polarization in racial attitudes (Laurence & Bentley, 2018).

Contrary to the intergroup contact theory, the intergroup threat and competition theory follows a psychological pathway (Laurence & Bentley, 2018). An increase in the size of the ethnic minority group and thus possibly also in the ethnic diversity is perceived as a threat (Ramos et al., 2021) or as an increased competition for scarce goods (Sherif, 1966). The concept “competition threat” is very complex: the competition can be perceived or actual (Esses et al., 1998), and it can touch upon the individual or collective interest (Semyonov et al., 2004). The premise here is that an increased ethnic diversity will lead to a rise in threat and competition, which will translate in more negative racial attitudes (Schlueter & Scheepers, 2010).

Despite both theories being opposites in their traditional foundations, the introduction of the concept of contact-valence reconciles them at least partially. Where positive intergroup contact reduces intergroup anxiety and threat (Pettigrew et al., 2007), negative contact reinforces them (Semyonov & Glikman, 2009). Therefore, intergroup anxiety and threat mediate the relationship between intergroup contact and racial attitudes (Binder et al., 2009; Jasinskaja-Lahti et al., 2011). Following both the intergroup contact and intergroup threat and competition theory, more ethnic diversity leads to a higher possibility of negative contacts and thus to more negative racial attitudes. However, following the intergroup contact theory, more ethnic diversity also leads to more positive encounters, and thus to less negative racial attitudes.

Both theories have in common that more objective ethnic diversity creates an awareness of this diversity, either through intergroup contact or through a sense of threat. It might be

expected that this “diversity awareness” somehow relates to “diversity knowledge” about which ethnic groups are present. We therefore hypothesize that:

**H5:** More objective diversity in the municipality where one resides relates to a better ethnic perception of names.

## Data and Methodology

In April 2021, an online survey was conducted among a non-probability sample of 990 respondents living in the Dutch-speaking part of Belgium, Flanders. The respondents were recruited via a research agency. In the sample formation, attention was paid to the gender, age, and educational level structure of the Belgian population. All respondents are members of the ethnic majority. This is operationalized as a person of Belgian nationality and whose parents were born in Belgium. Because women, respondents with a Bachelor degree, and respondents younger than 35 years are slightly over-represented in the sample, post-stratification weights are calculated. However, the results with or without weight do not substantially differ from each other (available upon request).

The biggest bias arising from this way of working is selection bias: only people who are in the database of the research agency can be recruited. Nevertheless, the research agency we worked with focuses on reaching a correct representation of the Belgian population, by using multiple sources and channels to recruit respondents (both on- and offline). An important recruitment tool is, for example, through swap deals with media (newspaper, radio, TV) from distinct titles and standards, to recruit different profiles present in the population.

We tested the perception of ethnic origin of 180 combinations of first and last names (Table 6 in the Appendix). Every respondent was randomly attributed 10 names. The order in each set of names also randomly varied. The names originated from five ethnic groups: Belgian, Moroccan, Turkish, Congolese, and Polish. Besides, we made a distinction between male and female names as well as between ethnically homogenous names (= first and last name of the same ethnic group) and mixed names (=Belgian first name and non-Belgian last name). Because Belgium does not publicly provide citizens' names divided over ethnic groups, we constructed combinations of first and last names by using databases with the most common female and male first names between 2010 and 2019 as well as the most common last names in 2020. This data was downloaded from <https://statbel.fgov.be/fr/themes/population>. The name-combinations were afterwards informally checked by colleagues and acquaintances originating from the same ethnic groups.

For the perception of ethnic origin, we asked the respondents which ethnic origin (and not nationality) they ascribe to each name, by providing seven answer-categories: “Belgian



origin,” “Another European origin,” “Non-European origin,” “Belgian + another European origin,” “Belgian + another non-European origin,” “Another European origin + non-European origin,” and “Don’t know.” Additionally, if they chose a category other than “Belgian origin,” we asked in two open questions which specific European or non-European country of origin they thought of. In line with Gaddis (2017), we made congruence variables for the perception of ethnic origin, which indicates whether the respondent correctly evaluated the names or not. These are dichotomous variables, whereby 1 stands for the same perception (“congruent”) as our intended signal of ethnic origin and 0 for not the same perception (“not congruent”). We make a distinction between four types of congruence variables: (1) the correct perception of a name as of Belgian origin or not. For Belgian names, only the first category is rated as correct. For all other names, only the first category is seen as not correct. The correct perception of a name as of European origin or not (2) is measured by considering all seven answer-categories. More precisely, For Belgian names, the answer-categories “Belgian origin” and “another European origin” are rated as correct. For Polish names “another European origin” and for Moroccan, Turkish, and Congolese names “non-European origin” is seen as correct. For mixed names, the answer-categories “Belgian + another European” (or “another European origin”) or “Belgian + non-European origin” is seen as correct. Lastly, for the correct perception of the specific European (3), or non-European country of origin (4), both naming a country (Morocco, Turkey, Congo, Poland) and a formulation referring to that country (e.g., Polish) are rated as correct.

Table 1 presents the descriptive statistics for the congruence rates on the perception of ethnic origin of names divided over the tested ethnic origin groups. Respondents are very successful ( $\pm 96\%$  or more of the respondents) at distinguishing names as having a Belgian origin or not, but find it harder to distinguish names as having a European or non-European origin and to perceive a names’ specific country of origin (for more detailed information, see Martiniello & Verhaeghe, 2022). Because the congruence rates for the distinction between names as of Belgian origin or not are so close to 100%, we do not consider this distinction in the further analysis.

To measure negative racial attitudes, we used the Blatant and Subtle Prejudice scale of Pettigrew and Meertens (1995, 2001). This scale consists of 10 items to measure blatant prejudice and 10 items to measure subtle prejudice (see Appendix Table 7). The motivation for using this scale lies in the distinction it makes between negative blatant and subtle attitudes. Because of the color-blind ideology that is becoming more widespread (Bonilla-Silva 2004), there is to some extent a move away from traditional racism expressed as overt attitudes to downplaying or ignoring the importance of ethnic origin. Nonetheless, ethnic discrimination persists through more subtle forms, like small but negative and stereotyping remarks during interactions

(Bail 2008). This color-blind ideology, however, does not mean that negative blatant attitudes no longer exist. Additionally, we argued before that both types of negative racial attitudes could lead to different perceptions of names. People with negative overt racial attitudes might avoid interethnic contacts. This might lead to a less accurate perception of ethnic origin in names. People with covert racial attitudes might engage in interethnic contacts, but by paying more attention to ethnic differences. The latter might lead to a more accurate perception of the ethnic origin in names.

In order for higher scores to correspond with more negative racial attitudes, we reversed some items (Pettigrew & Meertens 1995). The only modification to the original scale is the mention of “people of non-Belgian origin” instead of “Indians” or “Turks.” In line with Pettigrew and Meertens (1995), respondents with less than four answers on each set of 10 items are removed from the data, resulting in a loss of 62 respondents. Additionally, the mean imputation procedure is applied, whereby answering “don’t know” is replaced by the individual mean. We conducted factor analysis on each set of 10 items. For blatant prejudice, we find a high internal consistency, with Cronbach’s alpha of 0.894. Also, the 10 items for subtle prejudice show a high internal consistency, with Cronbach’s alpha of 0.870. In the further analysis, we use two regression components: the blatant and subtle attitudes factor, with higher scores referring to more negative blatant and subtle attitudes towards ethnic minorities. Concretely, a person with for example factor score 3 on blatant attitudes has more negative blatant attitudes as compared to a person with factor score 1. The former tends to oppose, for example, interethnic relationships or having colleagues/supervisors from another origin more strongly than the latter. The same holds for the subtle attitudes factor. A person with more subtle racial attitudes tends to consider ethnic minorities as having, for example, very different religious, cultural, and sexual values. A negative factor score (e.g.,  $-1.5$ ) means that this person has less negative blatant or subtle racial attitudes. The skewness for blatant and subtle attitudes are respectively 0.645 and  $-0.167$  and the kurtosis  $-0.330$  and  $-0.007$ .

