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Article

Neighbourhood Attachment in Ethnically Diverse Areas: The Role of Interethnic Ties

Agata Górny and Sabina Toruńczyk-Ruiz

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Abstract

This article examines the relationship between ethnic diversity in the neighbourhood and attachment to it, while addressing the role of interethnic relations—both within and beyond the neighbourhood—and differentiating between native and migrant residents. The analyses rely on data from an international research project conducted in 2009/10 among residents of ethnically diverse areas in six European cities: Bilbao, Lisbon, Rotterdam, Thessalonica, Vienna and Warsaw. The obtained results confirm earlier findings as regards the general negative association between ethnic diversity and neighbourhood attachment, but more importantly, reveal that having interethnic relations moderates this relationship differently for natives and migrants. Ethnic diversity does not erode neighbourhood attachment for natives who have ties with people of other ethnicities, or for migrants with mono-ethnic ties. This pattern is explained by the different meaning that a diverse setting has for natives and for migrants. Possible implications of these findings are also discussed.

Introduction

Despite the currently widely promoted concepts of multiculturalism and an open city, a number of researchers have recently reported that ethnic and racial diversity in the neighbourhood is detrimental to many aspects of social cohesion. Several scholars have demonstrated that, in diverse neighbourhoods, residents tend to be less trusting, less co-operative and manifest less civic attitudes (Alesina and La Ferrara, 2000, 2002; Costa and Kahn, 2003; Leigh, 2006; Putnam 2007; Stolle *et al.*, 2008). The model of multiculturalism has been especially challenged in the past few years, as interethnic tensions have exploded in the UK, France and the Netherlands, to mention only those that have drawn the strongest attention.

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While a number of empirical works have investigated the relationship between contextual diversity and social capital, not many have looked at the effect of diversity on a closely related concept: neighbourhood attachment. The latter is understood as positive emotional ties with the residential area (see for example, Altman and Low, 1992; Bonaiuto *et al.*, 1999; Lewicka, 2008; Bailey *et al.*, 2012). Being "concerned with the psychological meaning of the environment for a person or group", (Taylor *et al.*, 1985, p. 526), neighbourhood attachment can be also considered a valuable indicator of social cohesion. Social cohesion is conceptualised in the literature by a variety of psychological and social indicators—for example, existence of trust, mutual tolerance or voluntary work (for example, Tolsma *et al.*, 2009); the acceptance of shared norms (Portes and Vickstrom, 2011) or strong and positive social bonds between community members (Kearns and Forrest, 2000; Dekker and Bolt, 2005). Our understanding of social cohesion as indicated by neighbourhood attachment is closest to the last mentioned here.

The aim of this paper is to contribute to the discussion on the relationship between ethnic diversity and social cohesion by examining how living in relatively ethnically diverse urban areas affects neighbourhood attachment. Drawing on literature on neighbourhood attachment and social capital as well as the contact and conflict hypotheses, we examine the role of experience with ethnic diversity at the individual level—namely, having interethnic social ties—in moderating the relationship between the level of ethnic diversity in the home area and neighbourhood attachment. In our view, empirical works addressing the link between neighbourhood diversity and various dimensions of neighbourhood cohesion have tended to neglect the role of diversity of individual social relations. We expect that mere experience with diversity—both within and outside the neighbourhood—can affect emotional bonds with diverse surroundings. In our analyses, we differentiate between native and migrant residents, which so far has rarely been done.

The main research questions of this article are the following: What is the relationship between ethnic diversity in the neighbourhood and neighbourhood attachment? How does this relationship differ for individuals who have diverse personal relations and for those who do not? What are the differences between migrants and natives in these respects? We address these questions basing on data from a research project conducted in relatively ethnically diverse neighbourhoods in six European cities. Therefore, whereas most studies investigating the association between ethnic diversity and social cohesion have focused on one single country (Putnam, 2007; Letki, 2008; Tolsma *et al.*, 2009; Becares *et al.*, 2011; Sturgis *et al.*, 2011; Lancee and Dronkers, 2011; Laurence, 2011), we provide a wider international perspective.

Theoretical Framework

Neighbourhood Attachment and Diversity

To date, the only studies that have tried to verify the relationship between the level of contextual diversity and neighbourhood attachment are those of Taylor *et al.* (1985), Greif (2009), Oliver (2010) and Bailey *et al.* (2012). With the exception of the last work, which revealed that economic mix is very weakly related to place attachment in the UK, the remaining three were based on American data and reported an eroding effect of both ethnic and economic diversity in the neighbourhood. The explanation provided by Taylor *et al.* (1985) is that in ethnically diverse areas there is confusion about acceptable norms to follow, which induces

stress and dampens place attachment—a reasoning consistent with the homophily principle (McPherson *et al.*, 2001). Greif (2009), in turn, interprets the detrimental impact of ethnic diversity referring to people's concerns that a larger minority presence may be related to 'White flight' and consequently a reduction of property prices and higher crime rates. The negative relationship between ethnic diversity and social cohesion can be also explained by conflict theory (also referred to as threat theory, see Blumer, 1954; Blalock, 1967), which predicts that the mere presence of an outgroup—in this case: any different ethnic group—poses a threat to the majority group, increasing prejudice and chances for intergroup tensions.

