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Neighbourhood Attachment in Ethnically Diverse Areas- Diversity vs. Inequality, Selection Bias and Preferences for Diversity

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Abstract

This paper is a reply to the Comment by Oded Stark (2014, forthcoming) on our paper published recently in *Urban Studies* (Górny & Toruńczyk-Ruiz 2014). In that paper, we demonstrated that the negative relationship between ethnic diversity and neighbourhood attachment was moderated by interethnic ties differently for migrants and natives living in ethnically diverse neighbourhoods. In his comment, Stark proposes to interpret our findings within the framework of relative deprivation theory, and to explain the different results for migrants and natives by different preferences for diversity and resulting self-selection processes among the two groups. We argue that relative deprivation and ethnic diversity in a neighbourhood pertain to different dimensions and aspects of social diversity and thus interpreting their effects on neighbourhood attachment within one theoretical framework is problematic. We also claim that preferences for diversity are not a substantial basis for selection bias among migrants and natives, given the role of structural and social-psychological factors in residential choices. We conclude that employing the concept of relative deprivation into the analyses of ethnic diversity effects, neighbourhood attachment, and the self-selection process should acknowledge the role that interethnic ties play in the way natives and migrants define their reference groups.

Keywords: ethnic diversity, economic inequality, neighbourhood attachment, self-selection, preferences for diversity, migration, interethnic relations

Streszczenie:

Niniejsza publikacja jest odpowiedzią na komentarz Odeda Starka (2014 w druku) do naszego artykułu opublikowanego niedawno w *Urban Studies* (Górny & Toruńczyk-Ruiz 2014). W artykule tym pokazałyśmy, że negatywny związek między różnorodnością etniczną a przywiązaniem do sąsiedztwa jest moderowany przez posiadanie więzi między-etnicznych w różny sposób dla migrantów i miejscowych mieszkańców obszarów zróżnicowanych etnicznie. Stark proponuje, by interpretować nasze wyniki na gruncie teorii relatywnej deprivacji, a różnice pomiędzy migrantami i miejscowymi odnieść do odmiennych preferencji wobec różnorodności w tych dwóch grupach i wynikających z nich procesów auto-selekcji. Stoimy na stanowisku, że relatywna deprivacja i różnorodność etniczna w sąsiedztwie odnoszą się do różnych wymiarów i aspektów różnorodności społecznej i zatem problematyczne jest wyjaśnianie ich wpływu na przywiązanie do sąsiedztwa w ramach jednego podejścia teoretycznego. Uważamy również, że preferencje wobec różnorodności nie są głównym źródłem auto-selekcji migrantów i miejscowych w świetle znaczenia czynników strukturalnych i społeczno-psychologicznych w wyborach miejsca zamieszkania. Dochodzimy ponadto do wniosku, że zastosowanie koncepcji relatywnej deprivacji w analizach efektów różnorodności etnicznej, przywiązania do sąsiedztwa i procesów auto-selekcji wymagałoby uwzględnienia roli więzi między-etnicznych w procesie tworzenia i przekształcania się grup odniesienia migrantów i miejscowych.

Słowa kluczowe: różnorodność etniczna, nierówności, przywiązanie do sąsiedztwa, autoselekcja, preferencje wobec różnorodności, migracje, relacje między-etniczne

1. Introduction

This publication is a reply to the comment of Oded Stark (forthcoming) on our article ‘Neighbourhood Attachment in Ethnically Diverse Areas: The Role of Interethnic Ties’ published recently in *Urban Studies* (Górny and Toruńczyk-Ruiz 2014). In this article, based on data¹ from 18 ethnically diverse neighbourhoods located in six European cities – Bilbao, Lisbon, Rotterdam, Thessalonica, Vienna and Warsaw – we examined the relationship between ethnic diversity in the neighbourhood and attachment to it, taking into account the role of interethnic relations and differences between natives and migrants. Although we observed a general tendency that the higher the ethnic diversity, the lower the attachment – understood as an emotional bond to a place – of both migrant and native inhabitants of the neighbourhood, interethnic relations moderated this relationship, and did so differently for migrants and natives. Among natives, the negative effect of ethnic diversity was neutralised for those who had interethnic ties, while among migrants – for those who had no interethnic ties. We explained this pattern by integrating conflict theory (Blalock 1967; Blumer 1954) and contact theory (Allport 1954; Pettigrew 1998; Pettigrew and Tropp 2006), and by the different meaning that a diverse neighbourhood and interethnic contact have for natives and migrants.

In an insightful comment on our paper, Oded Stark does not challenge our observations, but proposes different interpretations and explanations for them. First of all, he suggests linking the negative effect of ethnic diversity on neighbourhood attachment to the concept of relative deprivation, developed in the fields of economics (Runciman 1966; Stark 2006; Yitzhaki 1979) and psychology (Smith *et al.* 2012; Tropp and Wright 1999; Walker and Pettigrew 1984). According to this approach, people evaluate their own situation basing on comparisons with others in their reference group (cf. Ferrer-i-Carbonell 2005). Stark argues that the negative relationship between ethnic neighbourhood diversity and neighbourhood attachment can be explained by ‘distaste for relative deprivation’, i.e. distaste for a situation in which an individual perceives his or her situation as worse than that of others in the reference group.

