

Neighbourhood Ethnic Diversity:  
Explaining Perceived Ethnic Threat  
and Interethnic Contact



**Neighbourhood Ethnic Diversity:  
Explaining Perceived Ethnic Threat and Interethnic Contact**

Bachelor Thesis for Sociology B

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## **Preface**

This bachelor thesis is the concluding assessment of our bachelor study in Sociology at Utrecht University, Faculty of Social Sciences. During five months we went through all steps of a scientific research, which has been both an educational and an enjoyable process. The cooperation between the two of us was pleasant and we really feel like working together has made our thesis better than it would have been otherwise. We had no major problems and found out a lot on our own, but we would like to thank our supervisor Manja Coopmans for all the inspiration and feedback she has given us. Furthermore, we want to thank our fellow students Hans Biezenaar and Twan Huijsmans for reading and commenting on our thesis. Finally, we want to thank our family and friends for all the support they have given us during the process.

## **Abstract**

While previous research typically assumed perceived ethnic threat and interethnic contact to be opposing mechanisms for the relationship between neighbourhood ethnic diversity and interethnic attitudes, this study actually examines the direct effect of ethnic diversity on perceived ethnic threat and on interethnic contact for Dutch natives. Secondly, it is investigated whether collective efficacy and economic circumstances of neighbourhoods influence these relationships. The Netherlands is a suitable research setting because of the presence of non-western minorities that are often contested in public debate, much alike the situation in other European countries. The paper utilizes data from the Netherlands Life Course Study (NELLS), which is a large-scale survey study on attitudes and living conditions of the Dutch population between ages 15-45. Findings indicate that native residents of more ethnically diverse neighbourhoods actually perceive less threat from non-western minorities and have more contact with them than native residents of less diverse neighbourhoods. Moreover, social aspects of the neighbourhood combined in the concept of collective efficacy appeared to have no influence on the found relationships between ethnic diversity and perceived ethnic threat and interethnic contact. On the other hand, better economic circumstances in an ethnically diverse neighbourhood seem to be associated with even less perceived ethnic threat and even more interethnic contact. Implications for theory and practice are discussed.

## **Keywords**

Neighbourhood ethnic diversity, perceived ethnic threat, interethnic contact, collective efficacy, economic circumstances, Netherlands Life Course Study

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## 1. Introduction

Ethnic diversity can be considered as characteristic for today's European cities. This diversity, however, is not uncontested. There is great political and public debate on problems such as the lack of ethnic minority integration in host societies and negative attitudes towards ethnic minorities (Phillips, 2010). These are problems that could undermine social cohesion and foster inequality in European cities. Natives can perceive threat from ethnic minorities because they are viewed as a source of cultural conflict, socioeconomic competition and safety threat (Blumer, 1958; Bobo, 1983; Quillian, 1995; Tajfel & Turner, 1997), which in turn leads to negative attitudes towards ethnic minorities. A way to improve natives' attitudes towards ethnic minorities is interethnic contact (Allport, 1954; Pettigrew & Tropp, 2006). Interethnic contact also makes social capital of natives available to ethnic minorities, which in turn helps their overall integration (Hagendoorn, Veenman & Vollebergh, 2003; Martinovic, Van Tubergen & Maas, 2009). This study makes two contributions to the existing literature. First, whereas the effects of neighbourhood ethnic diversity on interethnic attitudes have been studied intensively, few studies investigated the effect of ethnic diversity on perceived ethnic threat and on interethnic contact. Second, by learning about other neighbourhood circumstances under which perceived ethnic threat or interethnic contact is more likely, policy measures could be taken to create better neighbourhoods for ethnically diverse urban populations.

Some studies show that living in a more ethnically diverse area leads to more positive attitudes towards ethnic out-groups (e.g., Dirksmeier, 2014; Oliver & Wong, 2003; Wagner, Christ, Pettigrew, Stellmacher & Wolf, 2006). Others conclude that more ethnic diversity in someone's surroundings results in more negative attitudes towards ethnic out-groups (e.g., Cernat, 2010; Quillian, 1995). There are also researchers who find that initially positive feelings towards ethnic minorities increase in ethnically diverse neighbourhoods, but decline with increasing out-group size (Havekes, Uunk & Gijssberts, 2011). Even others find that ethnic diversity first leads to more negative attitudes towards ethnic minorities, but with larger out-groups to more positive attitudes (Schneider, 2008). Hence literature continues to be inconclusive to what ethnic diversity means for a neighbourhood.