Meanwhile, there has been substantial research on the relationship between ethnic diversity and various indicators of social capital, such as trust, social activity and neighbour relations. According to most American studies, social cohesion in ethnically or racially diverse areas is lower (for example, Alesina and La Ferrara, 2000, 2002; Costa and Kahn; 2003; Putnam, 2007; but see Portes and Vickstrom, 2011, for a critical review). However, European research results are more mixed. Recent works have pointed, for example, to the low socioeconomic status of the neighbourhood as a contextual factor eroding social cohesion (Letki, 2008; Becares *et al.*, 2011; Laurence, 2011), but also to the association of ethnic diversity with an increase of positive attitudes and some forms of trust (Wagner *et al.*, 2006; Tolsma *et al.*, 2009; Lancee and Dronkers, 2011).

Most works investigating the relationship between ethnic diversity and social cohesion do not differentiate between migrants and natives, assuming that neighbourhood diversity will affect the whole community in roughly the same way. However, several studies provide sound evidence that the effect of neighbourhood diversity tends to be different for the host population and for migrants. For instance, Lancee and Dronkers (2011), using data from the Netherlands, reported a positive effect of ethnic diversity for interethnic trust among natives, but not for migrants. In Australia, Leigh (2006) demonstrated that linguistic diversity reduced general trust only among migrants. Fieldhouse and Cutts (2010) in turn found that in the US and the UK there was a negative relationship between ethnic diversity and attitudinal social capital among Whites, but the effect was weaker among minority groups. Meanwhile, neighbourhood diversity reduced structural social capital among minorities but not Whites. In our view, these empirical examples demonstrate a need for differentiating between migrants and natives when addressing the relationship between ethnic diversity and neighbourhood attachment. Such an approach is particularly justified when ethnically diverse neighbourhoods are studied, as in this article.

The Moderating Role of Social Ties

While the reviewed studies have focused on the consequences of the mere fact of living in diverse neighbourhoods, a framework for investigating the effects of intergroup relations is provided by the contact hypothesis (Allport, 1954; Pettigrew, 1998; Pettigrew and Tropp, 2006), which postulates that contacts between persons from different groups should lead to better mutual attitudes. The positive effect of interethnic contact has been confirmed in many studies, among others with regard to the residential area (for example, Wagner *et al.*, 2006; Hewstone, 2009). Although the contact hypothesis originally referred to the effect of intergroup contact on attitudes towards the outgroup, it has often been applied also

to attitudinal measures of social capital (such as trust). In our view, this insight can be also transferred to the study of neighbourhood attachment.

While empirical support for the contact hypothesis is seemingly inconsistent with conflict theory, this discrepancy may result from the fact that conflict theory refers to living among outgroup members, while neglecting face-to-face contacts between them (Hewstone, 2009). Therefore, some researchers argue that an integration of contact and conflict theories is promising when trying to explain the effects of a diverse residential setting: neighbourhood diversity without intergroup contact may be threatening for the residents, but once contact is established, attitudes towards outgroups may become positive (Hewstone, 2009, Stolle *et al.*, 2008, Oliver, 2010).

To our knowledge, within the extensive research on neighbourhood diversity, only a few empirical works have tried to explain its effect on social cohesion by analysing the role of social ties at the individual level. An inspiring study was done on American and Canadian data, by Stolle *et al.* (2008), who found that, although living in a diverse residential area was detrimental to interpersonal trust, it posed a smaller problem for residents who regularly interacted with neighbours than for those who did not. A similar conclusion was reached by Sturgis and colleagues (2011), who reported that in the UK acquaintance with people in the neighbourhood was a crucial moderator of ethnic diversity's impact on trust in neighbours. Specifically, the more people an individual knew in the home area, the weaker the negative relationship was between ethnic diversity and his/her trust in neighbours. By combining the contextual and micro levels in the analyses, these two works clearly show that, even if the 'diversity effect' is negative on average, it can be neutralised by social ties *within* the neighbourhood. However, they did not concentrate on interethnic ties, so in fact we cannot be sure which neighbourhood ties mattered here.

So far, very few studies on the 'diversity effect' have included the role of social ties *beyond* the neighbourhood. Yet it seems that any intergroup relations—be it within or outside the home area—can moderate the link between contextual ethnic diversity and social cohesion (see also: Hewstone, 2009). This hypothesis was in fact confirmed by Laurence (2011), who found that, in the UK, the negative relationship between ethnic diversity and trust in neighbours was weaker for individuals with 'bridging' social ties—understood as interethnic networks—than for those without. With regard to these findings, the author concluded that the presence of bridging social ties can "serve as an effective buffer" (Laurence, 2011, p. 82) and that it is those who have only 'bonding ties' that experience the strongest eroding impact of a diverse surrounding on their social capital.

Although studies on the role of social ties in moderating the relationship between ethnic diversity and various components of social cohesion are still not numerous, they allow for a better understanding of the 'diversity effect'. However, none of the existing studies has addressed the moderating role of social ties in the context of neighbourhood attachment, nor differentiated between migrants and natives. Both tasks are worth undertaking.

Data and Measurement

The analyses are based on survey data collected in an international research project titled 'Generating Interethnic Tolerance and Neighbourhood Integration in European Urban Spaces' (GEITONIES, which means 'neighbourhoods' in Greek). The GEITONIES project was conducted in 2009/10 in six European cities: Bilbao,

Lisbon, Rotterdam, Thessalonica, Vienna and Warsaw. The case study cities represent southern, northern and central eastern regions of Europe and different European models of immigration history and volume. While Rotterdam and Vienna both have a long tradition of immigration and cultural diversity, Warsaw is only becoming a receiving area with a small percentage share of foreigners and the southern countries can be considered 'in between' cases. At the same time, the selected cities share important characteristics such as rising population diversity and being key immigrant destinations within their own national contexts.