Second, Stark claims that while analysing the relationship between ethnic diversity and neighbourhood attachment, the selection bias resulting from the fact that people living in ethnically diverse neighbourhoods have specific preferences for diversity should be taken into

¹ The survey was conducted in 2009/2010. Data derive from the project Generating Interethnic Tolerance and Neighbourhood Integration in European Urban Spaces (GETONIES) financed under the Seventh Framework Programme of the European Community for Research, Grant Agreement 216184.

account. Moreover, he argues that migrants are in general more tolerant towards diversity than are natives, which may imply that the self-selection effect differs for these two groups.

Third, Stark addresses causal relations between neighbourhood attachment, neighbourhood-specific social capital and onward migration. He argues that when the characteristics of the neighbourhood are consistent with residents' preferences, residents are more likely to make social capital investments, which in turn increases their neighbourhood attachment and makes out-migration less likely.

In replying to these stimulating comments, we refer not only to literature on diversity, economic inequalities and self-sorting of residents, but also to extended multilevel regression models predicting neighbourhood attachment built on models presented in the discussed article (Górny and Toruńczyk-Ruiz 2014). Specifically, addressing Stark's argument about the role of relative deprivation and neighbourhood-specific social capital, we verified whether or not our earlier results change when socio-economic diversity – as measured by the ISEI index – and indicators of local social capital are controlled for.

The remainder of our reply is organised in two major parts. The first one addresses interrelations between ethnic diversity, economic diversity and economic inequalities (including relative deprivation), and their association with social cohesion – encompassing neighbourhood attachment. The second section deals with preferences for diversity and the issue of self-selection among inhabitants of ethnically diverse neighbourhoods. In this section, based on a literature review and, where adequate data were available, on our own empirical findings, we discuss in detail three issues raised by Stark in his comment: 1) the role of preferences for diversity in self-selection in general; 2) differences between natives and migrants with respect to preferences for diversity; 3) interrelations between neighbourhood-specific capital, neighbourhood attachment and out-migration. The reply ends with a discussion of the presented considerations.

2. Ethnic diversity and economic inequalities – an unobvious relationship

The first big point that Stark makes is that our ‘finding that the more heterogeneous a neighbourhood, the weaker the attachment, is aligned with a standard social-psychological preference structure, and with the received social-psychological perspective of distaste for relative deprivation’. We find this assumption problematic for several reasons, which bear on the meaning of diversity and its different dimensions, its relation with inequalities, as well as

theoretical mechanisms that have been proposed to explain the negative relationship between ethnic diversity and social cohesion.

2.1. Types of diversity and measurement

Traditionally, diversity has been defined as 'the position of a population along a continuum ranging from homogeneity to heterogeneity with respect to one or more qualitative variables (Liebersohn 1969: 3; for other reviews on demographic diversity see also: Blau 1977; Budescu and Budescu 2012; Lau and Murnighan 1998; Schmid *et al.* 2014). It can thus refer to any categorical attribute, such as ethnicity, race, religion, age, socio-economic status or other characteristics. Most often, however, it is addressed in relation to ethnic or racial diversity, which, among others, is reflected in the definition of the term provided by *Encyclopaedia Britannica*², which states that diversity is 'the state of having people who are different races or who have different cultures in a group or organization'.

While the above general definition refers to differences in a nominal attribute, several researchers have highlighted that at least three types of diversity can be identified – variety diversity, disparity diversity and separation diversity (Budescu and Budescu 2012; Harrison and Klein 2007). Whereas separation diversity, referring to differences or disagreement on attitudes or opinions among members of a population (Budescu and Budescu 2012), is of less interest here since it is examined in relation to organisational groups rather than local communities, the differences between the remaining two types of diversity deserve attention. Variety diversity (also referred to as compositional diversity, see Schaeffer 2013, 2014) captures differences in the population's group composition on a given categorical variable, such as ethnicity, race, political preference. It thus takes into account only the number of different groups and their shares in the population. This type of diversity can be measured by the Simpson Diversity Index³, which we will refer to as the diversity index. The diversity index basically captures the probability that two randomly selected individuals in a given (spatial) unit belong to two different groups⁴ (ethnic or other, depending on the conceptualization of a group).

² <http://www.merriam-webster.com>

³ Its equivalent, commonly used by economists, is the Herfindahl-Hirschmann Index (HHI), also referred to as the fragmentation or fractionalization index.

⁴ By "diversity index", some researchers mean the inverse, i.e. the probability that two randomly selected individuals belong to the same group.

