Inter-Ethnic Neighbourhood Acquaintanceships of Migrants and Natives in Germany

On the Brokering Roles of Inter-Ethnic Partners and Children*

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Abstract: Since Allport, social scientists emphasise the importance of personal inter-ethnic contact for overcoming prejudices and enhancing social cohesion in mixed societies. But why do some people have more contact to their neighbours of other ethnicity? Using new data from a large-scale German survey, I analyse the brokering roles of children and inter-ethnic partners in explaining inter-ethnic neighbourhood acquaintanceships. Even on a contextual level, my results suggest that people living in regions with larger shares of children have more inter-ethnic neighbourhood acquaintanceships, which expands earlier findings on the general integrating function of children. However, I also argue that we should recognise brokering to be context-specific and exemplify this by showing how the brokering role of inter-ethnic partners shows particularly in interaction with inter-ethnic encounters at local bars and restaurants, while that of children shows particularly given frequent inter-ethnic encounters at public parks and playgrounds. More importantly, the brokering role of children only shows in interaction with the frequency of inter-ethnic encounters at local parks and playgrounds. On a theoretical level, my results demonstrate the importance of studying the interaction of mechanisms in explaining personal (inter-ethnic) contact.

Keywords: Inter-ethnic contact, weak ties, neighbourhood, networks, brokering, ethnic diversity

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Inter-ethnic contact is an important research topic in the social sciences. Theoretically it is conceptualised as one dimension of migrant integration, namely social integration (e.g. Haug 2003). But inter-ethnic contact is not only important for migrants. There is an accumulation of research findings according to which ethnically diverse regions are socially less cohesive so that inhabitants are less willing to produce and maintain public goods and engage in a rich public life (e.g. Lancee and Dronkers 2011; Putnam 2007). Personal inter-ethnic contact attenuates the negative impact of ethnic diversity on social cohesion (e.g. Stolle *et al.* 2008). Parallel to findings on prejudices (e.g. Schlueter and Scheepers 2010), this means that ethnic diversity seems to cause both a decline in social cohesion and a strengthening of the moderator that attenuates this decline. We are thus confronted with what I call the *dilemma of inter-ethnic co-existence*: how do natives and migrants get into personal contact, if spatial proximity also stirs prejudices, social isolation and refusal to mix? While many studies investigate the relation between ethnic diversity and prejudices, social cohesion, or levels of engagement, I here focus on the other side of the dilemma, by investigating why some people have more contact to their neighbours of other ethnicity. As dependent variable, I investigate weak neighbourhood acquaintanceship ties between migrants and natives, because such weak ties tend to bridge different groups (Granovetter 1973) and are thus an important means of integration into the neighbourhood at large, including various different inhabitants (Völker and Flap 2007).

General network theory (for a review see: Rivera *et al.* 2010) and theory on inter-ethnic contact in particular (Kalmijn 1998) discuss three explanatory approaches. Proximity mechanisms highlight the role of opportunities arising via spatial proximity or shared social foci, assortative mechanisms stress the importance of similarity, and relational mechanisms focus on the position of actors in existing networks. Given this background, I analyse the brokering roles of children and inter-ethnic partners. Even on a contextual level, my results suggest that people living in regions with larger shares of children have more inter-ethnic neighbourhood acquaintances. This context effect

expands earlier findings on the general integrating function of children (Logan and Spitze 1994) to the particular realm of inter-ethnic neighbourhood contacts.

Yet, Rivera *et al.* (2010) criticise that while network theory suggests the three different types of mechanisms to interact, only few studies provide empirical demonstrations of such interactions. I argue that for the case of relational mechanisms this means to conceive of brokering as context specific. As I demonstrate, the brokering roles of children and inter-ethnic partners depend on the type of context. I exemplify this by showing how the amplifying brokering role of inter-ethnic partners shows particularly in interaction with inter-ethnic encounters at local bars and restaurants, while that of children shows particularly given frequent inter-ethnic encounters at public parks and playgrounds. If such encounters are infrequent, parents even report to have fewer inter-ethnic neighbourhood acquaintances, which reflects earlier findings and might be accounted for by self-selection into homogeneous contexts. This demonstrates the importance of studying the interaction of mechanisms, because for parents an isolated, i.e. general or average impact of having children does not show.

Theoretical Background

Why do some people have more contact to neighbours of other ethnic background? In the following, I first introduce proximity, assortative and relational mechanisms, which are proposed as general explanations of why two persons are in contact with one another (for a review see: Rivera *et al.* 2010), but also why people entertain inter-ethnic contacts in particular (Kalmijn 1998). I continue to discuss why these three types of mechanisms should not be seen as additive explanations, but that the establishment of relations is a process that involves their interaction.

Proximity, Assortative and Relational Mechanisms

One approach of explaining the establishment of social relationships highlights proximity mechanisms, which denote the opportunities for contact that arise from a

person's geographic and social environment. Blau (1977) emphasises how social relations depend on a population's social structure, meaning that when a population is not ethnically diverse, contacts will not be either. Feld (1981) expands this approach by highlighting the opportunities that arise from social foci around which activities are organised. Next to mere geographical proximity, opportunities for contacts also arise in associations, at work or in bars for example. Overall, this approach sees people's (ego-)networks as a function of their social and geographical environment. Accordingly, the fact that next to affirmative findings (e.g. Vervoort *et al.* 2010), there are also studies that question the dependence of inter-ethnic contacts on ethnic residential segregation (e.g. Drever 2004) are troubling from the perspective of this approach. Well in line are findings that support the importance of host-country language skills for migrants' inter-ethnic contacts to natives (e.g. Martinovic *et al.* 2009b). Yet, from the perspective of natives, I would argue it is not so much their own language skills, but whether migrants who live in the same region or share social foci speak the host-country language.