In each city, three areas (neighbourhoods) with a share of third-country nationals[1] higher than that for the whole city were selected for the survey. The selection was based on a common set of criteria: neighbourhoods were to be compact and homogeneous, and to differ with regard to socio-demographic and urban characteristics as well as the main migrant groups—their number and countries of origin. Although migrants living in the selected neighbourhoods originated from various countries (see Table 1), in most cases they represented low-skilled working immigrants. Neighbourhood selection was based on 2001 or 2002 (depending on the country) census data, followed by a cluster analysis based on demographic, urban, social and economic variables, done for each city, and finally observation and expert interviews. A qualitative approach was implemented when selecting the neighbourhoods in order to verify potentially outdated census data, in particular regarding the main migrant groups and their characteristics. In Table 1 we present the basic socio-demographic characteristics of the case study neighbourhoods.

A 'neighbourhood' was understood in the project as a relatively small urban area inhabited by a population of residents, encompassing specific public resources that provide an opportunity to form social relations (for a similar operationalisation of the neighbourhood, see for example, Park *et al.*, 1925; Kearns and Parkinson, 2001; van Eijk, 2010). The size and population of the selected areas were determined by local research conditions: the size of spatial units for which adequate statistical data would be available and the ratio of migrant-to-native residents that would allow for obtaining an adequate representation of both groups in the sample.

While, on the one hand, all selected areas constituted 'migrant neighbourhoods' in their own cities, on the other, the percentage of migrants varied considerably across these 18 areas (Table 1). From the perspective of the analyses conducted in this article, the latter can be treated as an advantage of the case selection: it ensured sufficient variance of neighbourhood ethnic diversity for it to be analysed as an independent variable. Nevertheless, conclusions from our analyses apply only to relatively ethnically diverse urban areas in the studied European cities and not to a random selection of urban areas in these cities.

In each neighbourhood, a random sample of addresses was drawn from an inventory of residential addresses, which in most cases was generated for the purpose of the project. Data were collected using face-to-face questionnaire-based interviews with individuals aged 25 or older, who had resided in the studied neighbourhood for at least one year. In each neighbourhood, the sample consisted of natives and migrants, in roughly the same proportion[2] (quotas for both groups were imposed to ensure equal shares in the sample). Within the research project, migrants were defined as individuals with at least one parent born abroad. The total sample size reached 3668 individuals, distributed evenly across the 18 neighbourhoods.

Table 1. Basic socio-demographic characteristics of the case study neighbourhoods

City	*Neighbourhood*	*Surface area (square km)*	*Total population*	*Share of migrants (percentage)*	*Main migrant groups*	*Share of residents aged 0–14 (percentage)*	*Unemployment rate (percentage)*
Bilbao	Deusto	1.89	18746	5	Latin Americans, Romanians	11	13
	Rekalde	1.10	15449	6	Latin Americans, Romanians, Moroccans	11	16
	San Francisco	0.21	7690	37	Bolivians, Senegalese, Moroccans	12	31
Lisbon	Costa de Caparica	0.49	4127	38	Brasilians, PALOPa migrants, Asians	11	4
	Monte Abraão	0.33	10565	38	PALOP migrants, Brasilians, Eastern Europeans	22	5
	Mouraria / Martim Moniz	0.23	4348	36	South Alians, Chinese, PALOP migrants	6	5
Rotterdam	Afrikaanderwijk	0.47	9014	86	Turks, Surinamese, Morocco	22	14
	Westpunt	0.46	13129	46	Surinamese, Netherlands Antilles	19	8
	Schiemond	1.05	4009	85	Surinamese, Cape Verdeans, Moroccans	22	12
Thessalonica	Chinatown	1.00	21500	22	Chinese, Albanians, Georgians	12	8
	Nikopoli	0.70	10000	70	Soviet Greeks, Georgians, Russians	*No data*	*No data*
	Peraia	1.82	9600	20	Soviet Greeks, Georgians, Albanians	22	8

(continued)

Table 1. (Continued)

City	*Neighbourhood*	*Surface area (square km)*	*Total population*	*Share of migrants (percentage)*	*Main migrant groups*	*Share of residents aged 0–14 (percentage)*	*Unemployment rate (percentage)*
Vienna	Am Schöpfwerk	0.50	6619	36	Migrants from former Yugoslavia, Turks, non-Europeans	23	7
	Laudongasse	0.20	3930	31	Migrants from former Yugoslavia, diverse migrants	13	4
	Ludo-Hartmann-Platz	0.15	3922	63	Migrants from former Yugoslavia, Turks, non-Europeans	18	9
Warsaw	Szczęśliwice	1.80	7523	4	Vietnamese, Chinese	18	6
	Wilanów	1.28	10195	3	Americans, Eastern Europe, diverse migrants	11	12
	Żelazna Brama	0.60	13411	2	Vietnamese, Eastern Europeans	8	13

[a]PALOP = Portuguese-speaking African countries.
Source: GEITONIES database 2009/10.

Method of Analysis

Taking into account the nested data structure of the GEITONIES dataset (individuals were nested within neighbourhoods), we employed hierarchical linear modelling (HLM), which enables accounting for both individual and contextual-level characteristics (see for example, Hox, 1995). We distinguished two levels of hierarchy—the individual and neighbourhood—assuming that people living in one neighbourhood share more similarities than people living in different neighbourhoods. This way, we also took into account that the studied neighbourhoods differed in various dimensions. We did not introduce a city level in our modelling, but controlled for the city. Therefore, the presented analyses are not universal for all European cities but only for the six cities included in the study. We did separate analyses for natives and for migrants, in order to assess possible differences between the two groups.