Laurence (2014) is right in stating that most scholars infer mechanisms of perceived ethnic threat and interethnic contact based on the relationship between ethnic diversity and interethnic attitudes, without actually looking at perceived ethnic threat and interethnic contact as an outcome. He shows that both can be found with increasing ethnic diversity and it is thus not a question of either/or. However, much is still unknown about the contextual factors that influence the relationship between ethnic diversity and perceived ethnic threat and interethnic contact (Laurence, 2014).

Promising are recent studies that investigate other neighbourhood circumstances that could influence the effect of ethnic diversity on interethnic attitudes. For example, some studies find ethnic diversity to be related to more negative attitudes in lower socioeconomic status (SES) neighbourhoods and more positive attitudes in higher-SES neighbourhoods (Hjerm, 2009; Oliver & Wong, 2003;

Tolsma, Lubbers & Coenders, 2008). Other researchers showed that negative attitudes towards minorities are especially likely to show up in ethnically diverse neighbourhoods when there is increasing disorder and decline, for example youth nuisance, crime and street litter (Havekes, Coenders & Dekker, 2014). Still, it is not certain whether such contextual factors are also important in influencing the effect of ethnic diversity on perceived ethnic threat and on interethnic contact.

In sum, there appears to be a lack of studies that look at the effect of ethnic diversity on perceived ethnic threat and interethnic contact directly. Also, much is still unknown about what influences the direction and strength of the effect that ethnic diversity has on perceived ethnic threat and on interethnic contact. It should be noted that ethnically diverse neighbourhoods are more likely to be socially incoherent and economically poor neighbourhoods as well (Havekes et al. 2014; Letki, 2008). Therefore, it is important to examine how social and economic neighbourhood circumstances influence the effect of ethnic diversity on perceived ethnic threat and interethnic contact. Two neighbourhood characteristics will be specifically considered: collective efficacy and economic circumstances. Collective efficacy is an overarching concept of social circumstances that consists of social trust and neighbourhood connectedness among residents, combined with a willingness to intervene and use social control on behalf of the common good (Sampson, Raudenbush & Earls, 1997). Economic circumstances of a neighbourhood refer to the overall poverty, prosperity or everything between those two extremes. Living in a more or less affluent neighbourhood can be important for how one experiences the neighbourhood and behaves in it (Hjerm, 2009).

This paper utilizes data from the Netherlands Life Course Study (NELLS) (Tolsma, Kraaykamp, De Graaf, Kalmijn & Monden, 2014), which is a large-scale survey study on attitudes and living conditions of the Dutch population between ages 15-45. The following research question will be studied:

*To what extent do social and economic neighbourhood characteristics influence the relationship between local ethnic diversity and 1) native residents' perceived ethnic threat and 2) native residents' interethnic contact?*

First, the following section describes the setting of this study. Secondly, a theoretical framework and expectations are formulated. The relationships between ethnic diversity and perceived ethnic threat and interethnic contact are further elaborated upon and the influence of collective efficacy and economic circumstances will be substantiated. Then, the data and methods are described in more detail. Subsequently, the analysis results will be presented. Multivariate multiple linear regression is used to account for both perceived ethnic threat and interethnic contact as outcomes simultaneously. Finally, concluding remarks are discussed in light of theory and practice.