Disparity diversity (also referred to as relational diversity; see Schaeffer 2013, 2014) captures the relational nature and differences between groups present in the population. Contrary to variety diversity, this refers not only to the compositional aspect of diversity but also to the magnitude of distances between different sub-groups of the studied population. This type of diversity can be assessed when the given trait (e.g., income, status, power, magnitude of cultural distance) can be ordered along a hierarchical continuum, from smallest to largest. It is measured either by relative measures of dispersion or by measures of inequality, such as the Gini coefficient (Budescu and Budescu 2012). The index of aggregate relative deprivation can also be considered a good measure of this type of diversity. It is the sum of individual relative deprivations conceptualised as the proportion of those in the individual's reference group who have more of a desirable good (e.g. income) than the individual, times their mean excess quantity of the desirable good (cf. Yitzhaki 1979, Stark 2006). At the same time, aggregate relative deprivation can be also quantified as the Gini coefficient multiplied by the average income in the studied population (Yitzhaki 1979).

In recent works on ethnic diversity effects, the compositional aspect of diversity has been most frequently addressed, which stems from the difficulty of translating cultural distances into quantitative measures. Especially in international comparisons, finding objective criteria that can adequately capture differences between ethnic groups is problematic (e.g. Baldwin and Huber 2010). In contrast, the literature on economic differences more often addresses the relational aspect of diversity – economic inequality⁵. Among other reasons, this stems from the fact that distances between the given groups can, in this case, be objectively measured. In effect, the notion of 'economic inequality' has been more frequently addressed than 'economic diversity'. What we would like to stress here is that compositional and relational economic diversity, although related, are not tantamount. While high compositional economic diversity means that there are many different income groups of roughly equal size, high economic inequality implies that there are substantial differences between the given groups (see also Lancee and Dronkers 2011). Consequently, high compositional economic diversity does not have to imply high relational diversity and changes in the levels of these variables do not have to go in the same directions.

2.2. Interrelations between ethnic and economic diversity

⁵ In the sections to follow, if not stated otherwise, when referring to 'compositional diversity', we use the term 'diversity'. When referring to 'relational economic diversity', we use the term 'economic inequalities'.

As already mentioned above, apart from the variety of possible operationalisations of social diversity, its character may also have various origins pertaining to ethnic, economic, educational, and other differences present in a given population. Importantly, diversity on one dimension does not have to imply diversity on another (see also: Baldwin and Huber 2010). This applies, among other things, to the relationship between ethnic and economic diversity, which is at the centre of our discussion. Although the two are in many cases related, they do not always go hand in hand. For example, if we think of a neighbourhood inhabited by migrants of different nationalities all working in neighbouring open-air bazaars, their incomes can be comparable despite the diversity of countries of origin. Conversely, in countries with low immigration, we can easily find urban areas with high socio-economic inequalities but inhabited purely by natives – thus ethnically homogenous.

The above reflections can be at least partly supported by the data for 18 ethnically diverse neighbourhoods examined in our article. We analysed the correlations between compositional indices⁶ of ethnic and socio-economic diversity. In addition, we also examined educational diversity, which can be treated as an indicator of an area's composition regarding human capital. Socio-economic diversity was calculated on the basis of the International Socio-Economic Index of Occupational Status (ISEI) assessed for the respondents. We are aware that this is not a perfect measure of economic diversity, but data on income was not collected in the survey.

From among the three distinguished types of diversity, ethnic and socio-economic diversity were in fact most strongly related to each other, $r = .47$, $p < .001$. Correlations between educational diversity and the remaining two types of diversity were visibly lower, not exceeding 0.09. Our results thus suggest that not all types of social diversity have to be strongly interrelated, but also that there is an unquestionable link between ethnic and socio-economic compositional diversity, though only a moderate one.

2.3. Diversity and social cohesion: theoretical explanations

A number of authors have already investigated the link between neighbourhood diversity and social cohesion understood as strong and positive social bonds between community members. It can be argued that – especially in the European context – results are mixed, but with regard to intra-neighbourhood social cohesion, most studies have revealed a negative effect of ethnic diversity (for a review see: van der Meer and Tolsma forthcoming in 2014). Several

⁶ For all three types of diversity (ethnic, socio-economic, educational), we used the Simpson Diversity Index, based on data from the survey.

conceptual frameworks have already been proposed to explain this effect. One of them is the homophily theory, also referred to as in-group favouritism. This theory basically predicts that people prefer to interact with similar others (for a review see: McPherson *et al.* 2001). Therefore, interactions in diverse areas are expected to be less frequent, which in turn leads to lower trust and social cohesion. While similarity can be based on various social categories, it is often argued that ethnicity and race are the strongest bases for divisions compared to other individual characteristics such as age, occupation or religion (*ibid.*).

Another theoretical explanation relates to conflict and group threat theories (Blalock 1967; Blumer 1954), which posit that increasing numbers of minority members threaten the majority's position, which results in tensions and mutual prejudice. These theories predict that, as the size of the minority group increases, the views of the other groups become more negative. The focus here is thus not on the effects of diversity itself, but on the presence of out-group members and accompanying social processes.