Dependent Variable

The dependent variable was neighbourhood attachment, which was a latent variable calculated as the standardised factor score derived from eight items referring to positive feelings related to living in the neighbourhood: 'I feel attached to my neighbourhood', 'I am proud of my neighbourhood', 'I care about my neighbourhood', 'I would miss the people in my neighbourhood if I moved', 'I would move away from here with pleasure', 'I enjoy the daily exchanges with the people in my neighbourhood', 'The people in my neighbourhood make me feel safe here', 'To what extent do you feel a resident of the neighbourhood?'. With the exception of the last question, which was assessed on a six-point scale (1 = not at all, 6 = very strongly), responses were made on a five-point Likert scale (1 = disagree strongly, 5 = agree strongly), with the negative statement being reversed so that a higher value indicated a higher level of neighbourhood attachment. The scale had high reliability (Cronbach's Alpha equalled 0.86 for natives and 0.85 for migrants).

When opinions about the neighbourhood were measured, the definition of the neighbourhood referred to a smaller area than the case study neighbourhoods—namely, the physical and social home surroundings reachable by foot within 10 minutes from the respondent's home. Although this approach implies that respondents could understand 'the neighbourhood' in different ways, it relies on the idea that the neighbourhood does not have strict physical boundaries and is personally defined (e.g. Galster, 2001; Lewicka, 2010).

Independent Variables

Our main independent variable was ethnic diversity of the neighbourhood, which was measured by Simpson's Index of Diversity,[3] computed with the following formula, where s_i stands for the share of group i in the population of interest

$$1 - \sum_{i=1}^{N} s_i^2$$

The index represents the probability that, in a given population (here: population of the given neighbourhood), two randomly chosen persons belong to different groups. It ranges from 0 to 1, where the bigger the diversity, the bigger the index. In our analysis, due to lack of data for adequately small area units in national censuses, shares of each ethnic group were derived from the GEITONIES database and weighted by the general percentage of migrants obtained from census data.[4] Ethnic groups were distinguished on the basis of the country of birth of the respondent's mother.

Our second independent variable indicated whether or not the respondent had diverse social ties. It was a dummy variable, in which 1 represented having interethnic relations and 0, not having them. Persons having interethnic relations were those who mentioned at least one person of different ethnic origin in their closest or overall social ties.[5] We used a binary measure rather than a continuous one because we hypothesised that the mere experience of having relations with a person of different ethnic origin would be an important factor differentiating the two groups. Such an approach is supported by the fact that interethnic ties are generally rare (compare: McPherson *et al.*, 2001) and were also relatively rare in our sample (see further).

By including the interaction term between ethnic diversity in the neighbourhood and having interethnic relations, we were able to investigate whether and how the contextual influence of ethnic diversity on neighbourhood attachment is moderated by an individual characteristic—namely, having interethnic relations (for an elaboration of moderation analysis see for example, Baron and Kenny, 1986; Hayes, 2009).

Furthermore, we included control variables at both the contextual and the individual level, believing, like many other researchers (for example, Letki, 2008; Stolle *et al.*, 2008; Fieldhouse and Cutts, 2010; Lancee and Dronkers, 2011; Sturgis *et al.*, 2011) that both groups of characteristics should be accounted for when investigating the relationship between community cohesion and a diverse setting. At the contextual level, we controlled for the city in which the survey was conducted, age variation and educational diversity in the neighbourhood (see Lancee and Dronkers, 2011) and two indicators of neighbourhood status (see Letki, 2008; Becares *et al.*, 2011): residents' mean International Socio-Economic Index of Occupational Status (ISEI) and share of highly educated residents in the neighbourhood.

At the individual level, we controlled for basic socio-demographic characteristics such as: gender, age, education level, occupational status (having work), having a child below 16 years of age, length of residence in the neighbourhood (dummy variable with 1 representing 'over 10 years or since childhood') and country of origin (included only in the model for migrants). Since those contextual and individual control variables are not the subject of our paper, in our analyses we do not interpret their effects on the dependent variable.

Level of Ethnic Diversity and Characteristics of Natives and Migrants with Interethnic Relations

In the researched neighbourhoods, ethnic diversity ranged from 0.04 to 0.83, with an average of 0.46 and standard deviation of 0.27. The highest diversity indices—all above 0.80—were observed in one Vienna area and two Rotterdam areas, while the lowest indices (close to zero) belonged to the three Warsaw neighbourhoods (see Figure 1). Although the diversity index has been criticised for being 'colour blind' (for example, Gijsberts *et al.*, 2011; Lancee and Dronkers, 2011), in the researched neighbourhoods its high values were accompanied by high shares of migrants (the correlation between the two was $r = 0.936$, $N = 18$, $p \leq 0.001$).[6] Consequently, in the studied sample the most diverse neighbourhoods were to a large extent 'the most migrant neighbourhoods'.