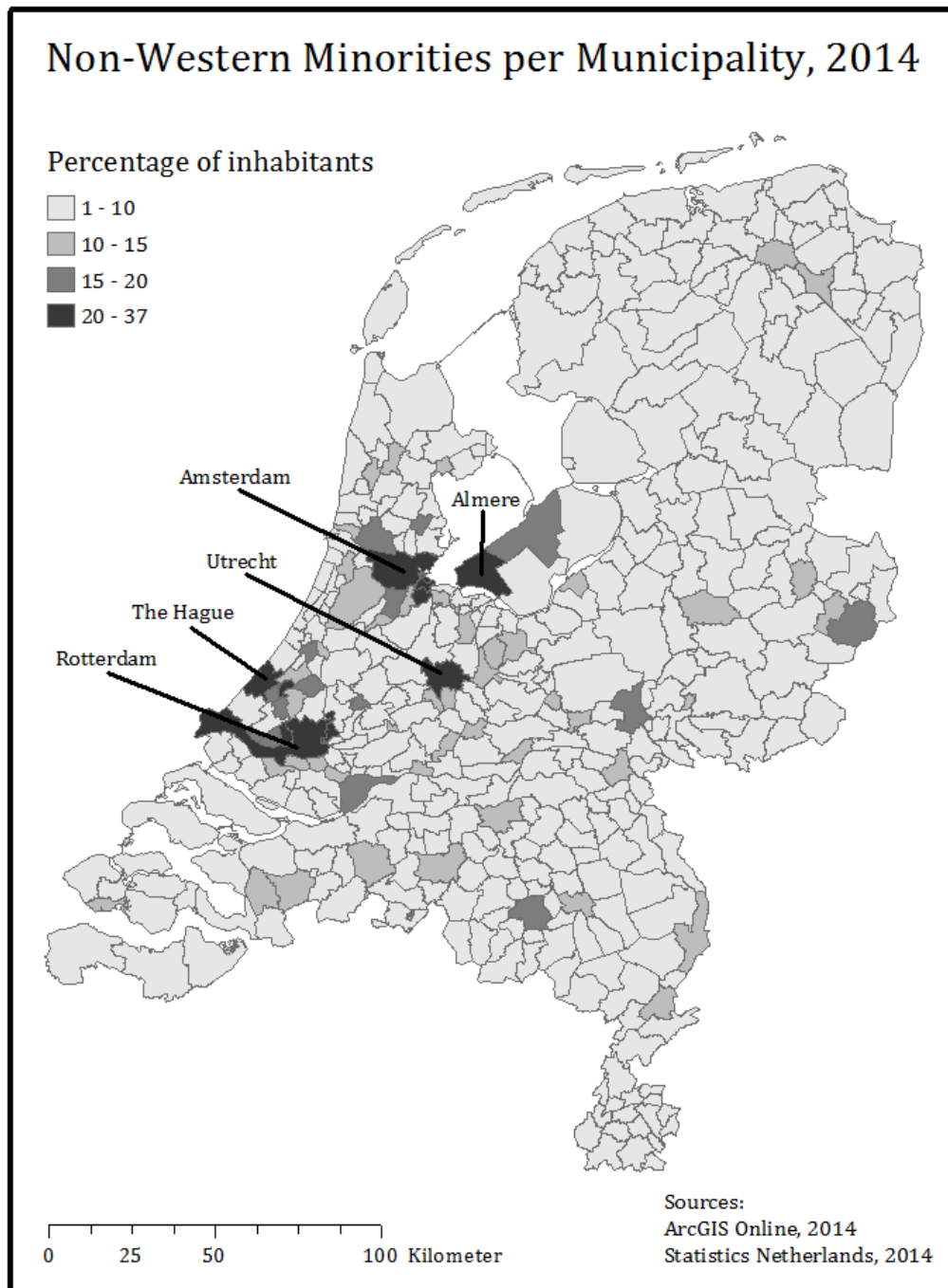
## 2. The Dutch Context

Just as most other Western European countries, the Netherlands have seen a change in population composition as a consequence of immigration in the decades after the Second World War. The Netherlands are a suitable research setting because there is a substantial proportion of ethnic minorities from non-western origin in the population that is often perceived as fundamentally different and foreign as compared to natives (Gijsberts & Dagevos, 2004). This is much alike the situation in for example Sweden (Hjerm, 2009) or Germany (Dirksmeier, 2014). Also, when looking at the relative sizes of groups in the overall population of the Netherlands, it seems most relevant to focus on the relationship between natives and non-western minorities: 80% native Dutch, 12% non-western and 8% western (Statistics Netherlands, 2014a).

Similar to other European countries, ethnic diversity is typically concentrated in urban areas of the Netherlands. Non-western minority groups mostly live in big cities of the urban region called Randstad: Amsterdam, Rotterdam, The Hague, Utrecht and Almere (see Figure 1). Natives who live in this region are thus living with ethnic diversity, be it in their own neighbourhood or when walking around the city. In Amsterdam, for example, the proportion of non-western minorities is almost three times larger than on a national level (35% in Amsterdam versus 12% nationally).