Other theoretical approaches – for example, the concept of the asymmetric distribution of preferences – explain the negative diversity effect by the existence of disagreements about norms and values. Although different preferences are usually thought to result from cultural differences, they may also be due to economic differences (Baldwin and Huber 2010). The rationale behind such argumentation is the notion that social class is related to lifestyle (Bourdieu 1984) and thus the differing lifestyles of the poor and the rich result in fewer shared norms (Devine 1998; Tolsma *et al.* 2009).

As far as we know, there has been no attempt to explain the negative diversity effect with the help of the theory of relative deprivation as Stark proposes in his comment. The concept of relative deprivation, embedded in the broader approach of the 'comparison income effect' (cf. Ferrer-i-Carbonell 2005), has been examined in relation to factors such as individual well-being, happiness and migration (Alesina *et al.* 2004; Lutmer 2005). In the migration field, theories of relative deprivation assume that aggregate deprivation leads to out-migration from the given area (Stark *et al.* 2009, but see Czaika 2013 for more nuanced empirical results). However, Stark's claim that relative deprivation theory also applies to neighbourhood social cohesion requires adequate theoretical and empirical tests. In particular, the attempt to answer whether it is relative deprivation – rather than cultural differences or cognitive bias – that impacts attitudes towards the given local area, should take into account the complexity of interrelations between relative deprivation and ethnic diversity.

2.4. Effects of ethnic and economic diversity: empirical findings

Whereas the effects of ethnic diversity have been studied extensively, economic diversity and inequality have received much less attention in the literature on neighbourhood cohesion (e.g. Baldwin and Huber 2010). Moreover, the different dimensions of diversity have been in most cases measured and analysed separately (Piekut *et al.* 2012). To our knowledge, only a few studies have simultaneously investigated the effects of ethnic and economic diversity or inequality on social cohesion, yielding mixed results. Lancee and Dronkers (2011), who investigated the effects of several types of neighbourhood compositional diversity on various indicators of social cohesion in Dutch neighbourhoods, showed that trust in neighbours⁷ was not related to ethnic diversity in the neighbourhood, but was positively related to economic diversity. In the authors' view, this was because ethnic diversity implies different values and thus different goals, while economic diversity is less linked to identity and may contribute to some of the conditions for optimal contact. The authors argue that people with a different economic background are less likely to compete with each other and can even be complementary in their professions, thus facilitating the formation of bridging ties. The results of Lancee and Dronkers (2011), suggesting that economic diversity has a more powerful – though positive – impact on neighbourhood trust than does ethnic diversity, correspond with the results obtained by Scheepers *et al.* (2013), also for the Netherlands. They showed that economic inequalities reduced unfavourable evaluation of the neighbourhood, while ethnic concentration had an opposite effect. With regard to the positive relationship between economic inequalities and neighbourhood evaluation, the authors suggested that it might be related to the presence of rich people, upgrading the status of the neighbourhood.

Meanwhile, two other studies conducted in the US revealed a secondary role of economic inequalities in shaping attitudes towards the neighbourhood. According to Lutmer's (2005) results, economic inequalities did not predict satisfaction with the neighbourhood, which he treated as one of the dimensions of self-reported happiness (though without controlling for ethnic diversity). Similarly, Alesina and La Ferrara (2002), who tested the effect of racial and ethnic compositional diversity as well as income inequality (measured by Gini) on general trust, found that when all three variables were included as predictors of trust, only racial diversity was significant (with a negative coefficient), while Gini and ethnic diversity were not. This, in turn, suggests that racial diversity is more strongly related to trust

⁷ They studied several dependent variables, but 'trust in neighbours' is closest to the neighbourhood attachment studied in our article.

than is economic inequality. Alesina and La Ferrara interpreted this finding referring mainly to ‘the aversion to heterogeneity’ explanation, i.e. the fact that people trust those more similar to themselves. ‘Similar’ in this case obviously means from the same racial group, not the same income group. However, their study addressed general trust and not neighbourhood trust, therefore, its results cannot be directly linked to neighbourhood social cohesion.

While the results presented above are obviously inconclusive, a consensus among many researchers has been recently reached that when investigating ethnic compositional diversity effects, the economic status of the neighbourhood should be accounted for. Some researchers have even argued that economic disadvantage of the neighbourhood – and not ethnic or racial diversity – should be considered the main source of low neighbourhood social cohesion (Becares *et al.* 2011; Letki 2008; Scheepers *et al.* 2013; Tolsma *et al.* 2009) including place attachment (Bailey *et al.*, 2012). The underlying factors are, most likely, a higher level of crime and safety in deprived areas and fewer opportunities for social interactions (Tolsma *et al.*, 2009) as well as a lower level of social capital among poor people (e.g. Alesina and La Ferrara 2002; Scheepers *et al.* 2013). All these factors generate feelings of threat, which erode attachment, interactions and social cohesion in the neighbourhood (Oliver and Mandelberg 2000, Letki 2008).