A second approach for explaining contact between two persons stresses assortative mechanisms, which focus on persons' similarity and complementarity. One of the best known mechanisms of this approach is the so called homophily mechanism, according to which people tend to form social ties to others who are alike (for a review see: McPherson *et al.* 2001). The general rationale behind this mechanism is that by choosing others who are alike, people are more likely to meet acceptance of their beliefs, dress, habits and ethics. Moreover, misunderstandings are less frequent and people who are alike seem more trustworthy. Accordingly, research on inter-ethnic contacts shows that people prefer a partner with the same ethnic background (e.g. Kalmijn 1998). Assuming that inter-ethnic contact is most likely between members of ethnic groups that are rather similar in religious or cultural terms, Martinovic *et al.* (2009b) show the predominantly Christian Surinamese and Antillean migrants to have more native Dutch friends than the predominantly Muslim Turkish and Moroccan migrants. For Germany, Martinovic (2010) similarly shows that Spanish and Yugoslav

migrants, have more contact to natives than Turkish ones, however, surprisingly Greek and Italian migrants do not.

A final approach to explain contacts focuses on relational mechanisms and can be traced back to the work of Simmel (1908), who studied triads and claimed that actors who are indirectly connected by a third person, will most likely be introduced to one another and establish a direct tie in the future. The common acquaintance acts as broker. This so called tendency toward transitivity also explains inter-ethnic contacts, since one is likely to be introduced to further persons with a different ethnic background, as soon as one starts to entertain one inter-ethnic acquaintance. In line with this expectation, Völker *et al.* (2008) show that having relatives of different ethnicity increases the number of inter-ethnic friends. Likewise Nauck (2001) shows that the amount of the parents' inter-ethnic friends is associated with their children's inter-ethnic friends. Finally, persons who get together with an inter-ethnic rather than co-ethnic partner, report to have more new inter-ethnic friends when they are re-interviewed a year later (Martinovic *et al.* 2009b).

The Interaction of Proximity, Assortative and Relational Mechanisms

The three above-discussed approaches offer seemingly additive answers to the question, why some people have more inter-ethnic contacts than others. Such a view is particularly appealing for survey research on inter-ethnic contacts, which tends to rely on an additive regression methodology. Most survey research on inter-ethnic contacts has therefore investigated the general, i.e. average explanatory power of factors such as inter-ethnic relatives, or ethnic residential concentration. Nevertheless, there are also examples of studies that investigate interaction effects. Schlueter (2012) for example shows how ethnic residential segregation negatively affects the number of inter-ethnic friends only for persons with little education. Those with high education are more mobile, which compensates for the limited opportunities for inter-ethnic contact that their neighbourhoods offer. This explanation is able to provide a plausible answer to the

question why earlier results on the role of ethnic residential segregation have been mixed. Similarly, Martinovic *et al.* (2009a) show that immigrants' co-ethnic cohort group sizes are less important, the longer an immigrant has stayed in the host country. They also provide evidence that the culturally more similar Antillean migrants are able to make use of the opportunities for inter-ethnic contacts that arise via longer stays in the Netherlands.

According to Rivera *et al.*'s review of the general literature on tie formation, such empirical demonstrations of the interaction of different mechanisms are rare, and in consequence the three approaches of explaining tie formation have 'tended to progress in relative isolation' (Rivera *et al.* 2010: 108). This is unfortunate, since Schlueter's (2012) example shows that investigations of interaction effects might solve debates on troubling findings. Moreover, according to network theory, such interactions, including those between different types of mechanisms, are much more frequent than the existing empirical research would suggest. On a fundamental level, Kossinets and Watts (2009) argue that tie formation is an endogenous process in which modest general preferences for homophily are amplified by growing limitations to meet people who are not alike through proximity or relational mechanisms. They are able to provide an impressive empirical demonstration by analysing the evolution of a university community's network of e-mail exchanges over time. Yet, even on a less fundamental level, Feld (1981) argues that the tendency toward transitivity depends on shared social foci, meaning that a triad is most likely closed, if actors share a focus of activity. While it is possible that two acquaintances are introduced merely because the shared friend wants them to know each other, an introduction is more likely when there are opportunities to be introduced. Such opportunities arise from visiting bars, doing sport or sharing other social foci with one's friends and acquaintances on a frequent basis. Brokerage is not general, but tends to happen within the particular social and geographical spaces of proximity mechanisms. It is this theoretical argument, for which I want provide an empirical demonstration.

In particular, I focus on the brokering roles of children and inter-ethnic partners. The latter is, as I have discussed above, well established in the literature on inter-ethnic contacts, including tests with longitudinal data. While these tests show a general brokering role of inter-ethnic partners, they do not provide evidence on the kind of contexts where inter-ethnic partners introduce a person to his or her co-ethnic acquaintances. Next to others, I assume that bars and restaurants are typical contexts where partners act as brokers and introduce their friends and acquaintances. Given this paper's focus on inter-ethnic neighbourhood acquaintances, I thus hypothesise that *the important and amplifying brokering role of inter-ethnic partners shows particularly in interaction with inter-ethnic encounters at local bars and restaurants (H1)*.

In contrast to inter-ethnic partners, I do not know a study that explicitly investigates the role of children in explaining inter-ethnic contact. The reason might be that a person's child is not an example of an inter-ethnic contact who has an ego-network consisting of further potential inter-ethnic acquaintances. In addition, one might argue that parents fear potential disadvantages for their children's development that they see as being associated with ethnic diversity and thus tend to move to more homogeneous neighbourhoods and send their children to homogeneous schools and kindergartens. Such self-selection might explain why persons with children tend to have fewer inter-ethnic contacts in general, as can be seen from the undiscussed control variables of existing studies (e.g. Martinovic *et al.* 2009b). This overlooks, however, that in theory children can also be effective brokers. To begin with, they involve their parents with all kinds of new institutions such as schools or child care facilities, within which parents get to know other parents (Small 2009). Moreover, they are also effective brokers themselves, because they get into contact with other people easily and are unlikely to pay attention to a person's ethnic background. A type of context where this seems most obvious is public parks and playgrounds. While playing, children draw their parents into the interaction if a fight over a toy breaks out, they hurt themselves, or they are about to do something dangerous. Thereby children act as brokers and bring parents into contact

with other parents. Whether these are inter-ethnic contacts depends on the opportunities to come across persons of different ethnic background that the geographical and social environment offers. This means that parallel to Schlueter's (2012) example, an interaction effect might be necessary to show the brokering role of children. Given this background, I expect that *the brokering role of children shows particularly at public parks and playgrounds given frequent inter-ethnic encounters (H2)*.