In public debate, the influx of non-western minorities is usually associated with increasing interethnic tension and the rise of anti-immigrant political movements (Gijsberts & Dagevos, 2004). Research has shown that there are some socioeconomic and cultural differences between natives and non-western minorities (Havekes et al. 2011: 1565) which could possibly contribute to perceived ethnic threat. In 2012 non-western minorities were three times more likely to be unemployed than Dutch natives and six times more likely to depend on social support (Huijnk, Gijsberts & Dagevos, 2014). They also had lower income and did worse in education than natives. Furthermore, relative crime-levels are higher among non-western minorities than among natives (Dagevos & Huijnk, 2014). Non-western minorities are also more traditionally oriented than natives with respect to family, religion, emancipation and so on (Uunk, 2003). The values of non-western minorities have often been characterized as conflicting with the more modern values of the native Dutch (Dagevos & Huijnk, 2014). Another difference between natives and non-western minorities is a racial one (Dixon, 2006). The ethnic minority groups have a darker skin colour than the Dutch, which also makes them more salient in public space.





**Figure 1.** Non-Western Minorities per Municipality (Data from Statistics Netherlands, 2014b)

### 3. Theoretical Framework

#### 3.1 Ethnic diversity, perceived ethnic threat and interethnic contact

Neighbourhood ethnic diversity has often been associated with both perceived ethnic threat (Quillian, 1995) as well as with interethnic contact (Wagner et al. 2006), despite being almost exclusively based on the relationship between ethnic diversity and interethnic attitudes (Laurence, 2014). However, at least one previous study in the Netherlands suggested that objective ethnic diversity increases

perceived ethnic threat via perceived ethnic diversity (Schlueter & Scheepers, 2010). Furthermore, there is some evidence that Dutch natives have more interethnic contact in neighbourhoods with a greater share of non-western minorities (Gijsberts, Vervoort, Havekes & Dagevos, 2010).

Scholars have distinguished three major types of interethnic threat: economic, political and cultural (Bobo & Hutchings, 1996; Schneider, 2008; Zarate, Garcia, Garza & Hitlan, 2004). Economic threat results from competition over limited resources (Schneider, 2008). Political threat is related to conflict over power and influence in the political arena (Bobo & Hutchings, 1996). Finally, cultural threat is related to the belief that ethnic minorities want to change dominant norms and values in society (Zarate et al. 2004). All three, however, result in a certain amount of perceived ethnic threat on a group level. According to Blumer (1958), people get a sense of group identity by comparing themselves to other groups. This comparison also implies distinguishing their group from other groups, by which a sense of hierarchical group position is established. Dominant groups can then become afraid of minority groups who they assume to be a competition to their group position and privileges (Blumer, 1958). Because perceived ethnic threat is about personally perceived competition to the group position, it is likely that the direct environment is most important. Also, a bigger share of ethnic minorities in the neighbourhood could be perceived as a competition to the natives' dominant group position (Quillian, 1995). Therefore it is expected that: *The more ethnic diversity in a neighbourhood, the more native residents perceive ethnic threat (H1).*

Friendly contact between two persons can be explained by individual preferences, influence of third parties and opportunities for contact (Kalmijn, 1998). All three can stimulate or restrict the formation of contact between members of ethnic groups (Martinovic, Van Tubergen & Maas, 2009). Interesting, though, is that preferences remain relatively stable over time. People prefer having contact with more similar people, as the premise of homophily theory states (McPherson, Smith-Lovin & Cook, 2001). It may be assumed that therefore third parties, like family and church, generally also prefer one to have contact within the ethnic in-group (Clark-Ibáñez & Felmler, 2014: 301-302). Thus, interethnic contact is less likely the result of preferences and third parties. Therefore, it is most likely that interethnic contact is made possible by meeting opportunity. Ethnically diverse neighbourhoods provide opportunity for interethnic friendships and acquaintances, which leads to the expectation that: *The more ethnic diversity in a neighbourhood, the more native residents will have interethnic contact (H2).*

### 3.2 Collective efficacy in ethnically diverse neighbourhoods

The concept of collective efficacy was introduced by Sampson and colleagues in a study on neighbourhood crime (Sampson et al. 1997). It is a specific type of social cohesion from which no one in a neighbourhood can be excluded, for it is expressed through the social behaviour, trust and control of all residents. For example, people in such neighbourhoods greet each other on the street, help each other when necessary and intervene when youth are causing trouble. This is why places that lack

collective efficacy are more prone to higher crime levels (Sampson et al. 1997), lower physical health (Browning & Cagney, 2002), lower school performance (Nash, 2002) and less volunteering (Sampson et al. 1997). Residents of such neighbourhoods simply do not trust each other enough to cooperate, they do not feel attached to their neighbourhood and are also not able to maintain social control. When there is more collective efficacy, everyone benefits. Even without having social ties with neighbours, one could enjoy a safer living environment for example.