Concerning intergroup contacts, we consider both close and superficial contacts. This was measured in two distinct questions. Close intergroup contacts were operationalized by asking the respondents how many in-depth contacts (e.g., friendship, romance, family) they have with people of non-Belgian origin. For superficial intergroup contacts, we asked how many superficial contacts (e.g., contact with neighbors, brief conversations in, e.g., a shop, leisure, school, work) the respondents have with people of non-Belgian origin. In both cases, they were asked to answer on a 7-point Likert scale, ranging from “no contacts” (1) to “a lot of contacts” (7). Respondents also had an additional option “don’t know.” A higher score on each question indicates more close and/or superficial intergroup contacts. Respondents answering “don’t know” on at least one of the two items were excluded from the data.

**Table 1** Descriptive statistics of the ethnic perception of names ( $n = 8700$ )

	Ethnic origin							
	Belgian vs. non-Belgian origin		European vs. non-European origin		Specific EU origin		Specific non-EU origin	
	Not congruent	Congruent	Not congruent	Congruent	Not congruent	Congruent	Not congruent	Congruent
Belgian name	16.0%	84.0%	16.0%	84.0%	/	/	/	/
Moroccan name	1.2%	98.8%	48.4%	51.6%	/	/	63.9%	36.1%
Turkish name	1.3%	98.7%	55.0%	45.0%	/	/	62.3%	37.7%
Congolese name	1.6%	98.4%	55.4%	44.6%	/	/	87.4%	12.6%
Polish name	1.4%	98.6%	52.6%	47.4%	63.2%	36.8%	/	/
Mixed Moroccan name	2.8%	97.2%	64.3%	35.7%	/	/	76.4%	23.6%
Mixed Turkish name	4.1%	95.9%	76.3%	23.7%	/	/	73.1%	26.9%
Mixed Congolese name	3.5%	96.5%	66.6%	33.4%	/	/	82.1%	17.9%
Mixed Polish name	3.5%	96.5%	65.9%	34.1%	65.6%	34.4%	/	/

The objective ethnic diversity in the municipality where respondents reside is operationalized by means of the inversed Hirschman-Herfindahl index (Herfindahl, 1950; Hirschman, 1964; Hirschman, 1945). The index was calculated based on 26 groups and five rest groups.<sup>2</sup> This gives us a value between 0 and 1 for each municipality, whereby 0 stands for “no diversity” and 1 for “absolute diversity.” Consequently, a municipality with a score of 0.7 is characterized by more ethnic diversity as compared to a municipality with a score of 0.3 for example. Data about the ethnic composition of municipalities were provided by Statistics Belgium. The ethnic origin was based on the nationality at birth of the inhabitant and both of his/her parents. The objective ethnic diversity is worth considering as a distinct concept, as it might have a separate effect from having intergroup contacts or not. Although people might be more likely to encounter those with a different ethnic origin in smaller settlements and although the action spaces within a municipality might differ in bigger areas (which might impede plausible interaction), there still can be a form of “diversity knowledge” about which ethnic groups live in the same municipality. Consequently, regardless of whether or not people living in more or less diverse areas engage in intergroup contacts, being aware of the diversity of one’s municipality can have an independent effect on the ethnic perception of names. After having excluded respondents based on the different criteria described above, the dataset consists of 870 respondents, or a total loss of 12%. These 870 respondents live in 234 out of the 300 municipalities in Flanders.

The name (type, ethnic origin, and gender) and respondent (sex, age, and educational level) characteristics are introduced as control variables. The type of name is a dichotomous variable with 1 “Mixed name” and 0 “Homogenous name.” For

the ethnic origin and gender of the name, the Congolese and male name are the reference categories. For the respondent characteristics, sex is a dichotomous variable, with men as the reference category. The age of the respondent is a continuous variable. Lastly, educational level is a categorical variable with 0 “At most a degree secondary education,” 1 “Bachelor degree,” and 2 “Master degree or higher.” The descriptive statistics are shown in Table 2.

We perform logistic multilevel analyses on the different variables for the perception of names to analyze if one’s blatant and subtle racial attitudes and close and superficial intergroup contacts as well as the objective ethnic diversity of the municipality where one resides are related to differences in the perception of names. We only take the non-Belgian names into account, as we are interested in the perception of ethnic minority names. We perform multilevel analysis, because the

**Table 2** Descriptive statistics of the independent variables

Level of the respondent ( $n=870$ )	$n$	%		Mean	SD
Education					
Max. Secondary education	399	45.9			
Bachelor’s degree	258	29.7			
Master’s degree or more	213	24.5			
Sex					
Men	415	47.7			
Women	455	52.3			
Age					
Min.		18	79	50.82	15.114
Blatant prejudices	–1.542	3.062	–0.008	0.999	
Subtle prejudices	–3.063	2.137	0.009	0.996	
Close intergroup contacts	1	7	2.92	1.728	
Superficial intergroup contacts	1	7	3.45	1.701	
Level of the municipality ( $n=234$ )					
Objective ethnic diversity	0.087	0.790	0.361	0.184	

<sup>2</sup> Germany, Bulgaria, Spain, France, Greece, Italy, the Netherlands, Portugal, Romania, Poland, Russia, Ex-Czechoslovakia, Belgium, other Europe, India, China, Iraq, Israel, Syria, Turkey, other Asia, Congo, Rwanda, Algeria, Morocco, Tunisia, other Africa, Brazil, other American, Oceania, other (missing — stateless)

perceptions of names (level 1) are nested in respondents (level 2), whom themselves are nested in municipalities (level 3). The ICC for the congruence on European versus non-European ethnic origin is of 14%, meaning that 14% of the individual differences can be explained by municipality differences. For the congruence on specific EU origin and non-EU origin, the ICCs are respectively 29.7% and 29.1%.

## Results

In Table 3, we present the results of the effect of racial attitudes and intergroup contacts as well as the ethnic diversity on the perception of the ethnic origin of names for the distinction between European and non-European origin. The congruence rates are lower for mixed as compared to homogenous names. Besides, respondents are more successful at defining Moroccan and Turkish names as of non-European origin than Congolese names (reference category). The odds for Polish names do not significantly differ from those for Congolese names. Also, higher educated people have significantly higher odds on the congruence rates than respondents with at most a secondary education degree. Additionally, holding more negative blatant racial

attitudes is related to a decrease and more negative subtle attitudes to an increase in the odds to successfully categorize names in comparison to people with less blatant or subtle attitudes (model 1). Intergroup contact (model 2) and the objective ethnic diversity (model 4) have no significant effect. The effect of racial attitudes does not change after the addition of the intergroup contact variables (model 3), nor do we find an interaction effect between both. Also, no other interaction effects are found (available upon request).