The brokering role of children is probably neither constrained to parks and playgrounds nor to parents in particular. Children might also act as brokers for baby sitters, their parents' friends, or neighbours who watch them and bring these into contact with all kinds of neighbours at local ice cream stores or during a neighbourhood street fair for example. This explains Logan and Spitze's (1994) evidence for a general positive context effect of the share of children on levels of neighbouring. I expect the same to hold for inter-ethnic neighbourhood contacts, meaning that *in regions with larger proportions of children, people have more inter-ethnic neighbourhood acquaintances (H3)*. Assumingly, there is a similar context effect for the regional share of inter-ethnic partnerships. Not only oneself, but also ones friends will eventually get into contact with the friends of ones inter-ethnic partner. Inter-ethnic partnerships bridge two — ethnically rather homogeneous — (ego-)networks. Yet, there are no publicly available sources for such data that would allow to test the according hypothesis on the impact of the regional share of inter-ethnic partnerships. That said, the brokering role of children and inter-ethnic partners does probably not show in any context. I believe that bars and restaurants are not contexts where children frequently act as brokers and likewise inter-ethnic partners do not typically introduce acquaintances during walks through the park, which is why I will also investigate these non-plausible interaction effects.

In sum, the interactions of different (inter-ethnic) tie-generating mechanisms are understudied, even though some theoretically plausible mechanisms can only be shown in interaction with other factors. In my case, I believe that inter-ethnic partners and

children act as brokers only in certain social contexts. Whether ignoring this has indeed overshadowed the brokering role of children so far, will be demonstrated below.

Data and Methods

The EDCA-Survey

The analysis relies on the German subset of the Ethnic Diversity and Collective Action Survey (EDCAS), which was conducted from October 2009 to April 2010 (Schaeffer *et al.* 2011). The German part of the survey consists of 7,500 standardised telephone interviews with participants who are at least 18 years of age. The survey has a 26 per cent oversample of migrants, here defined as either being born abroad or having at least one parent who was born abroad but did not migrate to Germany before 1950. There is an additional 14 per cent oversample of persons having a Turkish migration background. In order to prevent unfeasible screening costs these latter participants were not sampled via random digit dialling but via their last names from telephone books. These participants also had the possibility to conduct the interview either in German or Turkish. 55 Kreise stratify the sample. Kreise are administrative regions with an average population of about 190.000 inhabitants. In each region, 100 respondents were interviewed but in five of the largest German cities, 500 interviews were conducted.¹ The comparison of these 55 regions allows for the investigation of context effects.

Dependent Variables and Predictors

For surveying respondents' acquaintanceship networks, the EDCA-Survey entails items that are similar in design to a recently developed item of the 2006 General Social Survey (GSS), which was analysed by DiPrete *et al.* (2011). For their neighbourhood sub-network participants were asked:

‘Now I am going to ask you questions about your acquaintances in the neighbourhood. With acquaintances I mean people who you know by name and with whom you have a chat frequently, if you come across.

How many of your acquaintances from the neighbourhood have a migration background?

And how many of your acquaintances from the neighbourhood are of German descent?’

Unfortunately, inter-ethnic acquaintanceships between migrants of different ethnicity, for example between an Indian and a Polish migrant, cannot be investigated and accordingly this study focuses on inter-ethnic contact between natives and migrants. These are relatively large groups, which is why it would be infeasible to ask respondents to estimate the exact number of acquaintances. The EDCA-Survey therefore follows the GSS’s example and asked about the numerical ranges of none, one, two to five, six to ten and ten or more acquaintances. Following Zheng *et al.*’s (2006) suggestion, I took the middle value of each range as the respondents’ number of acquaintances and set the value for the category of ten or more to eleven.²

Given these items, I analyse two dependent variables in this study. The first one is the absolute number of inter-ethnic neighbourhood acquaintanceships, because all theoretical mechanisms discussed aim at explaining how contacts are established and not how certain contacts become of larger relative frequency. Yet from another point of view, some people might have few contacts in general, but a rather large share of inter-ethnic contacts among them. Furthermore, there could be ethno-cultural differences in the understanding who counts as acquaintance that result in group-specific over- or underestimations of contact numbers. Hence, I also analyse the relative share of inter-ethnic neighbourhood acquaintances³, which runs from zero (no inter-ethnic acquaintances) to one hundred (only inter-ethnic acquaintances):

$$Relative\ Share = \frac{Inter-Ethnic\ Acquaintances}{Inter-Ethnic\ Acquaintances + Co-Ethnic\ Acquaintances}$$

To test my hypotheses, one indicator variable identifies parents with children up to the age of ten, on the assumption that older children are rarely supervised when going to play in parks. Similarly, the regional proportion of children considers only children up to the age of ten.⁴ A second indicator variable identifies persons with an inter-ethnic

partner, which I either defined as having a native German partner in the case of migrant respondents or as having a migrant partner for native German respondents. The two indicator variables are interacted with two items that measure the frequency of inter-ethnic neighbourhood encounters. Respondents were asked how often they come across or encounter (a) Germans, in case they are migrants, or (b) migrants, in case they are natives. In particular, the respondents were asked:

‘How often do you encounter persons with a migration background/persons of German descent in your neighbourhood when you ...
...visit bars, restaurants, tee houses, pubs or other public houses?
...visit public parks, public places or playgrounds?’