Persons having interethnic relations comprised 33.5 per cent of the studied sample. Among them, 60.2 per cent were of migrant origin, while among persons without interethnic relations, natives prevailed (79.7 per cent of the group). The shares of persons

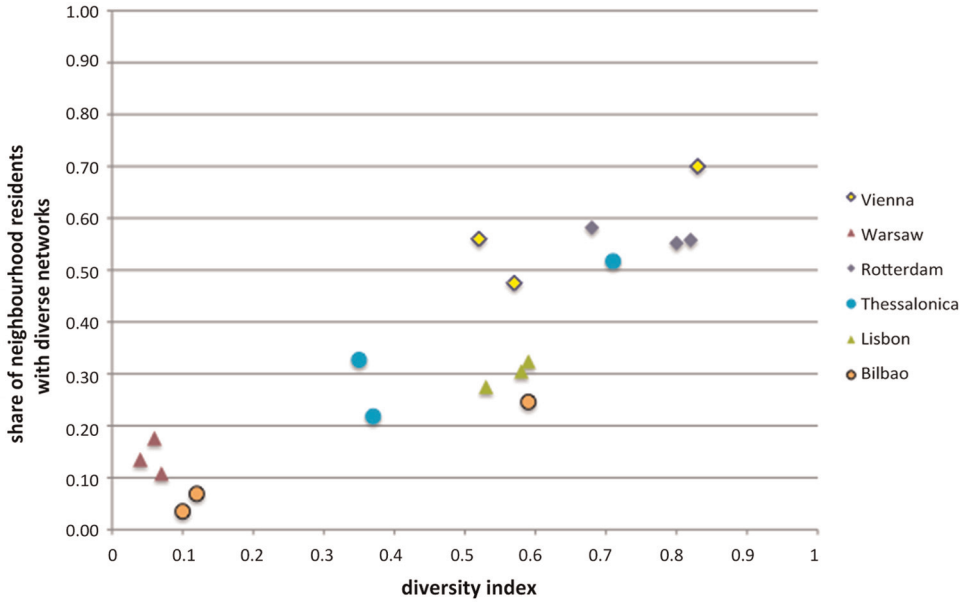

Figure 1. Level of neighbourhood ethnic diversity and share of persons having interethnic relations in the studied areas.
Source: GEITONIES database 2009/10.

with interethnic ties varied first of all between the six cities, but differences within cities were also visible (see Figure 1). The proportions of residents with interethnic ties were highest in areas with highest ethnic diversity and a long history of emigration: Vienna (70 per cent) and Rotterdam neighbourhoods (55 per cent and 56 per cent), and lowest in the three Warsaw neighbourhoods and two neighbourhoods in Bilbao—i.e. the least diverse areas. This corresponds with earlier findings indicating that people living in multiethnic areas have more intergroup contact (for example, Wagner *et al.*, 2006; Schmid *et al.*, 2008; Oliver, 2010). On an individual level, however, the correlation between the level of ethnic diversity and having diverse relations was rather low (for migrants: $r = 0.18$, $p < 0.001$, $N = 1672$; and for natives: $r = 0.28$, $p < 0.001$, $N = 1996$). Apparently then, in the studied neighbourhoods, bringing together people of different ethnic backgrounds does not directly translate into developing interethnic relations.

It is worth highlighting that having interethnic relations means something different for natives and migrants. Whereas for natives it implies establishing relations with foreigners coming to their country, for migrants it is frequently related to their ability to form ties with the natives. In the studied sample, among migrants having close interethnic relations, 78.7 per cent had at least one native person among their close ties and as many as 56.8 per cent had close ties consisting entirely of natives.[7] The ethnic composition of migrants' close interethnic ties thus suggests that having interethnic relations corresponds with the advancement of migrants' social integration in the host society.

The different nature of interethnic relations among natives and migrants is also confirmed by selected socio-demographic characteristics of persons with interethnic

relations. Natives with interethnic relations differed from the rest of natives in that they were younger, more often childless, with a higher socioeconomic position and living in the studied neighbourhoods for a relatively short time. Therefore, they can be considered as relatively mobile people, possibly having economic opportunities to choose their place of residence. Migrants having interethnic relations differed from those who did not in fewer aspects: mainly as regards their higher socioeconomic status and a longer stay in the current neighbourhood. At the same time, these two characteristics designate relative advancement in integration in the host society.

The Relationship between Ethnic Diversity and Neighbourhood Attachment: The Moderating Role of Interethnic Ties

In the random intercept hierarchical linear models explaining the variability of neighbourhood attachment, we employed a three-step approach (see Hox, 1995). We started with the estimation of the baseline model including only control variables (models N1 and M1). In the second step, we entered ethnic diversity and having interethnic relations (models N2 and M2) and in the third—the interaction between the two variables (models N3 and M3). Apart from dummy variables, all independent variables were centred with the use of grand-means. For individual-level variables, grand-means were calculated separately for natives and migrants.

Natives

Results obtained for natives suggest that in this group the level of neighbourhood attachment was strongly contingent on neighbourhood characteristics. In the baseline model (N1), in which control variables were included, intergroup variance (attributed to the neighbourhood) accounted for 6.1 per cent of the total variance of neighbourhood attachment (see Table 2).

Model N2 indicates that ethnic diversity in the neighbourhood significantly decreased natives' attachment to their residential area ($\beta = -1.237$, $p < 0.01$). At the same time, having interethnic relations itself was not significantly related to natives' attachment to the neighbourhood. Apparently then, among natives, having interethnic relations did not translate directly into more positive feelings towards ethnically diverse neighbourhoods. Among other factors, this might be because the investigated interethnic relations could be located outside the neighbourhood. This means that in extreme cases, foreigners with whom natives had personal relations could have differed considerably in terms of ethnicity and socio-demographic characteristics from foreign neighbours living in their areas. In such cases, individual relations with persons of migrant origin would not necessarily generalise to migrants in the neighbourhood, and thus would not affect the emotional attitude towards the neighbourhood.