In Tables 4 and 5, we consider the congruence on the perception of the specific ethnic origin of names. Firstly, we look at whether one's racial attitudes and intergroup contacts as well as the ethnic diversity of the municipality where one resides influence the ability to correctly recognize homogenous Moroccan, Turkish, and Congolese names as such and mixed Belgian-Moroccan, -Turkish, and -Congolese names as partially Moroccan, Turkish, and Congolese (*congruence specific ethnic origin non-EU*). Secondly, we do the same for the homogenous and mixed Polish names (*congruence specific ethnic origin EU*). For non-European names, the congruence on specific non-EU ethnic origin is lower for mixed as compared to homogenous names and higher for

**Table 3** Logistic multilevel analysis on the perception of the ethnic origin of names: congruence European versus non-European origin

	Congruence European vs. non-European origin ( $n=7734$ )				
	Model 1 OR (SE)	Model 2 OR (SE)	Model 3 OR (SE)	Model 4 OR (SE)	Full model OR (SE)
Intercept	0.761 (0.166)	0.696 (0.196)*	0.729 (0.195)	0.656 (0.179)**	0.726 (0.199)
Type of name (ref. homogenous)	0.476 (0.051)***	0.476 (0.051)***	0.476 (0.051)***	0.475 (0.051)***	0.476 (0.051)***
Ethnic origin of name					
Moroccan name	1.253 (0.071)***	1.256 (0.071)***	1.252 (0.071)***	1.251 (0.071)***	1.250 (0.071)***
Turkish name	0.776 (0.073)***	0.778 (0.073)***	0.774 (0.073)***	0.775 (0.073)***	0.774 (0.073)***
Polish name	1.106 (0.071)	1.107 (0.071)	1.104 (0.071)	1.103 (0.071)	1.105 (0.071)
Congolese name	(ref.)	(ref.)	(ref.)	(ref.)	(ref.)
Gender name (ref. men)	0.994 (0.051)	0.992 (0.051)	0.993 (0.051)	0.991 (0.051)	0.994 (0.051)
Gender (ref. men)	1.040 (0.077)	1.024 (0.077)	1.038 (0.076)	1.018 (0.077)	1.037 (0.076)
Age	0.999 (0.003)	1.002 (0.003)	0.999 (0.003)	1.002 (0.003)	0.999 (0.003)
Educational level (ref. max. secondary education)					
Bachelor degree	1.289 (0.088)***	1.289 (0.090)***	1.292 (0.088)***	1.292 (0.090)***	1.292 (0.090)***
Master degree or higher	1.394 (0.095)***	1.331 (0.096)***	1.398 (0.095)***	1.328 (0.100)***	1.391 (0.095)***
Blatant attitudes	0.800 (0.048)***	-	0.798 (0.049)***	-	0.800 (0.049)***
Subtle attitudes	1.361 (0.050)***	-	1.363 (0.051)***	-	1.365 (0.051)***
Close intergroup contacts		0.976 (0.026)	0.996 (0.026)	-	0.996 (0.026)
Superficial intergroup contacts		1.006 (0.027)	1.013 (0.027)	-	1.012 (0.027)
Objective diversity				1.061 (0.207)	1.054 (0.208)
-2 log likelihood	-4891.0	-4910.2	-4890.9	-4910.7	-4890.9
AIC	9810.1	9848.5	9813.8	9847.3	9815.7

OR, odds ratios; SE, standard errors; ref., reference category

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$



Moroccan and Turkish names than for Congolese names (see Table 4). For Polish names, women are less successful than men in categorizing the names (see Table 5). In both cases, higher educated respondents have higher odds to correctly perceive the specific ethnic origin in names. Also here, holding more blatant attitudes relates to lower odds on correctly identifying the names, whereas holding more subtle attitudes relates to higher odds (T4 and 5, model 1). Regarding the ethnic congruence on non-EU names, intergroup contacts have no significant effect. Additionally, although superficial intergroup contacts have no influence, reporting more close intergroup contacts is related to lower odds to correctly identify the names as Polish (T5, model 2). We find no interaction effect between racial attitudes and intergroup contacts (T5, model 4). The objective ethnic diversity has no influence for Polish names (T5, model 5), but does for non-EU names (T4, model 4). The higher the objective ethnic diversity, the higher the odds to correctly identify the non-EU names. The effect of objective ethnic diversity does not interact with intergroup contacts (T4, model 5).

## Discussion and Conclusion

The aim of this study was to look into individual differences in the ethnic perception of minority names. More concretely, our research questions ask whether the perception of ethnic origin in names depends on one’s negative blatant and subtle racial attitudes and close and superficial intergroup contacts as well as the objective ethnic diversity of the municipality where one resides. This contributes to a better theoretical understanding of how the ethnic perception of names is shaped from the perspective of the ethnically dominant group on the one hand, and to a more profound methodological understanding of research methods that only use names as signals of ethnic origin to uncover ethnic discrimination on the other. Researchers seldomly thoroughly pretest the names that they use in correspondence tests to uncover discriminatory behavior (Gaddis, 2017a). However, names are already found to not always be good signals of ethnic origin (Martiniello & Verhaeghe, 2022) and to also contain other signals, such as religiosity, social class, educational level, or generational status (Gaddis, 2019a, b, Martiniello & Verhaeghe,

**Table 4** Logistic multilevel analysis on the perception of the ethnic origin of names: congruence specific ethnic origin non-EU (Moroccan, Turkish, and Congolese names)

	Congruence specific ethnic origin non-EU (n=5790)					
	Model 1 OR (SE)	Model 2 OR (SE)	Model 3 OR (SE)	Model 4 OR (SE)	Model 5 OR (SE)	Full model OR (SE)
Intercept	0.076 (0.260)***	0.067 (0.306)***	0.067 (0.307)***	0.042 (0.283)***	0.048 (0.412)***	0.051 (0.313)***
Type of name (ref. homogenous)	0.659 (0.071)***	0.647 (0.071)***	0.656 (0.071)***	0.661 (0.071)***	0.668 (0.071)***	0.651 (0.071)***
Ethnic origin of name						
Moroccan name	2.905 (0.092)***	2.970 (0.093)***	2.943 (0.092)***	2.975 (0.092)***	2.957 (0.092)***	2.962 (0.092)***
Turkish name	3.367 (0.092)***	3.449 (0.092)***	3.427 (0.093)***	3.453 (0.093)***	3.410 (0.093)***	3.425 (0.093)***
Congolese name	(ref.)	(ref.)	(ref.)	(ref.)	(ref.)	(ref.)
Gender name (ref. men)	1.117 (0.071)	1.128 (0.071)*	1.126 (0.071)*	1.124 (0.071)	1.108 (0.071)	1.118 (0.071)
Gender (ref. men)	0.922 (0.118)	0.924 (0.119)	0.923 (0.118)	0.867 (0.118)	0.918 (0.118)	0.904 (0.117)
Age	1.008 (0.004)**	1.011 (0.004)***	1.008 (0.004)*	1.011 (0.004)***	1.007 (0.004)*	1.007 (0.004)*
Educational level (ref. max. secondary education)						
Bachelor degree	1.216 (0.136)	1.233 (0.139)	1.251 (0.138)	1.303 (0.138)*	1.287 (0.138)*	1.298 (0.137)*
Master degree or higher	1.268 (0.149)	1.227 (0.149)	1.315 (0.150)*	1.227 (0.148)	1.315 (0.150)*	1.298 (0.149)*
Blatant attitudes	0.809 (0.076)***	-	0.822 (0.077)**	-	0.810 (0.080)***	0.817 (0.076)***
Subtle attitudes	1.415 (0.078)***	-	1.434 (0.080)***	-	1.446 (0.080)***	1.422 (0.080)***
Close intergroup contacts		0.975 (0.040)	0.998 (0.040)	-	0.989 (0.087)	0.996 (0.039)
Superficial intergroup contacts		1.012 (0.041)	1.034 (0.041)	-	1.020 (0.095)	1.003 (0.041)
Objective diversity				3.423 (0.339)***	3.787 (0.778)*	3.417 (0.341)***
Close intergroup contacts*objective diversity					1.035 (0.206)	
Superficial intergroup contacts*objective diversity					0.951 (0.227)	
-2 log likelihood	-2947.4	-2957.6	-2946.9	-2951.2	-2940.5	-2940.5
AIC	5920.8	5941.3	5923.9	5926.4	5916.9	5912.9