While the German phrasing of these items says ‘treffen auf’, which stands in contrast to a planned meeting with someone and rather means ‘coming across’ or ‘running into’, I have to acknowledge that those people who are encountered probably also entail known acquaintances. An empirical relation between the frequency of inter-ethnic encounters and the number of inter-ethnic acquaintances thus most likely contains both directions of causality: people have more acquaintances because of the opportunities the frequent encounters offer, but they also encounter people of other ethnic background more often, the more inter-ethnic acquaintances they have. For this reason, one should be cautious in interpreting the direct effects of these items, and instead focus on the brokering role of children and inter-ethnic partners that are the topic of this study.

The models include as further predictors the regional out-group size (which for natives is defined as the share of migrants and for migrants the share of natives), migrants’ German language skills or the average migrant host-country language skills, and a dummy variable that indicates the country or region of origin. In addition, the models control for the local unemployment rate, population density and crime rate, as well as the respondents’ age, religiosity, educational level, years spent in the neighbourhood, homeownership, and gender. Table 1 shows the descriptive statistics of all variables.⁵

Modelling Strategy

The descriptives of Table 1 are shown separately for natives and migrants to highlight the core differences in the distribution of the two dependent variables and the regional out-group size. Whereas migrants have many native acquaintances and face clear regional majorities of natives, the opposite is the case for natives. These distributions therefore lack counter-factual cases, meaning there are no migrants and natives who face comparable situations. Even though the theoretical arguments should hold in general, I estimate separate models for natives and migrants for these methodological reasons.

Table 1. Descriptive Statistics

	Mean	SD	Min	Max
<i>Natives</i>				
Absolute Number of I-E Nbh. Acquaintances	2.43	3.16	0	11
Relative Share of I-E Nbh. Acquaintances	16.93	19.48	0	100
Regional Out-Group Size	15.56	9.03	1.72	36.58
Aggregate Level	13.98	8.44	1.72	36.58
Average Migrant German Skills	0.01	0.21	-0.61	0.45
Aggregate Level	0.02	0.23	-0.61	0.45
Age	53.40	16.88	17	97
Female	0.55	0.50	0	1
Religiosity	0.54	0.50	0	1
Education, Low	0.04	0.20	0	1
Middle	0.62	0.49	0	1
High	0.34	0.48	0	1
Years in the Nbh.	23.30	18.01	0	90
Home Owner	0.53	0.50	0	1
Young Children	0.18	0.39	0	1
I-E Partner	0.07	0.26	0	1
I-E Encounters at Parks and Playgrounds	1.87	1.31	0	4
I-E Encounters at Bars and Restaurants	1.60	1.27	0	4
<i>Migrants</i>				
Absolute Number of I-E Nbh. Acquaintances	7.84	3.70	0	11
Relative Share of I-E Nbh. Acquaintances	60.90	25.69	0	100
Regional Out-Group Size	81.46	8.62	63.42	98.28
Aggregate Level	86.02	8.44	63.42	98.28
Second Generation	0.31	0.46	0	1
Age	41.37	14.39	17	97
Female	0.52	0.50	0	1
Religiosity	0.67	0.47	0	1
Education, Low	0.16	0.36	0	1
Middle	0.60	0.49	0	1
High	0.24	0.43	0	1
Years in the Nbh.	13.19	10.41	0	75
Home Owner	0.33	0.47	0	1
German Language Skills	3.12	1.16	0	4
Young Children	0.31	0.46	0	1
I-E Partner	0.20	0.40	0	1
I-E Encounters at Parks and Playgrounds	2.68	1.24	0	4
I-E Encounters at Bars and Restaurants	2.52	1.38	0	4
<i>Common Contextual Characteristics</i>				
Local Unemployment Rate	8.54	3.39	3.27	14.76
Aggregate Level	8.01	3.37	3.27	14.76
Population Density	1.53	1.36	0.04	4.27
Aggregate Level	0.96	1.05	0.04	4.27
Crime Rate	0.09	0.04	0.03	0.16
Aggregate Level	0.08	0.04	0.03	0.16
Regional Share of Children	13.35	1.56	9.73	16.64
Aggregate Level	13.56	1.76	9.73	16.64

In particular, I model the absolute number and the relative share of inter-ethnic neighbourhood acquaintanceships by linear regression with clustered robust standard errors to account for clustering at the regional level (Angrist and Pischke 2009: Ch. 8). In contrast to multi-level models⁶, clustered standard errors assume ‘no particular kind of within-cluster correlation nor a particular form of heteroscedasticity’ (Wooldridge 2003: 134). One may feel uneasy about modelling the absolute number of inter-ethnic acquaintances as linear, since the original scale is ordinal in a strict way. Similar concerns relate to the prediction of the relative share of inter-ethnic contacts, which is a proportion. Against these concerns, I choose to run linear regressions, because of the more recent discussion on the pitfalls of non-linear models, according to which the comparison of groups and their interaction with other variables is biased (e.g. Mood 2010).⁷ One solution is to use classical linear regression with robust standard errors, even if this comes at the cost that a nonlinear relation is only linearly approximated.

Results

The results of my analysis of the absolute number and relative share of inter-ethnic neighbourhood acquaintances are displayed in Table 2 for natives and Table 3 for migrants. Before I present my findings on the brokering roles of children and inter-ethnic partners, I briefly comment on how my results relate to earlier studies on inter-ethnic contacts, most of which have investigated strong ties such as friendships or even intermarriages.