We conducted additional analyses to examine the effect of socio-economic diversity in the neighbourhood on neighbourhood attachment in the GEITONIES dataset. The results are displayed in Table 1 in the Appendix. Models N1 (for natives) and M1 (for migrants) included a set of control variables, among them the socio-economic status of the neighbourhood, ethnic diversity, having interethnic relations and the interaction between the last two, as in our article. In models N2 and M2 we added socio-economic diversity, based on the ISEI index. In models N3 and M3 we tested the effect of only socio-economic diversity together with control variables. Socio-economic diversity was not a significant predictor of neighbourhood attachment either when it was introduced together with the other variables or when it was introduced separately. When both socio-economic and ethnic diversity were added in models N2 and M2, ethnic diversity remained significant. What might have contributed to the observed insignificant relationship between socio-economic diversity and neighbourhood attachment is that the studied ethnically diverse neighbourhoods were very similar in terms of socio-economic diversity (standard deviation of the mean ISEI equalled only 0.01, while for ethnic diversity it was 0.28). This, in turn, may be related to the imperfect measure that we used.

In our view, the mixed conclusions derived from the presented studies supplemented by our examination of the role of socio-economic and ethnic diversity in shaping neighbourhood attachment, suggest that the relationship between compositional ethnic diversity, economic diversity and economic inequalities is more complex than intuition would suggest. It is clear that a better integration of research on both ethnic diversity and economic diversity or inequalities would allow for a better understanding of the mechanisms determining social cohesion in European neighbourhoods. However, in order to answer the question of how relative deprivation impacts neighbourhood attachment or other indicators of neighbourhood cohesion, additional theoretical and empirical studies are needed.

3. Preferences for diversity, selection bias and out-migration

3.1. Self-selection and preferences for diversity

Another important point that Stark makes is that many of our findings can be explained by the self-selection of both natives and migrants living in diverse neighbourhoods. ‘The story seems to be not “a different meaning that a diverse setting has for natives and for migrants” (G&TR, p.1) but rather, the self-selection of both natives and migrants acting on their preferences [for diversity]’, he argues.

We agree that the issue of self-selection of people into and out of different types of neighbourhoods constitutes an important conceptual and methodological challenge when assessing neighbourhood effects (cf. Bailey and Nick 2012; Hedman *et al.* 2011; van Ham and Manley 2012). The problem has also been addressed with regard to the effects of neighbourhood diversity on social cohesion, when the observation has been made that people living in ethnically diverse areas have certain attitudes towards ethnic and racial minorities (e.g., Bailey *et al.* 2012; Christ *et al.* 2014; Laurence 2011; Oliver 2010; Oliver and Wong 2003; Peterman 2013; Wagner *et al.* 2006). Conclusions derived from these works – based either on controlling for a general preference for diversity, or on results from a longitudinal study – suggest, however, that the self-selection effect was not strong enough to explain the relationship between neighbourhood diversity and attitudes towards out-groups or trust (cf. Christ *et al.* 2014; Oliver 2011; Oliver and Wong 2003).

The topic of individual preferences regarding neighbourhood choice has been extensively studied in literature on segregation, originating from Schelling’s theoretical model (1971), in which he demonstrated that even moderate ethnocentric preferences at an

individual level may lead to extreme aggregate levels of segregation (see also Clark 1991). The explanation for this has usually been linked to the homophily principle: people like to live among their co-ethnics simply because of the sense of community in their own group (ibid., Havekes *et al.* 2014). While the studies inspired by Schelling have mainly looked into ethnic and racial segregation, several studies have also shown that people in general choose neighbourhoods that match their own characteristics, such as economic status, age, having children, or other socio-demographic characteristics, with ethnicity being only one of the drivers of the sorting process (cf. Bailey and Nick 2012; Hedman *et al.* 2011; Talen 2008).

In light of the above, it could be argued that socially mixed neighbourhoods are ‘unnatural’ in terms of individual preferences and choices. However, the existence of diverse areas is not merely the effect of individual residential choices, but also – and perhaps more importantly – of macro-structural factors (cf. Talen 2008). Talen distinguished three groups of factors that can explain why some neighbourhoods are socially diverse: 1) historical and economic factors – related to the tradition of diversity in some places, dynamics of the local housing market and disruption in the gentrification process, 2) policy-related factors – related to policies aimed at deliberate mixing, and 3) physical factors – related to the mix of building types and other physical characteristics that are conducive to diversity (ibid.; the last was extensively discussed by Jacobs, 1961).

As regards a preference for diversity among residents of mixed areas, we do not have relevant data⁸ about the motivations for settling in the (ethnically diverse) neighbourhoods studied in the GEITONIES sample. However, according to several studies conducted in diverse neighbourhoods, ethnic diversity of the neighbourhood constitutes a less important motivation to move into such areas than do factors such as proximity of public transport and shops, standard of dwelling and being close to family members (Blokland and van Eijk 2010; van Eijk 2010). Other works on selection bias and residential mobility have also shown that demographic mix was a less important neighbourhood feature when thinking of potential destinations than were neighbourhood safety, cleanliness or access to green spaces (Hedman and van Ham 2012). These studies suggest therefore that ‘taste for diversity’ does not seem to be a very important factor attracting people to diverse areas (for similar argumentation see also Peterman 2013).