OR, odds ratios; SE, standard errors; ref., reference category

\*\*\**p* < 0.001; \*\**p* < 0.01; \**p* < 0.05

**Table 5** Logistic multilevel analysis on the perception of the ethnic origin of names: congruence specific ethnic origin EU (Polish names)

	Congruence specific ethnic origin EU (n=1944)					
	Model 1 OR (SE)	Model 2 OR (SE)	Model 3 OR (SE)	Model 4 OR (SE)	Model 5 OR (SE)	Full model OR (SE)
Intercept	0.446 (0.310)***	0.478 (0.361)**	0.569 (0.364)	0.557 (0.375)	0.336 (0.336)***	0.511 (0.375)*
Type of name (ref. homogenous)	0.995 (0.114)	0.992 (0.114)	0.987 (0.987)	0.994 (0.114)	0.993 (0.114)	0.987 (0.114)
Gender name (ref. men)	0.885 (0.118)	0.883 (0.118)	0.881 (0.118)	0.874 (0.143)	0.886 (0.118)	0.877 (0.118)
Gender (ref. men)	0.652 (0.143)***	0.659 (0.142)***	0.651 (0.143)***	0.650 (0.143)***	0.640 (0.143)***	0.644 (0.143)***
Age	1.004 (0.005)	1.008 (0.005)	1.004 (0.005)	1.004 (0.005)	1.007 (0.005)	1.004 (0.005)
Educational level (ref. max. secondary education)						
Bachelor degree	0.938 (0.167)	0.963 (0.168)	0.926 (0.168)	0.946 (0.168)	0.976 (0.168)	0.943 (0.168)
Master degree or higher	1.632 (0.180)***	1.610 (0.177)***	1.579 (0.179)**	1.610 (0.179)***	1.602 (0.178)***	1.593 (0.180)***
Blatant attitudes	0.702 (0.094)***	-	0.695 (0.094)***	1.173 (0.215)	-	0.695 (0.094)***
Subtle attitudes	1.398 (0.095)***	-	1.348 (0.097)***	0.834 (0.228)	-	1.344 (0.097)***
Close intergroup contacts		0.898 (0.048)**	0.909 (0.048)**	0.895 (0.050)**	-	0.908 (0.048)**
Superficial intergroup contacts		1.025 (0.049)	1.016 (0.050)	1.005 (0.051)	-	1.005 (0.051)
Objective diversity				-	1.469 (0.417)	1.625 (0.423)
Blatant attitudes*close interethnic contacts				0.892 (0.070)		
Subtle attitudes*close interethnic contacts				1.086 (0.067)		
Blatant attitudes*superficial interethnic contacts				0.951 (0.071)		
Subtle attitudes*superficial interethnic contacts				1.060 (0.075)		
-2 log likelihood	-1208.9	-1214.9	-1206.6	-1201.8	-1217.3	-1206.0
AIC	2439.8	2451.7	2439.2	2439.5	2454.5	2439.9

OR, odds ratios; SE, standard errors; ref., reference category

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

2022). A question that remains unanswered is how the ethnic perception of names can differ between individuals.

Firstly, we find that the higher one's blatant racial attitudes, the less successful one is at correctly interpreting the signals of ethnic origin of a name. For people with more subtle attitudes, the opposite is true. These findings support hypotheses 3 and 4 of this study. It is plausible that people holding more negative attitudes avoid intergroup contacts more (Pettigrew, 1998), leading them to be less successful at recognizing the origin of names. However, this reflection only holds for those with negative blatant attitudes. On the contrary, people with more subtle attitudes may avoid intergroup contacts less, leading them to recognize the origin of names more easily. This difference between both forms of racial attitudes probably lies in their form: overt versus covert (Pettigrew & Meertens, 1995). Although the former possibly leads to avoidance of intergroup contact, the latter might entail more intergroup contact, but subtle yet important negative remarks during these contacts (Essed, 2002). In addition, people with more negative subtle attitudes might focus more on ethnic differences than

people without negative racial attitudes. Because we could not control for the contact-valence or the specific ethnic groups respondents have contacts with, we suggest further research should look into these differences.

Concretely, these results bring some elements to the foreground with regard to research methods that aim to uncover ethnic discrimination by using names to signal ethnic origin. Firstly, ethnic discrimination is for example often significantly found in correspondence tests on both the housing and labor market (Auspurg et al., 2019; Quillian et al., 2020; Zschirnt & Ruedin, 2016). One the one hand, we find that people with more blatant racial attitudes have less accurate perceptions of ethnic origin in names. Thus, it is possible that these research methods underestimate ethnic discrimination when people with more blatant attitudes are being tested and when the goal is to measure discrimination towards a specific ethnic group. However, if the goal is to measure ethnic discrimination towards ethnic minorities in general, the underestimation of the results is smaller, because respondents successfully made a distinction between names as of Belgian

and non-Belgian origin. The latter practice brings up questions, given the complex reality of social life and the absence of the existence of one homogenous group of “ethnic minorities” in relation to the ethnic majority. On the other hand, people with more subtle racial attitudes are rather successful at perceiving the ethnic origin in names, leading to more accurate test results when using correspondence testing.

As the objective ethnic diversity in the municipality increases, respondents are more successful at recognizing Moroccan, Turkish, and Congolese names as such. Here, we see that the mere presence of residents of those ethnic backgrounds is enough to recognize the ethnic origin of names, even without having intergroup contacts. The objective ethnic diversity has no effect for the perception of Polish names. However, people have lower congruence rates for Polish names as they have more close intergroup contacts, rejecting hypotheses 1 and 2 of this study. Besides, partial support is found for hypothesis 5: More objective ethnic diversity in the municipality where one resides relates to a better ethnic perception of names. This however only holds for non-EU names.

Signals of ethnic origin are embedded in both visible and invisible characteristics. Depending on the situation, one characteristic becomes more important than another (Tuppat & Gerhards, 2021). However, both forms seem to be related to each other. Some ethnic groups are physically more easily to recognize than others. On the one hand, this explains why the objective ethnic diversity is of importance for Moroccan, Turkish, and Congolese names but not for Polish names. This reasoning can be extended to invisible characteristics such as names, whereby certain names may contain clearer signals of their ethnic origin, which can be stimulated by the stronger visible signals. On the other hand, because people of Polish origin have less visible signals of ethnic origin, people with more close intergroup contacts might not relate the ethnic origin to the name, leading them to not perceive these names as of a Polish origin. In addition, the share of residents of Polish descent is relatively small in many cities, which could explain the absent effect of the objective ethnic diversity in this case.