Table 2. Natives' Inter-Ethnic Neighbourhood Acquaintanceships

	Absolute Number			Relative Share		
	(1)	(2)	(3)	(1)	(2)	(3)
Contextual Characteristics						
Local Unemployment Rate	-0.0299 (0.0180)	-0.0285 (0.0180)	-0.0301 (0.0183)	-0.196 ⁺ (0.116)	-0.192 (0.117)	-0.200 ⁺ (0.118)
Population Density	0.0379 (0.0700)	0.0386 (0.0718)	0.0397 (0.0709)	0.424 (0.422)	0.421 (0.433)	0.435 (0.427)
Crime Rate	-0.104 (1.910)	-0.262 (1.977)	-0.223 (1.931)	0.621 (12.36)	-0.0979 (12.66)	0.325 (12.48)
Regional Out-Group Size	0.0534** (0.0102)	0.0533** (0.0104)	0.0531** (0.0104)	0.370** (0.0657)	0.370** (0.0667)	0.368** (0.0664)
Average Migrant German Skills	0.0993 (0.263)	0.113 (0.262)	0.0970 (0.265)	0.603 (1.504)	0.681 (1.503)	0.608 (1.510)
Regional Share of Children	0.0514 (0.0369)	0.0507 (0.0375)	0.0503 (0.0367)	0.517* (0.247)	0.514* (0.248)	0.522* (0.247)
Individual Characteristics						
Age	-0.00281 (0.00335)	-0.00355 (0.00329)	-0.00338 (0.00326)	-0.0457* (0.0206)	-0.0493* (0.0203)	-0.0481* (0.0200)
Female	-0.305* (0.117)	-0.311* (0.119)	-0.311* (0.119)	-2.267** (0.589)	-2.304** (0.600)	-2.307** (0.603)
Religiosity	0.284* (0.132)	0.284* (0.134)	0.280* (0.134)	1.417* (0.764)	1.406* (0.773)	1.389* (0.774)
Education, Reference: Low	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Middle	-0.309 (0.289)	-0.260 (0.279)	-0.282 (0.283)	-3.206 (2.026)	-2.973 (1.975)	-3.105 (1.983)
High	-0.324 (0.249)	-0.281 (0.243)	-0.297 (0.243)	-3.735* (1.877)	-3.530* (1.843)	-3.626* (1.830)
Years in the Nbh.	0.00464 (0.00312)	0.00475 (0.00310)	0.00468 (0.00311)	0.00714 (0.0167)	0.00773 (0.0167)	0.00705 (0.0167)
Home Owner	-0.198* (0.0923)	-0.199* (0.0934)	-0.203* (0.0934)	-2.703** (0.518)	-2.710** (0.524)	-2.744** (0.526)
I-E Partner	0.510* (0.210)	-0.305 (0.295)	0.224 (0.333)	3.941** (1.346)	0.312 (2.048)	4.385* (2.401)
Young Children	0.194 (0.157)	-0.427** (0.143)	-0.173 (0.143)	-0.334 (0.829)	-3.487** (0.879)	-2.006* (0.935)
I-E Encounters at Parks and Playgrounds	0.306** (0.0529)	0.254** (0.0517)	0.295** (0.0553)	2.060** (0.406)	1.798** (0.386)	2.062** (0.425)
I-E Encounters at Bars and Restaurants	0.475** (0.0588)	0.434** (0.0597)	0.434** (0.0646)	2.619** (0.451)	2.435** (0.451)	2.435** (0.526)
Interaction Terms						
Young Children* I-E Encounters at Parks and Playgrounds		0.305** (0.0846)			1.543** (0.519)	
I-E Partner* I-E Encounters at Bars and Restaurants		0.447** (0.163)			1.987* (0.960)	
Young Children* I-E Encounters at Bars and Restaurants			0.209* (0.0895)			0.946 (0.609)
I-E Partner* I-E Encounters at Parks and Playgrounds			0.139 (0.161)			-0.188 (0.966)
Constant	0.148 (0.610)	0.315 (0.604)	0.274 (0.605)	4.284 (4.250)	5.117 (4.218)	4.654 (4.258)
Observations	3501	3501	3501	3431	3431	3431
R ²	0.16	0.17	0.16	0.19	0.19	0.19
AIC	17334.16	17319.53	17332.87	29353.73	29346.39	29355.19