This finding appears to be consistent with the results of Blokland and van Eijk (2010), who, in a study conducted in one diverse Rotterdam neighbourhood, found that 'a taste for diversity'—defined as eagerness to live in a diverse setting—was not necessarily accompanied by high involvement in interethnic relations. If we reverse their conclusion, we can say that people with interethnic ties are not necessarily 'diversity likers'—and thus their attachment to a relatively diverse neighbourhood is not higher than among individuals who maintain ties only with natives. Similar conclusions—although regarding the effect of racial attitudes on spatial self-sorting—were reached by Oliver (2010).

Table 2. Multilevel linear regression predicting neighbourhood attachment for natives and migrants

	NATIVES, N = 1853			*MIGRANTS, N=1559*		
	Model N1 Baseline model[a] Estimate (S.E.)	*Model N2 Estimate (S.E.)*	*Model N3 Estimate (S.E.)*	*Model M1 Baseline model[b] Estimate (S.E.)*	*Model M2 Estimate (S.E.)*	*Model M3 Estimate (S.E.)*
Constant	−0.626 (0.427)	−0.985* (0.380)	−1.041** (0.380)	−0.498 (0.343)	−0.174 (0.303)	−0.137 (0.311)
Diversity index		−1.237** (0.450)	−1.335** (0.451)		−1.324* (0.412)	−0.946* (0.436)
Having interethnic relations		0.066 (0.054)	0.010 (0.058)		0.052 (0.049)	0.049 (0.049)
Diversity index * having interethnic relations			0.537** (0.205)			−0.681** (0.185)
Fit indices						
−2 Log-likelihood	5041.666	4915.520**	4908.663**	4074.812	4065.669**	4052.162**
AIC	5047.666	4959.520*	4954.663*	4128.812	4123.669*	4112.162**
ICC (percentage)	6.08	4.00	4.00	5.80	3.30	3.59
Proportion of reduced variance (ref. baseline model)						
Level 2 (neighbourhood)	N.A.	0.346	0.346	N.A.	0.346	0.346
Level 1 (individual)	N.A.	0.000	0.004	N.A.	0.000	0.004
Proportion of reduced variance (ref. null model)[c]						
Level 2 (neighbourhood)	0.708	0.809	0.809	0.520	0.730	0.710
Level 1 (individual)	0.052	0.052	0.056	0.057	0.058	0.067

[a]Control variables entered into the baseline model included: the city in which the survey was conducted, age variation in the neighbourhood, educational diversity in the neighbourhood, residents' mean International Socio-Economic Index of Occupational Status (ISEI), share of highly educated residents in the neighbourhood, gender, age, education level, employment, having a child below 16 years of age, and length of residence in the neighbourhood.
[b]For migrants, control variables included the same set of variables as for natives, and additionally: country of origin.
[c]ICC for the null model for natives: 17.08 per cent; for migrants: 10.78 per cent.
Notes: * p <0.05; ** p <0.01.
Source: GEITONIES database 2009/10.

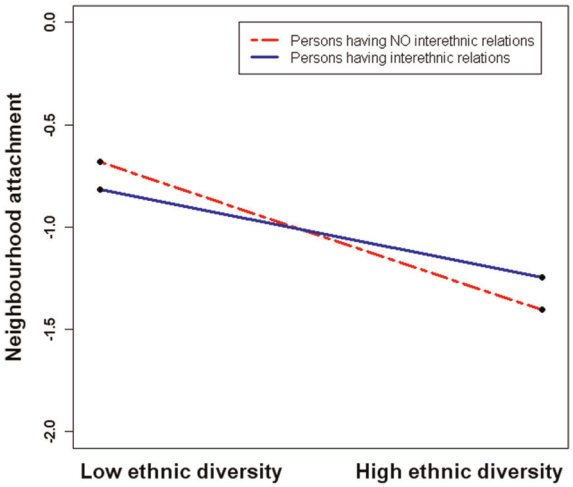

Figure 2. Predicted effect of neighbourhood ethnic diversity on neighbourhood attachment for natives with and without interethnic relations.
Source: GEITONIES database 2009/10.

In model N3, we added the interaction term between ethnic diversity and having interethnic ties, which significantly improved the model fit ($\Delta\chi^2 = 6.857$, $\Delta df = 1$, $p < 0.01$). The coefficient of the interaction was significant ($\beta = -1.335$, $p < 0.01$). Further analyses done separately for natives with and without interethnic relations indicated that the negative association between ethnic diversity and neighbourhood attachment was significant only for natives without interethnic ties ($\beta = -1.533$, $p < 0.01$), while for those who had such ties it was not ($t(18.579) = 0.427$, $p > 0.05$).

These differences between natives with and without interethnic ties are illustrated by Figure 2. We see that, while in general ethnic diversity in an individual's surrounding tended to reduce neighbourhood attachment, this relationship was 'neutralised' among natives with interethnic relations. The plot of the interaction clearly shows that a *less* diverse neighbourhood generated stronger attachment among natives with no interethnic relations, while a *more* diverse neighbourhood generated the same among those that had interethnic relations. We interpret this finding as a congruency pattern: for natives, the attachment is greater when the level of neighbourhood diversity is consistent with ethnic characteristics of their personal relations.