Because people are better at perceiving the ethnic origin in non-EU names when there is more objective ethnic diversity in the area, this could lead to more robust results concerning discrimination rates towards people of Moroccan, Turkish, or Congolese descent when the research subjects live in more ethnically diverse areas as compared to people from less diverse areas. Besides, since people are less successful at perceiving EU names as they have more close intergroup contacts, the measured level of discrimination might be underestimated when the research subjects have close contacts with people from Polish descent.

Our findings have multiple implications for correspondence studies and their interpretation. First, the level of measured ethnic discrimination is underestimated when people with negative blatant racial attitudes or living in diverse areas (when testing discrimination towards non-European minority groups) or having close intergroup contacts (when testing discrimination towards European minority groups) are tested. Secondly, given the generally rather low congruence rates on the perception of ethnic signals in names and the individual variation in this regard, it is important to pretest the names used in correspondence studies for internal validity. This is preferably among the same — or a similar — sample as for the correspondence tests. Only then, researchers can be certain to measure discrimination towards a specific migrant-origin group. If names are not pretested and people might not correctly interpret the names, discrimination is measured to some extent, but rather based on the distinction between whether or not the name originates from the tested country (Belgian vs. non-Belgian in our case). This impedes the comparison between specific migrant-origin groups. Failing to recognize the ethnic origin of names (of an ethnic group) might lead to an underestimation of measured discrimination in comparison to well-recognized names (of another ethnic group). It is then also complicated to state that ethnic and no other forms of discrimination are measured. See Fig. 1 in the Appendix for some guidelines on how to ascertain which names can be used to measure ethnic discrimination with correspondence tests.

Nevertheless, some limitations of this study should be taken into consideration. Since we used a non-probability sample, it is complicated to make broader generalizations. Also, our research is conducted in Belgium, which entails that the results cannot be extended to other (West)-European countries. We therefore suggest further research to analyze the perception of names in other European contexts. Also, the survey was conducted among a sample of ethnic majority members. However, correspondence tests generally focus on the labor and housing markets, with real estate agents or employers as research subjects. The latter might, partly because of their experience, be more successful at perceiving the signaled ethnic origin in names. It could be helpful to replicate this type of research among a sample of realtors or employers. Lastly, although we gathered information on both close and superficial intergroup contacts, we do not know with which specific ethnic groups respondents interact and whether they perceive these interactions as pleasant or not. This more precise information might lead to other results concerning the effect of intergroup contacts and the perception of names. Nevertheless, our results show that the perception of names differs according to one’s racial attitudes and intergroup contacts as well as according to the ethnic diversity of the municipality where one resides.

## Appendix

Table 6 The tested names divided by ethnic group, gender, and name

Homogenous names	1	2	3	4	5	6	7	8	9	10
Moroccan men	Karim Azzouzi	Youness el Malahi	Hassan El Battoui	Hamza Boulharir	Ayoub Haddioui	Mohamed Abdelaziz	Rachid El Khadji	Yassin Ben Aïssa	Youssef El Ayadi	Imran el Malahi
Moroccan women	Dounia El Majdoub	Silame Assecoum	Amira El Messoui	Soumaya El Attabi	Nisrine El Amrani	Norah El-Bazoui	Fadua El Kaddouri	Hanane El Yaakoubi	Karima El Yahyaoui	Fatima Bayraktar
Turkish — men	Orhan Özcan	Osman Gonuler	Erdem Agirdag	Onur Celik	Artan Karadeniz	Ahmet Karakaya	Muhammed öztürk	Yusuf Yüksel	Maher Berisha Dumus	Doruk özdemir
Turkish — women	Nimet Yilmaz	Fatma Celiköz	Sevgi Gül	Esmâ Söğütli	Betül Yildirim	Elif Yıldiz	Meryem Aydin	Defne Oguz	Ceylan Kiliçoglu	Ebru Gökce
Congolese men	Idriss Moukoko	Gaetan Ndlandu	Tanguy Mangala	Yedidiya Zola Yeze	Wilson Kamiki Masengo	Denzell Edén Ndiwa	Isidore Sassou-Nguesso	Ouley-matou Bintou Dia	Radu Raileanu	Ray Tshiani Muadiamvita
Congolese women	Eunice Makola	Massara Tandia	Laetitia Tshimanga	Marie-Eden Moukoko	Quettia Lunanga	Wivine Nsengiyumva	Maeva Bishinga	Marlene-Mae Yahuma	Promise Semengue	Nayema Kabonogo
Polish — men	Henryk Borkowski	Mikołaj Górski	Rafał Kwiatkowski	Paweł Adamski	Kacper Zawadzki	Sebastian Nowak	Wiktor Woźniak	Lukasz Wieczorek	Aleksander Smolarek	Tomasz Sobków
Polish — women	Marianna Jasińska	Dorota Dąbrowska	Magda Piotrowska	Anna Zamojska	Teresa Kwiecińska	Aleksandra Żur	Agata Zając	Zuzanna Dudek	Gabriela Pawlak	Krzyszyna Tabak
Belgian — men	Thomas Goossens	Pieterjan De Smet	Matthias Van Damme	Bert Vermeulen	Maarten Wauters	Kenny Cools	David Verhoeven	Kevin Lemmens	Steven Laurent	Davy Declercq
Belgian women	Nele Aerts	Charlotte Michiels	valerie Devos	Eva Segers	Julie De Backer	Melissa Claes	Cindy De Smet	Vanessa Hermans	Linsey Peeters	Evi Janssens
Mixed names										
Moroccan men	Tibo Akheddiou	Jacob El Majdoub	Loic El Salhi	Maarten El Boujdaini	Thomas Bekhaloumi	Jef Benthani	Maxim El Moussaoui	Liam Daoudi	Michael Rahimi	David Messaouidi
Moroccan women	Julie Chourdi	Valerie Majoui	Nele El Hilali	Bo El Jattari	Ine Kaddouri	Lena El Makrini	Nina Hasani	Vanessa Achahbar	Amy El Morabit	Sarah Ben Omar
Turkish — men	Bram Yavuz	Mattias öztürk	Axel Dönmez	Hanne Gündüz	Nathan ünäl	Leon Ciftci	Ben Erdem	Amo Turan	Davy Uzun	Tuur Küçük
Turkish women	Fien Aktas	Annelies Acar	Victor Mongongu	Daan Okito Nboombo	Liesbet çelik	Romy Kahya	Vicki Eryörük	Amélie Akyüz	Zita öz	Lily Akbulut
Congolese men	Vince Tambwe Kabati	Jules Mossemba	Stefanie Kuzekemena	Marie Malamba	Elias Benteke	Steven Boyota	Andy Mujiangi Bia	Yves Lowango	Kevin Tombolo	Mathis Basenga
Congolese women	Isabel Muangala	Juliette Bukasa	Pieter Jaworski	Jan Kowalski	Luna Mbombo	Tess Ngawa	Wendy Etimbale	Linsey Bokungu	Debbie Lomboka	Sandra Nyanga
Polish — men	Simon Wyrzykowski	Ruben Hemelínski	Sara Wronkowska	Katrien Letowska	Joris Aberski	Jurgen Calik	Glen Żabik	Nick Rabczak	Kevin Gabala	Matteo Dacyk
Polish — women	Hanne Gutczyńska	Lien Osńiecka	Sara Wronkowska	Katrien Letowska	Carolien Kamińska	Natacha Koc	Evi Kowalczyk	Joke Wójcik	An Ziemczyk	Kelly Mancewicz