Table 3. Migrants' Inter-Ethnic Neighbourhood Acquaintanceships

	Absolute Number			Relative Share		
	(1)	(2)	(3)	(1)	(2)	(3)
Contextual Characteristics						
Local Unemployment Rate	-0.000290 (0.0236)	0.000306 (0.0236)	0.000906 (0.0232)	0.0126 (0.190)	0.0172 (0.188)	0.0130 (0.188)
Population Density	0.0649 (0.0853)	0.0629 (0.0859)	0.0662 (0.0859)	-0.981+ (0.508)	-1.000+ (0.512)	-0.985+ (0.511)
Crime Rate	-4.035+ (2.256)	-4.050+ (2.278)	-4.043+ (2.257)	-11.26 (14.95)	-11.42 (15.12)	-11.01 (14.88)
Regional Out-Group Size	0.0275* (0.0136)	0.0270+ (0.0137)	0.0270+ (0.0136)	0.356** (0.0855)	0.352** (0.0863)	0.354** (0.0859)
Regional Share of Children	0.101 (0.0860)	0.102 (0.0864)	0.105 (0.0856)	-0.413 (0.438)	-0.415 (0.445)	-0.404 (0.438)
Individual Characteristics						
Origin, Reference: Turkey (n=1334)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Western Countries (n=250)	0.631* (0.284)	0.622* (0.283)	0.625* (0.282)	12.84** (2.094)	12.78** (2.078)	12.80** (2.078)
Southern Europe (n=561)	-0.0798 (0.233)	-0.0932 (0.232)	-0.0910 (0.234)	8.001** (1.883)	7.908** (1.881)	7.940** (1.892)
Eastern Europe (n=418)	0.305 (0.210)	0.306 (0.211)	0.317 (0.211)	11.16** (1.664)	11.16** (1.673)	11.21** (1.657)
Former Soviet Union (n=352)	-0.153 (0.223)	-0.160 (0.223)	-0.169 (0.222)	5.989** (1.903)	5.955** (1.901)	5.905** (1.900)
Asia (n=122)	-0.0348 (0.375)	-0.0540 (0.376)	-0.0635 (0.382)	5.249* (2.538)	5.106+ (2.566)	5.096+ (2.554)
Grand Middle East (n=183)	0.349 (0.371)	0.343 (0.367)	0.338 (0.367)	8.406** (2.546)	8.376** (2.563)	8.351** (2.544)
Other (n=183)	0.0762 (0.318)	0.0798 (0.320)	0.0945 (0.317)	1.376 (1.599)	1.419 (1.604)	1.476 (1.603)
Second Generation	0.257 (0.167)	0.252 (0.166)	0.256 (0.166)	1.023 (1.072)	0.980 (1.069)	1.013 (1.061)
Age	0.0221** (0.00663)	0.0220** (0.00663)	0.0217** (0.00666)	0.248** (0.0425)	0.247** (0.0426)	0.248** (0.0425)
Female	-0.0856 (0.131)	-0.0892 (0.129)	-0.0898 (0.130)	0.458 (0.827)	0.425 (0.825)	0.424 (0.824)
Religiosity	-0.0924 (0.179)	-0.0915 (0.180)	-0.0888 (0.179)	-4.943** (1.042)	-4.943** (1.041)	-4.901** (1.051)
Education, Reference: Low	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Middle	0.572* (0.249)	0.575* (0.252)	0.570* (0.252)	5.265** (1.406)	5.311** (1.418)	5.242** (1.405)
High	0.558* (0.268)	0.563* (0.268)	0.564* (0.268)	7.279** (1.604)	7.324** (1.587)	7.303** (1.600)
Years in the Nbh.	0.0258** (0.00767)	0.0257** (0.00762)	0.0253** (0.00762)	-0.0675 (0.0490)	-0.0686 (0.0502)	-0.0702 (0.0494)
Home Owner	0.879** (0.148)	0.881** (0.148)	0.887** (0.146)	3.767** (1.160)	3.786** (1.159)	3.791** (1.163)
German Language Skills	0.344** (0.0719)	0.340** (0.0725)	0.342** (0.0722)	2.204** (0.432)	2.177** (0.438)	2.202** (0.431)
I-E Partner	0.396* (0.159)	0.493 (0.349)	0.858* (0.348)	5.749** (1.303)	6.262* (2.591)	9.347** (3.353)
Young Children	0.217 (0.157)	-0.188 (0.347)	-0.113 (0.292)	-1.052 (0.879)	-4.117+ (2.065)	-1.761 (2.046)
I-E Encounters at Parks and Playgrounds	0.242** (0.0818)	0.196* (0.0854)	0.278** (0.0780)	0.534 (0.470)	0.187 (0.535)	0.763 (0.489)
I-E Encounters at Bars and Restaurants	0.399** (0.0512)	0.409** (0.0517)	0.354** (0.0621)	1.876** (0.345)	1.940** (0.385)	1.793** (0.425)
Interaction Terms						
Young Children* I-E Encounters at Parks and Playgrounds		0.149 (0.110)			1.120+ (0.665)	
I-E Partner* I-E Encounters at Bars and Restaurants		-0.0353 (0.111)			-0.186 (0.690)	
Young Children* I-E Encounters at Bars and Restaurants			0.132 (0.0960)			0.286 (0.675)
I-E Partner* I-E Encounters at Parks and Playgrounds			-0.160 (0.121)			-1.234 (0.966)
Constant	-0.374 (2.224)	-0.218 (2.251)	-0.346 (2.235)	8.743 (12.04)	10.05 (12.37)	8.419 (12.17)
Observations	2655	2655	2655	2603	2603	2603
R ²	0.14	0.14	0.14	0.23	0.23	0.23
AIC	14057.59	14059.89	14058.68	23607.27	23609.15	23609.36

Model 1 of Tables 2 and 3, suggests that the findings of earlier studies, by and large also apply to inter-ethnic neighbourhood acquaintanceships in Germany. For both natives and migrants it is true that the two dependent variables, i.e. the absolute number and relative share of inter-ethnic neighbourhood acquaintanceships, increase with the local out-group size. Migrants' absolute number of native neighbourhood acquaintances only stands in a marginally significant relation to the local share of natives, but this is likely due to a ceiling effect. As can be seen from Table 1 that displays the descriptives, the average local out-group size for migrants, meaning the average local share of natives, lies at about 81 percent. The proximity approach finds further support in the positive and highly significant coefficients of migrant respondents' German language skills. Taken from the angle of natives, the importance of average regional migrant host-country language skills does not show. Even though the coefficients point in the expected positive direction, natives who live in regions where migrants have better German skills do not report significantly larger numbers nor shares of migrant neighbourhood acquaintances. This is probably due to the large measurement error of the index that was aggregated from the EDCA-Survey itself.

The results are also in line with earlier findings on homophily as the migrant-specific analysis shows. Figure 1 shows migrants' absolute number and relative share of native neighbourhood acquaintances by origin, controlled for all other variables of Model 1 in Table 3. In line with the homophily mechanism, migrants from Western Countries are the only ones that report a significantly larger number of native neighbourhood acquaintances than Turkish migrants, who are the reference in the models. The picture is more differentiated, when we focus on the relative share of contacts to natives. This might indicate that the relative share is less prone to ethno-cultural differences in the understandings of who counts as acquaintance, or habits in entertaining rather large or small (ego-)networks. It is therefore probably a more reliable indicator with regard to ethnic group comparisons. In any case, it is migrants from

neighbouring European and other Western countries who report comparatively large shares of neighbourhood contacts to natives, which again reflects earlier findings.

Figure 1. Migrants' Inter-Ethnic Neighbourhood Acquaintances by Origin

The final predictor that was also part of earlier investigations is having an inter-ethnic partner and again, my results support earlier findings. Both native and migrant respondents with an inter-ethnic partner report larger absolute numbers and relative shares of inter-ethnic neighbourhood contacts. A similar finding on a general brokering role of children shows neither for native nor for migrant parents. And yet, I find support for my hypothesis that people who live in regions with larger shares of children report to have more inter-ethnic neighbourhood acquaintances both in absolute as well as in relative terms — at least for natives. What Logan and Spitze (1994) have shown for neighbouring in general also holds for inter-ethnic neighbourhood acquaintanceships in particular; the significant context effect demonstrates a general integrating function of children that is not particular to parents. Why does the brokering role of children not

show on the individual level of parents? As I have argued above, the average effect of having children might be ambivalent, because parents probably self-select into homogeneous contexts. But I have also argued that brokering happens predominantly in specific social contexts. If this hypothesis is true, I should be able to identify the brokering role of children in interaction with inter-ethnic encounters at local parks and playgrounds and that of inter-ethnic partners in interaction with encounters at bars and restaurants.