A neighbourhood with less collective efficacy has less cooperation, trust and social control among residents (Sampson et al. 1997). This also relates to what members of the Chicago School of Sociology described as social disorganisation (Havekes et al. 2014). A lack of collective efficacy hinders the capacity of neighbourhoods to deal with social problems and enforce shared values. Living under such stressful circumstances can lead to individual feelings of hopelessness (Mair, Kaplan & Everson-Rose, 2012), fear and suspicion (Oliver & Mendelberg, 2000). According to scapegoat theory (Allport, 1948), native residents are likely to blame neighbours of a different ethnicity for local social problems and their inability to deal with them. Even though these ethnic minorities are not necessarily the root of the problem, they are salient out-groups that can easily be used for projecting one's own frustrations (Havekes et al. 2014). This may result in more perceptions of ethnic threat among native residents of ethnically diverse neighbourhoods. Furthermore, scapegoating is more common towards out-groups that are frequently encountered (Allport, 1948). This means that it can be an important process in ethnically diverse neighbourhoods. On the other hand, when there is more collective efficacy in the neighbourhood it may be possible to overcome the differences between native and ethnic minority residents. Both groups then feel more attached to the neighbourhood, experience more social trust and are more likely to cooperate on behalf of the common good. This leads to the expectation that: *The more collective efficacy in a neighbourhood, the weaker the positive relationship between ethnic diversity and perceived ethnic threat (H3).*

When there is more collective efficacy in a neighbourhood, residents are more likely to form social ties (Sampson et al. 1997). This makes sense because there is more mutual trust in these neighbourhoods. Trust is also secured by the higher level of social control, which makes it less risky to trust a neighbour with for example keeping an eye on playing children or ask for help with fixing a bicycle (Coleman, 1988). It seems therefore that collective efficacy provides safe opportunity to engage in social contacts. On the contrary, having less collective efficacy could hinder a neighbourhood in providing safe opportunity for social contact. When there is distrust and a lack of social control, residents may be more focussed on their own household and shut out the rest of the neighbourhood. Moreover, neighbourhoods with more collective efficacy are also literally safer because more social control leads to less crime (Sampson et al. 1997). This makes it more likely for parents to let their children play on the streets (Carver, Timperio & Crawford, 2008), for elderly to go outside in the neighbourhood (Piro, Næss & Claussen, 2006) and for residents to participate in voluntary organizations (Sampson et al. 1997). Such a neighbourhood is livelier and there is more

opportunity to meet other residents. Because opportunity for meeting is a necessary condition for interethnic contact (Kalmijn, 1998), it is expected that: *The more collective efficacy in a neighbourhood, the stronger the positive relationship between ethnic diversity and interethnic contact (H4).*

### 3.3 Economic circumstances in ethnically diverse neighbourhoods

A neighbourhood's economic circumstances are important for how one experiences the neighbourhood and behaves in it (Hjerm, 2009). More affluent neighbourhoods often have better housing, service facilities and job markets. Local poverty, on the other hand, can lead to competition over jobs, public services and education within neighbourhoods (Oliver & Mendelberg, 2000; Tolsma et al. 2008).

The realistic conflict theory states that conflict between groups arises when there is competition over scarce resources (Bobo, 1983). Natives may feel privileged to get jobs or access to services over ethnic minorities (Blumer, 1954). If this is the case, then they will perceive ethnic minorities as a bigger threat to their group position under poor economic circumstances and as a smaller or no threat under good economic circumstances. Neighbourhoods with ethnic diversity and poor economic circumstances can result in common hostile reactions like 'they take away our jobs'. Moreover, perceived ethnic threat may be higher when the in-group's economic position is perceived to be poor (Quillian, 1995), which can be experienced through the economic status of the ethnically diverse neighbourhood (Tolsma et al. 2008: 217). Thus, under more affluent economic circumstances there is less economic group conflict, which leads to the expectation that: *The better economic circumstances in a neighbourhood, the weaker the positive relationship between ethnic diversity and perceived ethnic threat (H5).*