**Table 7** Blatant and Subtle Prejudice scale by Pettigrew and Meertens

## Blatant prejudice items

1. People of non-Belgian origin have jobs that the Dutch should have (strongly agree to strongly disagree).
2. Most person of non-Belgian origins living here who receive support from welfare could get along without if they tried (strongly agree to strongly disagree).
3. Dutch people and person of non-Belgian origins can never be really comfortable with each other, even if they are close friends (strongly agree to strongly disagree).
4. Most politicians in the Netherlands care too much about person of non-Belgian origins and not enough about the average Dutch (strongly agree to strongly disagree).
5. person of non-Belgian origins come from less able races and this explains why they are not as well off as most Dutch people (strongly agree to strongly disagree).
6. How different or similar do you think person of non-Belgian origins living here are to other Dutch people like yourself – in how honest they are? (very different, somewhat different, somewhat similar, or very similar)
7. Suppose that a child of yours had children with a person of very different color and physical characteristics than your own. Do you think you will be very bothered, bothered, bothered a little, or not bothered at all, if your grandchildren did not physically resemble the people on your side of the family?
8. I would be willing to have sexual relations with a person of non-Belgian origin (strongly agree to strongly disagree) (\*).
9. I would not mind if a suitably qualified person of non-Belgian origin was appointed as my boss (strongly agree to strongly disagree) (\*).
10. I would not mind if a people of non-Belgian origin person who had a similar economic background as mine joined my close family by marriage (strongly agree to strongly disagree) (\*).

## Subtle prejudice items

1. person of non-Belgian origins living here should not push themselves where they are not wanted (strongly agree to strongly disagree).
  2. Many other groups have come to the Netherlands and overcome prejudice and worked their way up. person of non-Belgian origins should do the same without any special favor (strongly agree to strongly disagree).
  3. It is just a matter of some people not trying hard enough. If person of non-Belgian origins only try harder they could be as well off as Dutch people (strongly agree to strongly disagree).
  4. person of non-Belgian origins living here teach their children values and skills different from those required to be successful in the Netherlands (strongly agree to strongly disagree).
- How different or similar do you think person of non-Belgian origins living here are to other Dutch people like yourself (very different, somewhat different, somewhat similar, or very similar)
5. In the values that they teach their children?
  6. In their religious beliefs or practices?
  7. In their sexual values or sexual practices?
  8. In the language that they speak?
- Have you ever felt the following ways about person of non-Belgian origins and their families living here (very often, fairly often, not too often, or never)?
9. How often have you felt sympathy for person of non-Belgian origins living here? (\*)
  10. How often have you felt admiration for person of non-Belgian origins living here? (\*)

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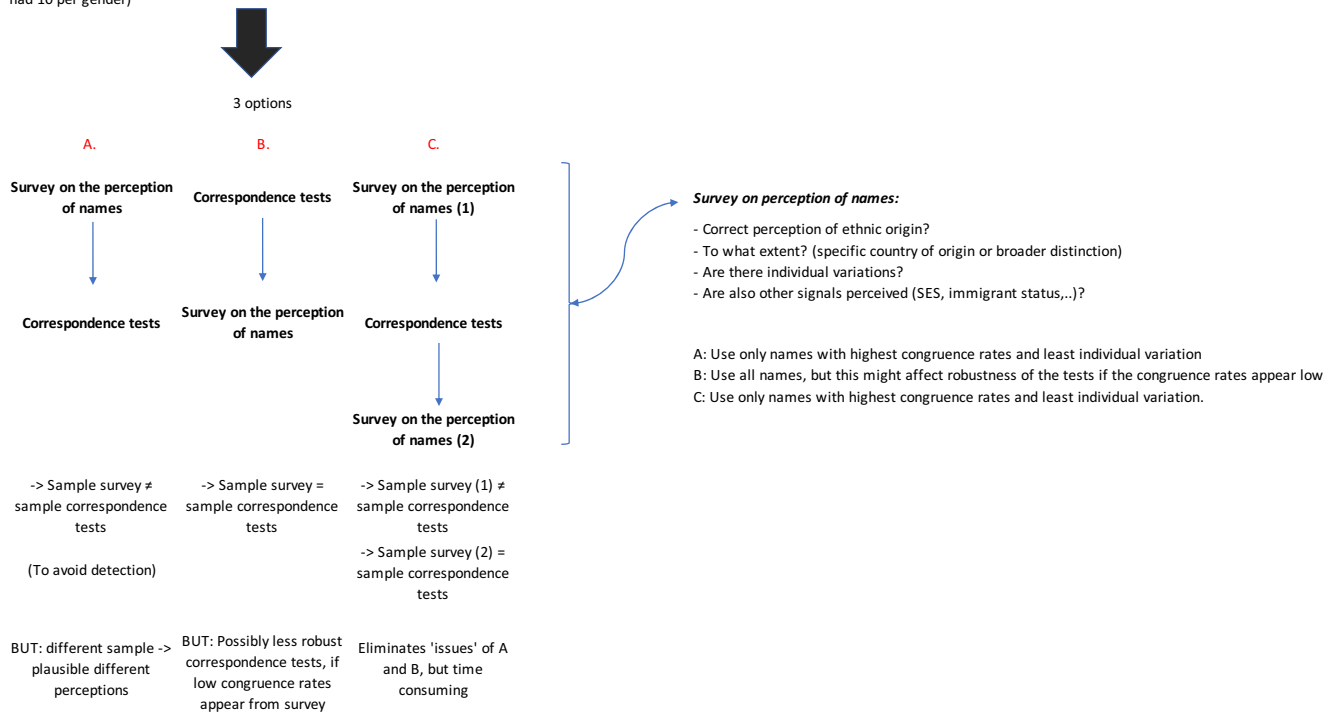
\*Reversed scoring

Source: Pettigrew and Meertens (1995, 2001)



Decide which geographical context is the focus  
 Decide which ethninc group(s) is (are) the focus  
 -> Create combinations of first and last names using databases containing popular first and most common last names  
 (This is ethnic group and geographical context dependent)

If the aim is to be representative for an ethnic group, and not just for one particular name:  
 -> Create more than one combination of first and last name (we had 10 per gender)



**Fig. 1** Guidelines for using names to measure ethnic discrimination with correspondence tests

**Author Contribution** All authors contributed to the study conception and design. Material preparation, data collection, and analysis were performed by Billie Martiniello and Pieter-Paul Verhaeghe. The first draft of the manuscript was written by Billie Martiniello and Pieter-Paul Verhaeghe commented on previous versions of the manuscript. Both authors read and approved the final manuscript.

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**Data Availability** The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

## Declarations

**Ethics Approval** Ethical approval has been granted within the EdisTools Project to conduct questionnaires among human participants in which participation was voluntary and after informed consent. This ethical approval has been granted by the ethical commission of the Political and Social Sciences of Ghent University. The consent of participants was informed and written. The data were processed and analyzed anonymously.