Figure 2. The Moderating Role of Children, Natives Only

Because of a migrant-specific ceiling effect that I discuss below, I here focus on natives first. Model 2 of Table 2 shows both interaction terms to be positive and significant. For the case of having children, Figure 2 shows interaction plots as suggested by Brambor *et al.* (2006): the difference it makes to have young children, conditional on the frequency of inter-ethnic encounters. In regard of the absolute number of inter-ethnic neighbourhood acquaintances, we see that native parents indeed report to have significantly more migrant neighbourhood acquaintances given frequent inter-ethnic encounters at public parks and playgrounds. If their inter-ethnic encounters

are not frequent, parents report lower numbers of migrants acquaintances, which is generally in line with earlier studies and might indicate the assumed self-selection of parents. With regard to the relative share of inter-ethnic acquaintances the findings are less obvious. While the pattern looks similar in general, the positive brokering role given frequent inter-ethnic encounters does not reach significance due to large confidence intervals. What does reach significance is the particularly low share of inter-ethnic contacts of parents who seldom have inter-ethnic encounters at local parks and playgrounds. In terms of this negative effect, we have to acknowledge the special nature of the relative share as dependent variable however. There is no reason to assume that children exclusively help to establish inter-ethnic contacts, which means that in such homogeneous contexts children probably help to establish co-ethnic acquaintances in addition to their parents' lower absolute number of inter-ethnic contacts. This results in particularly low shares of inter-ethnic contacts of parents who rarely have inter-ethnic encounters.

Figure 3. The Moderating Role of Inter-Ethnic Partners, Natives Only

This argument identifies a key difference between children and inter-ethnic partners as brokers of inter-ethnic contacts. When inter-ethnic encounters are infrequent, inter-ethnic partners should just not make a difference, because they particularly broker inter-ethnic contacts. This is exactly what we see in Figure 3, which visualises the significant interactions of having an inter-ethnic partner and the frequency of encountering migrants at local bars and restaurants for both dependent variables. The plot supports my hypothesis that inter-ethnic partners act as brokers, particularly when frequent opportunities allow them to do so.

Overall, these results support my claim that brokering happens in social and geographical contexts that are the realm of proximity mechanisms. The contexts investigated here are only two examples, meaning that the brokering roles of inter-ethnic partners and children are probably not reduced to bars and restaurants and playgrounds and parks respectively. The general context effect of the local share of children demonstrates this and I expect that a similar context effect could be shown for the local share of inter-ethnic partnerships given the respective data. That said, I also qualified that inter-ethnic partners and children probably do not act as brokers in any context. While I cannot formally test a non-relation, Model 3 of Table 2 shows that neither the interactions between having children and the frequency of inter-ethnic encounters at bars and restaurants nor between having an inter-ethnic partner and the frequency of inter-ethnic encounters at public parks and playgrounds are significant. The one unexpected exception is the significant interaction term between having children and encounters at bars and restaurants in the prediction of the absolute number of migrants neighbourhood acquaintances. While it is possible that children also help to make contacts in restaurants for example, the effect is weaker than the others.

While I did focus on the brokering role of children and inter-ethnic partners rather than the direct effects opportunities arising from inter-ethnic encounters, one may still be concerned about the possibility of reverse causality. It is possible that parents get to know other parents at school or any other context and afterwards encounter them at the

local playgrounds and parks. Similarly, people may meet acquaintances at local bars and restaurants that their inter-ethnic partner has introduced elsewhere. These scenarios are likely and I cannot isolate them from the ones I wish to study methodologically. However, these scenarios cannot explain why parents do not seem to encounter their acquaintances at bars and restaurants, or why people with inter-ethnic partners do not encounter their acquaintances at local parks and playgrounds or other public places. The particular pattern of significant and insignificant interactions is better accounted for by the above-elaborated theoretical argument.

The whole discussion on the brokering roles of children and inter-ethnic partners has focused on natives. For migrants, the results do not hold, even though no theoretical reason implies that children and inter-ethnic partners exclusively act as brokers for natives. The reason lies in a migrant-specific ceiling effect. Being in a clear minority position in Germany, those migrants who frequently come across natives at parks and playgrounds or bars and restaurants average 8.8 and 8.7 native neighbourhood acquaintances respectively. Natives, who report similar levels of inter-ethnic encounters report about half as many, namely 4.6 and 4.5 migrant neighbourhood acquaintances. Similarly, those migrants who have a native partner, average 8.9 native neighbourhood acquaintances. This means that for migrants who do come across natives frequently, having children or an inter-ethnic partner can hardly increase the number of contacts any further. Similarly, those migrants who do have an inter-ethnic partner are already so well socially integrated, that frequent encounters at bars and restaurants do not make a difference. This ceiling effect indeed suggests the broker function of children and inter-ethnic partners to work particularly, or even exclusively, for natives.

Conclusion

While ethnic diversity seems to cause a decline in social cohesion, it also strengthens at least one of the moderators that attenuates this decline: inter-ethnic ties level the negative impact of ethnic diversity on trust in neighbours, collective efficacy and related indicators of social cohesion. Complementing these findings, I have here tried to answer why some people have more contact to their neighbours of other ethnicity than others. In particular, I analysed the absolute number and relative share of inter-ethnic neighbourhood acquaintances of both natives and migrants, i.e. migrant acquaintances in the case of native respondents and native acquaintances in the case of migrant respondents. Research on (inter-ethnic) tie formation relies on proximity, assortative and relational mechanisms as explanations. My analysis shows that existing findings on strong inter-ethnic ties such as friendships or intermarriages largely also hold for the case of weak inter-ethnic neighbourhood acquaintanceships: local out-group size, host-country language skills, cultural similarity and inter-ethnic partners are significant predictors. My results also suggest that relative shares of inter-ethnic contacts might be a better indicator for the purpose of group comparisons, because there seem to be ethno-cultural differences in the understanding of who counts as an acquaintance or in the habits of entertaining comparatively large or smaller (ego-)networks. The implications of using a relative as compared to an absolute indicator of inter-ethnic ties should be investigated in more detail by future research.