Migrants

Analogous models for migrants revealed a number of similarities compared with natives, although with some important differences. As in the case of natives, migrants' neighbourhood attachment was affected by neighbourhood characteristics. In the baseline model, intergroup variance accounted for 5.8 per cent of the total variance of neighbourhood attachment (see model M1 in Table 2).

Model M2, which included ethnic diversity and having interethnic ties, demonstrated that, similarly to natives, migrants living in the more ethnically diverse areas tended to report lower neighbourhood attachment ($\beta = -1.324$, $p < 0.05$), and the

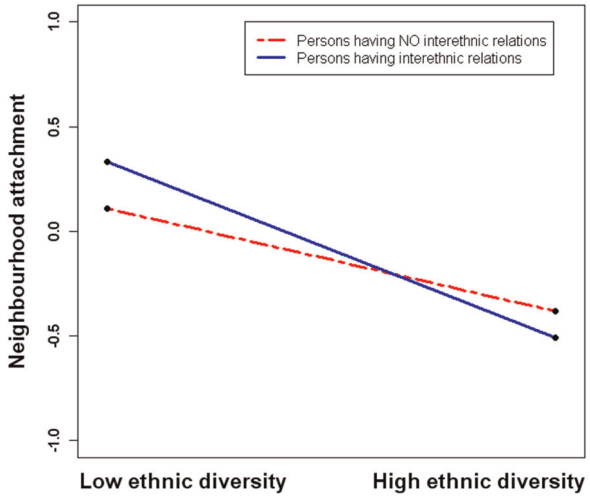

Figure 3. Predicted effect of neighbourhood ethnic diversity on neighbourhood attachment for migrants with and without interethnic relations.
Source: GEITONIES database 2009/10.

role of having interethnic relations was insignificant. We find this result particularly interesting, especially given that we control for indicators of neighbourhood status. The counter-intuitive negative relationship between ethnic diversity and migrants' attachment to the neighbourhood can be related to the fact that their settlement in ethnically diverse places is more often than among natives based on necessity rather than free choice. Being dependent on the support of co-ethnics or other foreigners, migrants are often physically attached to 'migrant neighbourhoods', having limited possibilities to move elsewhere.

Adding the interaction term between ethnic diversity and having interethnic ties in Model M3 significantly improved the model's fit ($\Delta\chi^2 = 13.507$, $\Delta df = 1$, $p < 0.01$). The interaction term was significant ($\beta = -0.681$, $p < 0.01$), which means that migrants having relations beyond their own ethnic group—predominantly with natives—responded to the ethnic diversity of the neighbourhood differently than did other migrants. Further analyses done in sub-groups revealed a seemingly different pattern than that for natives: the negative relationship between ethnic diversity and neighbourhood attachment was significant for migrants having interethnic relations ($\beta = -1.697$, $p < 0.01$), but not for other migrants ($t(17.436) = -1.607$, $p > 0.05$). These differences are illustrated by Figure 3.

Interestingly, for less diverse areas, migrants with interethnic relations tended to express higher levels of neighbourhood attachment when compared with the rest of the migrants, whereas in the relatively ethnically diverse neighbourhoods the opposite pattern was observed. It thus appears that in more diverse areas, migrants who have formed relations with the receiving society and other migrant groups represent a *lower* level of attachment to the home area than those who lack such relations.

This pattern can be related to a process of self-selection. Migrants having monoethnic relations might tend to concentrate in diverse areas, and while operating in their ethnic group they might have stronger positive feelings towards their neighbourhood.

Since less diverse areas usually mean those in which natives are more often present, they generate stronger attachment among migrants who have relations with both co-ethnics and natives.

While interpreting these results, we need to bear in mind that, for migrants, having interethnic relations usually means having developed relations with natives. This indicates stronger social integration in the host society compared with other migrants. Consequently, we can argue that among migrant residents it is the modes of their social integration that moderate the relationship between neighbourhood ethnic diversity and neighbourhood attachment.

This reasoning provides an additional perspective on the interpretation of the obtained results. Migrants who confine their social relations to their co-ethnics are 'preserved' from the impact of ethnic diversity in their surroundings with regard to the level of their emotional bonds with the area. In contrast, migrants who are able and willing to engage in relations with the host society are more sensitive to the high level of ethnic diversity in the neighbourhood, being negatively affected by it. In this aspect they become more similar to natives not having interethnic relations than to migrants without such relations.

Discussion

It is clear that the 18 urban areas studied in this article represent cities that vary in terms of history of immigration and patterns of diversity. The migrant groups present in Rotterdam have little in common with those in Warsaw or Vienna. Nevertheless, as our analyses control for the neighbourhood level, we can identify some general 'average' mechanisms in the studied neighbourhoods, which pertain to relatively ethnically diverse urban areas.

As regards the general link between ethnic diversity and neighbourhood attachment, our findings support earlier observations indicating that an increase in ethnic diversity in the residential area tends to decrease various indicators of neighbourhood cohesion—among them, the level of neighbourhood attachment (see Greif, 2009; Oliver, 2010). This pattern has been found for both native and migrant residents and can be explained by, among others, conflict theory, which predicts competition and, consequently, tensions between different groups living together. In the case of natives, we can also refer to the homophily principle: their neighbourhood attachment decreases as their chances to meet other natives in the home area fall.