**Conflict of Interest** The authors declare no competing interests.

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## References

- Acolin, A., Bostic, R., & Painter, G. 2016. A field study of rental market discrimination across origins in France. *Journal of Urban Economics*, 95, 49–63. <https://doi.org/10.1016/j.jue.2016.07.003>.
- Ahmed, A. M., & Hammarstedt, M. 2008. Discrimination in the rental housing market: A field experiment on the Internet. *Journal of Urban Economics*, 64(2), 362–372. <https://doi.org/10.1016/j.jue.2008.02.004>.
- Allport, G. W. 1954. *The nature of prejudice*. Cambridge, MA: Perseus Books.
- Andersson, L., Jakobsson, N., & Kotsadam, A. 2012. A field experiment of discrimination in the norwegian housing market: Gender, class,

- and ethnicity. *Land Economics*, 88(2), 233–240. <https://doi.org/10.3368/le.88.2.233>.
- Auspurg, K., Schneck, A., & Hinz, T. 2019. Closed doors everywhere? A meta-analysis of field experiments on ethnic discrimination in rental housing markets. *Journal of Ethnic and Migration Studies*, 45(1), 95–114. <https://doi.org/10.1080/1369183X.2018.1489223>.
- Baert, S. 2018. Hiring discrimination: An overview of (almost) all correspondence experiments Since 2005. In S. M. Gaddis (Ed.), *Audit Studies: Behind the Scenes with Theory, Method and Nuance* (pp. 63–77). Springer International Publishing. <https://doi.org/10.2139/ssrn.2960547>.
- Baldini, M., & Federici, M. 2011. Ethnic discrimination in the Italian rental housing market. *Journal of Housing Economics*, 20(1), 1–14. <https://doi.org/10.1016/j.jhe.2011.02.003>.
- Berinsky, A. 1999. The two faces of public opinion. *American Journal of Political Science*, 43, 1209–1230.
- Bertrand, M., & Mullainathan, S. 2004. Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *The American Economic Review*, 94(4), 991–1013. <https://doi.org/10.4324/9781003071709-20>.
- Binder, J., Zagefka, H., Brown, R., Funke, F., Kessler, T., Mummendey, A., Maquil, A., Demoulin, S., & Leyens, J. P. 2009. Does contact reduce prejudice or does prejudice reduce contact? A longitudinal test of the contact hypothesis among majority and minority groups in three European countries. *Journal of Personality and Social Psychology*, 96(4), 843–856. <https://doi.org/10.1037/a0013470>.
- Bonilla-Silva, E. 2004. *Racism without racists: Color-blind racism and the persistence of racial inequality in America*. Lanham: Rowman & Littlefield.
- Bursell, M. 2012. Name change and destigmatization among Middle Eastern immigrants in Sweden. *Ethnic and Racial Studies*, 35(3), 471–487. <https://doi.org/10.1080/01419870.2011.589522>.
- Bursell, M. 2014. The multiple burdens of foreign-named men - Evidence from a field experiment on gendered ethnic hiring discrimination in Sweden. *European Sociological Review*, 30(3), 399–409. <https://doi.org/10.1093/esr/jcu047>.
- Butler, D. M., & Homola, J. 2017. An empirical justification for the use of racially distinctive names to signal race in experiments. *Political Analysis*, 25(1), 122–130. <https://doi.org/10.1017/pan.2016.15>.
- Carpusor, A. G., & Loges, W. E. 2006. Rental discrimination and ethnicity in names. *Journal of Applied Social Psychology*, 36(4), 934–952. <https://doi.org/10.1111/j.0021-9029.2006.00050.x>.
- Ceobanu, A., & Escandell, X. 2010. Comparative analyses of public attitudes towards immigrants and immigration using multinational survey data: A review of theories and research. *Annual Review of Sociology*, 309–328.
- Dovidio, J. F., & Gaertner, S. L. 2004. Aversive racism review. *Advances in Experimental Social Psychology*, 36, 1–52.
- Ellison, C. G., Shin, H., & Leal, D. L. 2011. The contact hypothesis and attitudes toward latinos in the United States. *Social Science Quarterly*, 92(4), 938–958. <https://doi.org/10.1111/j.1540-6237.2011.00798.x>.
- Essed, P. 2002. Everyday racism. In D. T. Goldberg & J. Solomos (Eds.), *A companion to Racial and Ethnic Studies* (pp. 202–216). Blackwell Publishers Ltd.
- Esses, V.M., Jackson, L.M. & Armstrong, T.L. 1998. Intergroup competition and attitudes towards immigrants and immigration: An instrumental model of group conflict. *Journal of Social Issues* 54: 699–724.
- Flage, A. 2018. Ethnic and gender discrimination in the rental housing market: Evidence from a meta-analysis of correspondence tests, 2006–2017. *Journal of Housing Economics*, 41(May), 251–273. <https://doi.org/10.1016/j.jhe.2018.07.003>.
- Gaddis, S. M. 2017a. How black are Lakisha and Jamal? Racial perceptions from names used in correspondence audit studies. *Sociological Science*, 4, 469–489. <https://doi.org/10.15195/v4.a19>.
- Gaddis, S. M. 2017b. Racial/ethnic perceptions from Hispanic names: Selecting names to test for discrimination. *Socius: Sociological Research for a Dynamic World*, 3, 237802311773719. <https://doi.org/10.1177/2378023117737193>.
- Gaddis, S. M. 2018. An introduction to audit studies in the social sciences. In *Audit Studies: Behind the Scenes with Theory, Method and Nuance* (Vol. 20, Issue 3, pp. 3–44). Springer US. <https://doi.org/10.2307/3005642>.
- Gaddis, S. M. 2019a. Assessing immigrant generational status from names: Evidence for experiments examining racial/ethnic and immigrant discrimination. Available at SSRN: <https://ssrn.com/abstract=3022217> or <https://doi.org/10.2139/ssrn.3022217>.
- Gaddis, S. M. 2019b. Signaling class: An experiment examining social class perceptions from names used in correspondence audit studies. *SSRN Electronic Journal*, 1–29.
- Gerhards, J., & Hans, S. 2009. From Hasan to Herbert: Name-giving patterns of immigrant parents between acculturation and ethnic maintenance. *American Journal of Sociology*, 114(4), 1102–1128. <https://doi.org/10.1086/595944>.
- Gerhards, J., & Kämpfer, S. 2017. Symbolische grenzen und die grenzarbeit von migrantinnen und migranten. *Zeitschrift Fur Soziologie*, 46(5), 303–325. <https://doi.org/10.1515/zfsoz-2017-1017>.
- Gerhards, J., & Tuppatt, J. 2020. “Boundary-maintenance” or “boundary-crossing”? Name-giving practices among immigrants in Germany. *Names*, 0(0), 1–16. <https://doi.org/10.1080/00277738.2020.1849925>.
- Hanson, A., Hawley, Z., & Taylor, A. 2011. Subtle discrimination in the rental housing market: Evidence from e-mail correspondence with landlords. *Journal of Housing Economics*, 20(4), 276–284. <https://doi.org/10.1016/j.jhe.2011.09.003>.
- Heath, A. F., & Di Stasio, V. 2019. Racial discrimination in Britain, 1969–2017: A meta-analysis of field experiments on racial discrimination in the British labour market. *British Journal of Sociology*, 70(5), 1774–1798. <https://doi.org/10.1111/1468-4446.12676>.
- Heath, A.F. & Richards, L. 2019. *How do Europeans differ in their attitudes to immigration? Findings from the European Social Survey 2002/03 – 2016/17*. (OECD Social, Employment and Migration Working Papers no. 222). Paris, France: OECD Publishing.
- Herfindahl, O. C. 1950. Concentration in the U.S. steel industry. Unpublished doctoral dissertation. Columbia University.
- Hirschman, A. O. 1945. *National power and the structure of foreign trade*. Los Angeles: University of California Press.
- Hirschman, A. O. 1964. The paternity of an index. *The American Economic Review*, 54(5), 761.
- Hogan, B., & Berry, B. 2011. Racial and ethnic biases in rental housing: An audit study of online apartment listings. *City and Community*, 10(4), 351–372. <https://doi.org/10.1111/j.1540-6040.2011.01376.x>.
- Jasinskaja-Lahti, I., Mähönen, T. A., & Liebkind, K. 2011. Ingroup norms, intergroup contact and intergroup anxiety as predictors of the outgroup attitudes of majority and minority youth. *International Journal of Intercultural Relations*, 35(3), 346–355. <https://doi.org/10.1016/j.ijintrel.2010.06.001>.
- Khosravi, S. 2012. White masks/Muslim names: Immigrants and name-changing in Sweden. *Race and Class*, 53(3), 65–80. <https://doi.org/10.1177/0306396811425986>.
- Laurence, J., & Bentley, L. 2018. Countervailing contact: Community ethnic diversity, anti-immigrant attitudes and mediating pathways of positive and negative inter-ethnic contact in European societies. *Social Science Research*, 69, 83–110. <https://doi.org/10.1016/j.ssresearch.2017.09.007>.
- Laurence, J., Schmid, K., & Hewstone, M. 2018. Ethnic diversity, Intergroup attitudes and countervailing pathways of positive and negative inter-group contact: An analysis across workplaces and