Stark suggests that the process of self-selection may also – and perhaps more importantly – occur as an adjustment process: residents who prefer homogeneity leave the

⁸ ‘Liking diversity’ was not listed in the questionnaire among the possible reasons for moving into the neighbourhood.

diverse neighbourhood, while those who favour diversity stay. In this respect, he stresses the role of opportunity costs of leaving the neighbourhood, suggesting that these costs are higher for natives than for migrants, since the former stay in the neighbourhood for a longer time than the latter do. We agree that the self-selection of residents who are already in a diverse neighbourhood should be acknowledged, since in the real world, the social composition of the surroundings changes rather than stays fixed. However, we believe that the problem of the self-selection of people living in diverse areas resulting from out-migration is much more complex than Stark suggests, for at least two reasons.

First, Stark's rationale is based on the conviction that the main force for out-migration from an ethnically diverse neighbourhood is 'distaste for diversity', as opposed to a 'taste for diversity', which makes people stay. Meanwhile, it seems that indifference towards diversity is an equally important explanation for staying in mixed areas: not all people have an opinion about diversity, and many of them may simply perceive diversity in their surroundings as a neutral characteristic of their surroundings, which neither 'pulls to' nor 'pushes out' from the given neighbourhood.

Second, opportunity costs of leaving a diverse neighbourhood are not simply a function of spatial mobility and time spent in the given area, as Stark suggests, but also of structural and social-psychological factors. The first group of factors encompasses the ability to move elsewhere, which can result from individual economic resources (cf. Havekes *et al.* 2014), a need to be close to family members, or other restrictions. The second group relates to processes that accompany the passage of time – such as formed social ties, habits and place-specific memories – as well as psychological costs related to the natural human need to justify one's decisions to oneself (Tversky and Shafir 1992) and the emotional costs of making life changes. All these factors may contribute to staying in a given area. In our view, whereas the costs of out-migration may be related to different factors for native and migrant residents, there is no reason to assume that the level of these costs should be higher for either of these groups, as Stark suggests in his comment.

3.2. Preferences for diversity: differences between migrants and natives

One of the points that Stark makes with regard to the self-selection problem concerns differences between natives and migrants: in his view, migrants are by definition more tolerant to ethnic diversity than are natives. We do not have adequate indicators of attitudes

towards ethnic diversity to examine this issue with the help of the GEITONIES data, but based on the literature on migration and interethnic relations, we find this assumption at least debatable for several reasons.

First, while according to several studies members of ethnic minority groups indeed value ethnic diversity more strongly and express more tolerance to neighbours of a different race than do natives (Tolsma *et al.* 2009; Oliver 2011), other studies have shown resentment among settled groups of migrants towards newcomers. For example, Philips *et al.* (2014), interpreting such negative attitudes among settled migrants in Bradford, linked them to a lack of knowledge about the new migrants, cultural differences and threat to the settled migrants' status as owners of the area. She also stressed that the potential for settled migrants to accommodate different others is likely to vary depending on local opportunities, the dynamics of in-migration, history of intercultural relations, local politics and other structural factors.

Second, tolerance of diversity may be limited among new migrants given that international migration is driven chiefly by economic reasons (cf. Massey 1999). Therefore, their willingness to meet other migrants in daily life does not have to be strong, or at least – not stronger than it is for natives. Moreover, migrants usually travel from less diverse to more diverse societies, thus having limited opportunities for contact with diversity prior to migration. Some migrants – such as Polish economic migrants, for example – encounter ethnic diversity for the first time abroad (Hamilton and Iglicka 2000). Thus, their initial knowledge about ethnic others may be very modest and often based on prejudice.

Third, while empirical studies suggest that members of the majority group prefer homogenous settings and ethnic minority members prefer mixed ones (for a discussion see Dekker and Bolt 2007), we need to bear in mind that in the European context, ethnic diversity is empirically almost indistinguishable from minority concentration (Gijsberts *et al.* 2011, Schaeffer 2013). At the same time, mixed neighbourhoods on the average host more migrants' co-ethnics than do homogenous areas. It can be thus argued that the propensity of migrants to settle in ethnically diverse neighbourhoods is driven by a 'natural' preference for homogeneity rather than for heterogeneity.

Altogether, we believe that migrants and natives do not have to differ strongly with regard to preferences for diversity. We therefore argue that differences in natives' and migrants' preferences for diversity should not be considered as the main source of differences between these two groups in their residential choices and functioning in the neighbourhood.