However, as Rivera *et al.* (2010) criticise, research on tie formation tends to study the isolated explanatory power of different mechanisms and neglects their interactions. I have argued that brokering happens within certain contexts and that we should therefore study the interaction of relational and proximity mechanisms. In line with this expectation, I was able to show that people who have an inter-ethnic partner entertain more inter-ethnic neighbourhood acquaintances particularly when they have frequent inter-ethnic encounters at local bars and restaurants. More importantly, also children

broker inter-ethnic ties for their parents, however, this only shows in interaction with the frequency of inter-ethnic encounters at local parks and playground. If such encounters are infrequent, parents report to have fewer inter-ethnic neighbourhood acquaintances, which reflects earlier findings and might be accounted for by self-selection into homogeneous contexts. This demonstrates the importance of studying the interaction of mechanisms, because for parents an isolated, i.e. general or average impact of having children does not show. These findings on the ambivalent general effect of having children also imply that parents' (inter-ethnic) contact behaviour is an interesting topic for future research.

My findings on the importance of bars and restaurants as well as playgrounds and parks are only exemplary demonstrations. Children and inter-ethnic partners probably help to establish contacts in many other contexts as well. This is an implication of my finding that people who live in regions with larger shares of children report to have more inter-ethnic acquaintances. This context effect expands earlier findings on the general integrating function of children (Logan and Spitze 1994) to the particular realm of inter-ethnic neighbourhood contacts and shows children to matter for the establishment of inter-ethnic ties for wider populations than their parents and beyond the social contexts of local parks and playgrounds. I expect the share of inter-ethnic partnerships to exert a similar context effect, but cannot test this because the according context information is not publicly accessible. At the same time, I have also tried to show that brokerage does not happen in any context. My results suggest that inter-ethnic partners do not broker at local parks and playgrounds, nor do children in restaurants and bars. Overall, my findings imply that regions that attract young families, and provide family friendly spaces for free-time activities, will do better in facing the challenges of immigration. The segregation of family friendly suburbs that are dominated by natives on the one hand and diverse inner city districts on the other might be suboptimal with regard to the relation between ethnic diversity and social cohesion.

Future research might be able to provide evidence for a context effect of the share of inter-ethnic partnerships. In addition, future research could investigate other potential brokers with likely candidates being middle-class migrant families (Koopmans *et al.* 2012) or street vendors (Duneier 2000). Concerning the limitations of this study, I have to emphasise that these results hold particularly, or even exclusively, for natives only. Migrants who frequently encounter natives have so many native neighbourhood acquaintances that having an inter-ethnic partner or a young child does not make a difference anymore. This ceiling effect suggests that future research might follow Martinovic (2010) and look more closely into the different factors that explain migrants' contacts to natives in comparison to those that explain natives' contacts to migrants. Another main limitation pertains to the possibility of reverse causality, which I admittedly cannot exclude, even though the findings provide suggestive evidence in favour of my causal interpretation. From a longitudinal perspective, future research could investigate whether parents and people with an inter-ethnic partner who move to a diverse neighbourhood do get into contact with their inter-ethnic neighbourst sooner than childless co-ethnic couples. Such a finding would support the argument made here. A final limitation is the large discrepancy between my individual level measure of inter-ethnic neighbourhood encounters and the context level share of out-groups. Unfortunately, nationally comparable neighbourhood level data are hard to come by in Germany, but would make my arguments much more compelling.

Notes

¹ Although the aim in conducting the EDCA-Survey was to test theoretical hypotheses and not to make representative descriptive statements, a comparison to the German Micro-Census suggests that the EDCA-Survey is fairly representative, but shows the common pattern of an undersample of lowly and oversamples of highly educated and single respondents. These and all other mentioned additional results can be obtained from the author upon request.

² I also ran models with the maximum value set to 15 and 25, yet found that the principle structure of the results does not change, with the exception of relation between the regional share of children and the absolute number of inter-ethnic acquaintances, which drops below significance.

³ There is a problem, with 114 respondents who have no acquaintances in the neighbourhood at all. For these the share is mathematically not defined, because there is no solution to a division by zero. I do not consider these 114 respondents in the results discussed in this study. However, the results generally hold when these respondents' relative shares of inter-ethnic neighbourhood acquaintances are set to 0, 50 or 100.

⁴ All context information (the local unemployment rate, population density, share of children under the age of ten and local out-group size) was derived from the Federal Statistical Office of Germany (www.destatis.de) with the exception of the local crime rate. The latter was derived from the German Federal Criminal Police Office.

⁵ Unfortunately only 80 per cent of the respondents answered all respective questions. This is especially due to missing values on the two dependent variables as well as respondents' estimation of the frequency of inter-ethnic encounters. I re-estimated the models with twenty multivariate imputations for the missing values on any of the variables. The imputation model consisted of all variables of the later analysis, including the interaction terms. The results of the analyses that include these multiply

imputed variables are similar in conclusion.

⁶ The results also hold when the regressions are specified as a multi-level models. The only difference is that the regional share of children is only a marginally significant predictor of the absolute number of inter-ethnic acquaintanceships. Since the hypothesis-test is two-sided, however, the directed hypothesis still passes the commonly accepted five per cent threshold.

⁷ I also estimated ordered logisitic regression models with cluster-robust standard errors. The results are basically the same. One difference is that the interactions between having an inter-ethnic partner and the frequency of inter-ethnic encounters at local bars and restaurants only reaches marginal significance. However, since the hypothesis-test is two-sided, the directed hypothesis is still supported at the commonly accepted five per cent level.

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