When a neighbourhood is characterised by poverty, there will be less resources available to sustain basic institutions in the neighbourhood like churches, sports clubs, schools and voluntary organizations (Browning & Cagney, 2002). Such institutions foster social networks and trust between native and ethnic minority residents of a neighbourhood (Putnam, 2000). Therefore, there is less of a community in poor neighbourhoods and also less opportunities to meet other people, which in turn leads to less contact between residents. On the other hand, when a neighbourhood has better economic circumstances, there will be more opportunities to meet other residents. In ethnically diverse neighbourhoods such opportunity for meeting is a necessary condition for interethnic contact (Kalmijn, 1998). Previous research has found that in neighbourhoods with a higher mean income there is more contact between residents, higher social trust and residents are more likely to do voluntary work (Tolsma, Van der Meer & Gesthuizen, 2009). Therefore, it is expected that: *The better economic circumstances in a neighbourhood, the stronger the positive relationship between ethnic diversity and interethnic contact (H6).*

## 4. Methods

### 4.1 Data

For this study data was used from the second wave of the Netherlands Longitudinal Life Course Study (NELLS wave two, N = 4456), which was conducted in 2013 among Dutch citizens aged 15-45 (Tolsma, Kraaykamp, De Graaf, Kalmijn & Monden, 2014). This wave of data was collected without problems, while the first wave had some delay and other issues. Longitudinal examination was not possible because the two waves included different variables. The respondents were originally approached through a two-stage stratified sampling procedure. First, a quasi-random selection was made of 35 municipalities by region and degree of urbanization. The second stage was a random sample within the municipalities based on age and ethnicity. In the Netherlands, the definition for belonging to an ethnic minority is when oneself or at least one parent is born in a foreign country (Statistics Netherlands, 2015). Although non-western minorities were oversampled by NELLS, the current study focused only on native respondents (N = 1717). The data was not really representative for the entire native Dutch population because the quasi-random sample overrepresented (semi-)urban municipalities with relatively high percentages of ethnic minorities. This was, however, no problem because the research question demanded a sample that includes enough respondents that live in ethnically diverse neighbourhoods. The selective age group (15-45) did, however, limit the sample's representativeness for the entire native Dutch population. This will be discussed in more detail in the final section of the paper.

The net response rate for the native respondents (83%) was satisfactory. Most of the surveys were completed online by respondents themselves (average time needed: 51 minutes). Though, also face-to-face interviews were used to query respondents (average interview length: 56 minutes). Furthermore, interviewers visited respondents' homes at different days and times. Multiple incentives were used in the study. At first approach respondents could win gift vouchers and an iPad. Respondents who had not yet participated after some time were re-approached and promised additional gift vouchers. Finally, respondents who still did not respond were promised 20 euros in cash. Neighbourhood variables were collected by linking geo-coded addresses to data files of Statistics Netherlands. The respondents' addresses were updated for the second wave, so that correct neighbourhood information could be gathered for people that had moved. The final sample that was used for analysis in this study contained 1151 native respondents that had valid scores on all variables (see Table 1).

### 4.2 Dependent variables

*Perceived ethnic threat* was represented by a four-item Likert-type scale (Cronbach's  $\alpha$  was .881). Respondents were asked to what extent they agreed with the following items: "One day Dutch people will be forced to hire ethnic minorities", "The immigration of ethnic minorities threatens Dutch culture",

“Education of ethnic minorities happens at the expense of Dutch children's education” and “Financial prospects deteriorate due to the presence of ethnic minorities”. The answer categories were the same for all items, namely: totally agree (1); agree (2); do not agree, do not disagree (3); disagree (4); totally disagree (5); never thought about it (6). The last category was coded as a missing value because these respondents may not have an opinion, which made them unfit to merge with any other categories. Furthermore, the answer categories were recoded in the inverse order, so that a higher score related to more perceived ethnic threat. Although one could argue that there are different forms of perceived ethnic threat, namely cultural, political and economic threat (Bobo & Hutchings, 1996; Schneider, 2008; Zarate, Garcia, Garza & Hitlan, 2004), from a factor analysis no different forms of perceived ethnic threat were distinguished. The factor analysis produced one scale with an eigenvalue larger than 1 (2.952), explaining 73.799% of the total variance. Only respondents that had a valid score on all items of perceived ethnic threat were included in this scale.