3.3. Preferences for diversity, neighbourhood attachment and out-migration

The last point that Stark makes with regard to self-selection relates to the mechanisms underlying the relationship between preferences towards diversity, neighbourhood attachment and out-migration. In our article we suggested that low neighbourhood attachment may result in out-migration (for similar arguments see Clark and Ledwith 2006; Permentier *et al.* 2009). Stark, in turn, argues that the plan to move out is likely to result from the discrepancy between neighbourhood characteristics and individual residential preferences, which then determines how much people invest in locality-specific capital (which we will refer to as local social capital) and consequently the level of neighbourhood attachment.

What we find problematic in Stark's proposal is his conviction that plans for out-migration are formed at an early stage of stay in the neighbourhood and are based only on pre-formed preferences, and not experiences or strength of emotional ties with the residential area. Similarly to other authors, we treat neighbourhood attachment as an affective bond that develops over time, as people embed with their residential area through associated meanings and an increasing sense of familiarity (Bailey *et al.* 2012; Kasarda and Janowitz 1974; Lewicka 2013). It is associated with a feeling of safety, builds self-esteem and provides a bond between people (Altman and Low 1992; Dekker and Bolt 2007) thus contributing to the formation of social cohesion. At the same time, the way people perceive the level of social cohesion of their neighbourhood may influence their residential plans. In the study mentioned above, Havekes *et al.* (2014) found that it was perceived social cohesion and not negative attitudes towards ethnic minorities that predicted the wish to move out from the neighbourhood. However, the problem of causality still remains, since we cannot be sure whether it is the perceived level of social cohesion that affects moving wishes or it is the plans to move out that affect the perception of social cohesion in the neighbourhood (this problem is also acknowledged by Havekes). Taking into account the complexity of psychological and social process within the neighbourhood, we thus argue that while preferences determine residential choices, their role in shaping the decision to stay or leave the neighbourhood is more ambiguous.

Nevertheless, we agree that the causal order of the relationship between length of residence, neighbourhood attachment and the formation of local social capital is not clear. Local social capital – understood as for example engagement in close social ties in the residence place or involvement in neighbourhood organisations – may be the basis for emotional bonds with the residential area, but it may also be the result of neighbourhood

attachment: as attachment to the neighbourhood increases, so does willingness to enter into contacts with neighbours (see also: Bailey *et al.* 2012; Lewicka 2013). What seems most likely is that both causal directions are true. The observation that local social capital is positively related to place attachment has been confirmed in a number of studies (cf. Bonaiuto *et al.* 2006; Kasarda and Janowitz 1974; Lewicka 2005). However, studies on place attachment, similarly to our study, are correlational in nature, and therefore they cannot reveal causal relationships between neighbourhood attachment and social capital.

We checked if controlling for neighbourhood social capital changed our results regarding the relationship between ethnic diversity and neighbourhood attachment, including the role of interethnic ties. The results of these analyses are presented in models N4 (for natives) and M4 (for migrants) in Table 1 in the Appendix. We added an indicator of engagement in social ties with people from the neighbourhood⁹ and an indicator of involvement in neighbourhood organisations¹⁰. While the obtained results are consistent with the literature on place attachment (both variables are positively related to neighbourhood attachment for both natives and migrants), what is worth stressing is that our results regarding ethnic diversity, interethnic relations and the interaction between the two did not change. This means that even when differences regarding neighbourhood-specific capital are controlled for, our findings regarding the role of interethnic ties in moderating the relationship between ethnic diversity and neighbourhood attachment remain valid.

4. Conclusion and discussion

Our reply to Stark should be treated as a discussion on several important topics intersecting with the ethnic diversity effect. We believe that the above considerations not only provide a better conceptual basis for our study on interethnic relations, but also make them more appealing in that they disentangle our results from other possible effects.

First of all, we believe that introducing the concept of relative deprivation into studies on ethnic diversity and social cohesion constitutes a promising research direction. However, we also argue that high ethnic diversity does not have to go hand in hand with relative deprivation, and the links between the two are complex and multifaceted. Therefore,

⁹ A dichotomous variable indicating whether or not at least half of the respondent's close ties in one or more spheres of contacts (spending free time, asking for/giving advice, receiving help or helping out and other relationships) are ties with neighbours.

¹⁰ A dichotomous variable indicating whether or not the respondent is involved in at least one kind of neighbourhood organisation (religious, cultural, sport, political, labour union or other).

conclusions derived from the examination of the negative effect of ethnic diversity on neighbourhood attachment cannot be easily linked to the concept of relative deprivation.

It is clear that linking economic inequalities and ethnic diversity to processes of out-migration and neighbourhood attachment would allow for a better understanding of the mechanisms underlying neighbourhood social cohesion. However, this would require an adequate conceptual framework addressing both the compositional and relational aspects of ethnic and economic diversity. The theory of asymmetric preferences is the closest to combining the two, since it recognizes that specific (ethnic, cultural or other) groups may disagree about what the shared community should look like and that economic inequalities between groups may provide a basis for this disagreement (cf. Baldwin and Huber 2010; Shaeffer 2013). However, the relative deprivation concept is based on interpersonal comparisons to others in the reference group, which in many cases is in fact a specific minority or majority group and not the whole population of the neighbourhood. Consequently, in an extreme scenario, migrants who have very low incomes compared to the average in the neighbourhood do not experience relative deprivation, if they compare their low incomes to incomes of other migrants who earn comparably small amounts of money.