- neighbourhoods. *Social Indicators Research*, 136(2), 719–749. <https://doi.org/10.1007/s11205-017-1570-z>.
- Le Gallo, J., L'horty, Y., Parquet, L. du, & Petit, P. 2019. Discrimination in access to housing: A test on urban areas in metropolitan France. *Economie et Statistique*, 2019(513), 27–45. <https://doi.org/10.24187/ECOSTAT.2019.513.2004>.
- Martiniello, B., & Verhaeghe, P. P. 2022. Signaling ethnic-national origin through names? The perception of names from an intersectional perspective. *Plos One*, 17(8), 1–20.
- Moberg, S.P., Krysan, M. & Christianson, D. 2019. Racial attitudes in America. *Public Opinion Quarterly*, 83, 450–471.
- Pettigrew, T. F., & Meertens, R. W. 1995. Subtle and blatant prejudice in western Europe. *European Journal of Social Psychology*, 25(1), 57–75. <https://doi.org/10.1002/ejsp.2420250106>.
- Pettigrew, Thomas F., Christ, O., Wagner, U., & Stellmacher, J. 2007. Direct and indirect intergroup contact effects on prejudice: A normative interpretation. *International Journal of Intercultural Relations*, 31(4), 411–425. <https://doi.org/10.1016/j.ijintrel.2006.11.003>.
- Pettigrew, Thomas F., & Meertens, R. W. 2001. In defense of the subtle prejudice concept: A retort. *European Journal of Social Psychology*, 31(3), 299–309. <https://doi.org/10.1002/ejsp.45>.
- Pettigrew, Thomas F., Tropp, L. R., Wagner, U., & Christ, O. 2011. Recent advances in intergroup contact theory. *International Journal of Intercultural Relations*, 35(3), 271–280. <https://doi.org/10.1016/j.ijintrel.2011.03.001>.
- Quillian, L. 2006. New approaches to understanding racial prejudice and discrimination. *Annual Review of Sociology*, 32, 299–328.
- Quillian, L., Lee, J. J., & Honoré, B. 2020. Racial discrimination in the U.S. housing and mortgage lending markets: A quantitative review of trends, 1976–2016. *Race and Social Problems*, 12(1), 13–28. <https://doi.org/10.1007/s12552-019-09276-x>.
- Quillian, L., & Midtbøen, A. H. 2021. Comparative perspectives on racial discrimination in hiring: The rise of field experiments. *Annual Review of Sociology*, 47, 391–415. <https://doi.org/10.1146/annurev-soc-090420-035144>.
- Ramos, M., Thijssen, L., & Coenders, M. 2021. Labour market discrimination against Moroccan minorities in the Netherlands and Spain: A cross-national and cross-regional comparison. *Journal of Ethnic and Migration Studies*, 47(6), 1261–1284. <https://doi.org/10.1080/1369183X.2019.1622824>.
- Rooth, D.O. 2010. Automatic associations and discrimination in hiring: Real world evidence. *Labour Economics*, 17, 523–534.
- Roscigno, V. J., Karafin, D. L., & Tester, G. 2009. The complexities and processes of racial housing discrimination. *Social Problems*, 56(1), 49–69. <https://doi.org/10.1525/sp.2009.56.1.49>.
- Schlueter, E., & Scheepers, P. 2010. The relationship between outgroup size and anti-outgroup attitudes: A theoretical synthesis and empirical test of group threat- and intergroup contact theory. *Social Science Research*, 39(2), 285–295. <https://doi.org/10.1016/j.ssresearch.2009.07.006>.
- Semyonov, M., & Glikman, A. 2009. Ethnic residential segregation, social contacts, and anti-minority attitudes in European societies. *European Sociological Review*, 25(6), 693–708. <https://doi.org/10.1093/esr/jcn075>.
- Semyonov, M., Rajzman, R., Tov, A. Y., & Schmidt, P. 2004. Population size, perceived threat, and exclusion: A multiple-indicators analysis of attitudes toward foreigners in Germany. *Social Science Research*, 33(4), 681–701. <https://doi.org/10.1016/j.ssresearch.2003.11.003>.
- Sherif, M. 1966. *Group conflict and cooperation*. London: Routledge and Kegan Paul.
- Sue, C. A., & Telles, E. E. 2007. Assimilation and gender in naming. *American Journal of Sociology*, 112(5), 1383–1415. <https://doi.org/10.1086/511801>.
- Thomsen, J. P. F., & Rafiqi, A. 2018. When does superficial intergroup contact reduce anti-foreigner sentiment? Negative contact as an essential condition. *International Journal of Comparative Sociology*, 59(1), 25–43. <https://doi.org/10.1177/0020715217744598>.
- Tuppat, J., & Gerhards, J. 2021. Immigrants' first names and perceived discrimination: A contribution to understanding the integration paradox. *European Sociological Review*, 37(1), 121–135. <https://doi.org/10.1093/esr/jcaa041>.
- Verhaeghe, P. P. 2022. Correspondence studies. In K. F. Zimmermann (Ed.), *Handbook of Labor, Human Resources and Population Economics* (Issue February). Springer Nature Switzerland. <https://doi.org/10.1007/978-3-319-57365-6>.
- Verhaeghe, P. P., & Ghekiere, A. 2021. The impact of the Covid-19 pandemic on ethnic discrimination on the housing market. *European Societies*, 23(S1), S384–S399. <https://doi.org/10.1080/14616696.2020.1827447>.
- Zschirt, E., & Ruedin, D. 2016. Ethnic discrimination in hiring decisions: A meta-analysis of correspondence tests 1990–2015. *Journal of Ethnic and Migration Studies*, 42(7), 1115–1134. <https://doi.org/10.1080/1369183X.2015.1133279>.
- Zussman, A. 2013. Ethnic discrimination: Lessons from the Israeli online market for used cars. *Economic Journal*, 123, 433–468.

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