Another result that fits into previous research findings, but provides an additional perspective by addressing neighbourhood attachment, is the observation that individual experience with ethnic diversity moderates the relationship between neighbourhood diversity and neighbourhood attachment. Importantly, the moderating role of interethnic relations is significant regardless of where they take place—within one's neighbourhood or beyond it. What deserves attention is the fact that the mechanisms that shape this link are not uniform for natives and migrants.

For natives, having interethnic relations 'neutralises' the eroding effect of ethnic diversity on neighbourhood attachment. This outcome, obtained for relatively ethnically diverse neighbourhoods in several European cities, is consistent with the results of previous country-specific studies devoted to a closely related aspect of social cohesion: trust in neighbours (Stolle *et al.*, 2008; Laurence, 2011). It also supports the idea that, when we refer to living in a diverse context, conflict theory will be likely to predict the effects of diversity, but when speaking of actual relations with

outgroup members, contact theory will better explain its outcomes (see Hewstone, 2009; Oliver, 2010).

In the case of migrants, apparently an opposite process takes place: having no interethnic relations 'neutralises' the negative effect of ethnic diversity on neighbourhood attachment. In our view, this can be explained by the fact that migrants without interethnic relations tend to rely on local ties with their countrymen, being thus indifferent to the general level of ethnic diversity in their home areas. Meanwhile, migrants having interethnic relations, for whom the relationship between ethnic diversity and neighbourhood attachment remains negative, are predominantly persons who have bonds with the natives, who are less numerous in more diverse areas.

What also clearly stems from our findings is that diverse areas generate stronger attachment among migrants having relations only with co-ethnics, and among natives having interethnic relations. Moreover, our analyses suggest that whether or not ethnic diversity has a generally negative effect on the residents' neighbourhood attachment can be conditioned by the proportions of natives and migrants in the neighbourhood who have interethnic relations. These observations directly lead to the conclusion that, when studying the role of individual experience with ethnic diversity in shaping the relationship between neighbourhood ethnic diversity and neighbourhood attachment, it is crucial to differentiate between the migrant and native populations. This is related to the different meaning that a diverse setting has for the host population and for migrant groups. While for native residents a diverse setting means the opportunity to meet non-natives, for migrants it is often the opportunity to meet fellow countrymen.

These results suggest that with regard to the relationship between ethnic diversity and neighbourhood attachment we can speak of two 'ideal' extreme scenarios, which depend on the nature of interethnic relations held by inhabitants of the given location, be they relations within or outside the neighbourhood. One extreme situation can take place when inhabitants of a given location tend to generally engage in interethnic relations, and ties between natives and migrants living in the neighbourhood are also extensive and most likely positive. In such neighbourhoods, growing levels of ethnic diversity do not affect natives but may reduce migrants' neighbourhood attachment, given that they have interethnic ties mainly with natives. It can also be expected that, without strong migrant communities in the area, migrants are relatively free to choose their place of residence, since they are less dependent on the resources of their own ethnic community. Consequently, when the level of ethnic diversity becomes too high for migrants that have ties with natives, they tend to leave the area, which subsequently leads to a decrease in the level of diversity. It can be thus expected that some 'equilibrium' level of ethnic diversity could exist in such neighbourhoods.

In the opposite extreme situation, relations between natives and migrants are limited, with migrants forming a close-knit community. In this case, ethnic diversity does not affect migrants' neighbourhood attachment, but it decreases that of natives living in the area. Consequently, the level of community cohesion depends on the proportions and power relations between the native and migrant groups. In particular, migrants' emotional bonds with the neighbourhood can be strong and positive, but natives can be prone to leave such areas, which consequently gradually earn a 'migrant neighbourhood' label. In effect, the neighbourhood, though perceived by migrants from a given ethnic group as a friendly place to live in, can become an alienated island in the city.

Certainly, the real picture is usually somewhere between the two described extreme scenarios, although their demonstration implies that interethnic relations can be generally positive for social cohesion, especially when the perspective of the whole city is taken. Our findings also suggest that the study of the impact of ethnic diversity on neighbourhood attachment should take into account the migrant groups' character and the modes of their social integration. Nevertheless, we believe that our results, built upon a broad and diversified selection of ethnically diverse European neighbourhoods, can generate new hypotheses for other European cities. Moreover, taking into account the links between neighbourhood attachment and other components of social cohesion (Dekker, 2007; Lewicka, 2010), it can be expected that our conclusions regarding neighbourhood attachment can be of significance also for the discussion of broadly defined social cohesion.

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Notes

1. Non-EU foreign nationals.
2. The exceptions were: Warsaw neighbourhoods where migrants accounted for around 25 per cent of the neighbourhood sample, and one Rotterdam neighbourhood, where migrants outnumbered natives.
3. In the literature, several variations and names of this index are used—for example, the fragmentation index, diversity index (for example, Letki, 2008; Fieldhouse and Cutts, 2010; Gijsberts *et al.*, 2011; Laurence, 2011) or the Herfindahl index (for example, Lancee and Dronkers, 2011).
4. Data were weighted whenever calculations for the whole sample were done.
5. The questionnaire collected information on respondents' closest and overall social ties. Four contact categories were distinguished: spending free time, asking for/giving advice, receiving help or helping out and other relationships (see Fischer, 1982). For the closest ties, name generator questions collected information on up to eight most important persons. For the overall social ties (with no limit imposed), its ethnic composition and other selected characteristics were collected.
6. Because of this high correlation, we decided not to include the share of immigrants in the neighbourhood as a control variable.
7. Due to data limitations, it was possible to assess the share of natives only for close relations.

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