One way to link the process of out-migration to levels of neighbourhood attachment in ethnically diverse neighbourhoods is to examine the degree of selection bias among their inhabitants. Like many other authors, we do agree that the problem of self-selection in ethnically diverse neighbourhoods deserves attention, although given the analyses presented in this article we would not equate ‘distaste for diversity’ with ‘distaste for relative deprivation’. Moreover, we argue that any explanation for why some people live in diverse areas while others do not, should take into account that not all people have a ‘taste’ or ‘distaste’ for diversity, but some may be simply indifferent to it. In this context, the role of the costs of leaving the neighbourhood should be stressed, but their magnitude should not be treated merely as a function of time spent in a given area and individual mobility, but also as a function of other psycho-sociological and structural factors. This leads to the conclusion that differences between natives and migrants with regard to self-selection bias are not straightforward. In addition, preferences for diversity do not have to differ strongly between migrants and natives, and thus we believe that they should not be at the core of the discussion on self-selection effects in ethnically diverse neighbourhoods.

In his comment, Stark does not consider the role that engagement in interethnic ties could play in the relationship between relative deprivation and neighbourhood attachment.

However, we would argue that the above analyses allow for further deliberations in this respect. In our opinion, establishing relationships with out-group members is likely to redefine the reference group of migrants and natives. For natives, establishing interethnic ties may extend their reference group to migrants. At the same time, migrants who have ties with natives may identify more with the majority group than with their own ethnic group (see also Demireva and Heath 2014; Fan and Stark 2007), and thus compare themselves to natives rather than to their co-ethnics. This corresponds with the observation of Stark and Jakubek (2013), who claimed that social integration – understood as the establishment of ties with natives – can facilitate economic assimilation considerably.

Therefore, who is considered to be in the ‘reference group’ of both natives and migrants living in the studied areas can have profound consequences for the level of individual relative deprivation for both groups (cf. Falk and Knell 2004). While extending the reference group to migrants can suppress individual relative deprivation among natives – since they are likely to have relatively higher socio-economic status than do migrants (cf. Havekes *et al.* 2014; Schaake *et al.* 2014) – migrants who compare their socio-economic status to that of natives can experience higher individual relative deprivation than do migrants without interethnic ties. Consequently, the effect of existing interethnic ties on aggregate relative deprivation in the neighbourhood can be ambiguous, since the two groups that live together may in fact have different reference groups. It is clear that this topic deserves adequate empirical testing, which could not be undertaken in this reply, given the limitations of the GEITONIES data regarding incomes of migrants and natives. In our view, given the above considerations, the complexity of interrelations between ethnic diversity, relative deprivation and neighbourhood attachment is in itself a topic that deserves further study.

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Appendix

Table 1. Multilevel linear regression predicting neighbourhood attachment for natives and migrants

	NATIVES, N=1853				MIGRANTS, N=1559			
	Model N1	Model N2	Model N3	Model N4	Model M1	Model M2	Model M3	Model M4
	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)
Constant	-1.041*** (0.380)	-1.053** (0.388)	-0.596 (0.423)	-1.087*** (0.353)	-0.456 (0,399)	-0.416 (0.391)	-0.116 (0.424)	-0.485 (0.396)
Having neighbours in close social networks				0.257*** (0.044)				0.167*** (0.048)
Involvement in neighbourhood organisations				0.304*** (0.066)				0.415*** (0.072)
Ethnic diversity index	-1.335*** (0.451)	-1.356** (0.472)		-1.222*** (0.418)	-0.947** (0.436)	-0.815* (0.441)		-0.908** (0.432)
Having interethnic relations	0.011 (0.058)	0.010 (0.058)		-0.012 (0.057)	0.049 (0.049)	0.050 (0.049)		0.015 (0.048)
Diversity index * having interethnic relations	0.537*** (0.205)	0.539*** (0.205)		0.516** (0.201)	-0.681*** (0.185)	-0.687*** (0.185)		-0.658*** (0.182)
Socio-economic diversity index		-2.067 (14.016)	11.494 (15.790)			13.430 (12.858)	21.576 (14.710)	
Fit indices								
-2 Log-likelihood	4908.663	4908.641	4922.741	4847.367	4052.162	4051.106	4072.787	4004.315
AIC	4954.663	4956.641	4964.741	4897.367	4112.162	4113.106	4128.787	4068.315
ICC	4.00%	3.99%	5.82%	3.43%	3.58%	3.37%	5.07%	3.66%

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Control variables in the model include: 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, length of residence in the neighbourhood, employment, having a child below 16 years of age.

For migrants, control variables included the same set of variables as for natives, and additionally: country of origin.