To measure *interethnic contact* a scale was made from twelve items (Cronbach's Alpha was .853). The items comprised questions about three types of interethnic contact: in the neighbourhood, in school or in the workplace, and in leisure clubs. Respondents were asked how much contact they had with people from the four biggest non-western groups in the Netherlands: Turkish, Moroccan, Surinam/Antillean and other non-western immigrants. An example of a question was: “How much contact do you have with people from a Turkish background in your neighbourhood?”. The answer categories were the same for all items, namely: (almost) every day (1); once or more times a week (2); several times a month (3); once a month (4); several times a year (5); once a year (6); never (7); and I do not have a person of this group in my neighbourhood/school or workplace/leisure club (8). The categories had to be recoded in the inverse order, so that a higher score corresponded with more interethnic contact. The categories “never” and “I do not have this person” both got the score 0, because both categories imply that the respondent has no contact with someone of that ethnic background in a certain context. This lack of interethnic contact could, then, be due to not having ethnic minorities around or due to just not having contact with ethnic minorities. If the category ‘I do not have this person’ would have been coded as a missing value it would be impossible to compare natives that live in more ethnically diverse neighbourhoods to natives that do not live in such neighbourhoods, which is the intention of this study. A final scale was constructed that consisted of the mean of all twelve items. Only respondents that had a valid score on all items of interethnic contact were included in this scale.

#### 4.3 Independent variables

*Ethnic diversity* was measured as the percentage of non-western ethnic minorities in the respondent's neighbourhood. The information came from neighbourhood level data of Statistics Netherlands that were linked to the NELLS dataset. The mean percentage was relatively low (about 9%), while the maximum observed ethnic diversity was 64%.

*Collective efficacy* was represented by a six-item Likert-type scale (Cronbach's  $\alpha$  was .874). Although this paper examined collective efficacy as perceived by individual residents, this can be considered indicative for a neighbourhood's actual collective efficacy as would be perceived on average by all residents. Respondents were asked how strongly they agreed (on a four-point scale) that: "people greet each other in the neighbourhood", "people can be trusted in the neighbourhood", "people get along in the neighbourhood", "people know each other in the neighbourhood", "people like to help each other in the neighbourhood" and "people in the neighbourhood would speak up if youth would make trouble". The answer categories were the same for all items, namely: totally agree (1); somewhat agree (2); not agree (3); totally disagree (4). The categories were recoded in the inverse order, so that a higher score indicated that more collective efficacy was perceived in the neighbourhood. A factor analysis produced one scale with an eigenvalue larger than 1 (3.719), explaining 61.990% of the total variance. Only respondents that had a valid score on all items of collective efficacy were included in this scale.

*Economic circumstances* of the neighbourhood were represented by a four-item scale (Cronbach's  $\alpha$  was .828). The items that were used for the scale are average house value in the neighbourhood, percentage of privately owned residences, average income per person and amount of welfare benefits. All these items came from neighbourhood level data of Statistics Netherlands that were linked to the NELLS dataset. Amount of welfare benefits was recoded inversely to make the highest score correspond with better economic circumstances. A factor analysis produced one scale with an eigenvalue of more than 1 (2.672), explaining 66.811% of the total variance. Only respondents that had a valid score on all items of economic circumstances were included in this scale.

#### 4.4 Individual-level control variables

Demographic, socioeconomic and cultural characteristics of neighbourhood residents were included as controls. Sex was included as a dummy variable set equal to 1 for males: 45 percent of the respondents were male. Age and education were measured in years. Monthly household income was coded as a categorical variable with twelve categories. To make interpretation easier, the variable was recoded into three categories of approximately the same size (30 percent): low (1999 or lower), middle (2000-3499) and high (4000 or higher). Employment was included as a dummy variable (being employed = 1): 88 percent of the respondents were employed. Religiosity was also measured as a dummy variable (being religious = 1): 34 percent of the respondents were religious.

**Table 1.** Descriptive Statistics for Dependent, Independent and Control Variables (*N Listwise = 1151*)

	Range	Mean	Std. Deviation	Valid N
<i>Dependent variables</i>				
Perceived ethnic threat	-1.568 – 2.371	0.000	0.942	1501
Interethnic contact	0 – 6	1.335	1.199	1707
<i>Independent variables</i>				
Ethnic diversity	0 – 64	9.140	8.910	1716
Collective efficacy	-4.021 – 0.997	0.000	0.941	1711
Economic circumstances	-4.589 – 2.427	0.000	0.985	1715
<i>Control variables</i>				
Sex (male = 1)	0 – 1	0.455	-	1717
Age	19.430 – 50.100	36.424	9.107	1717
Education in years	0 – 20	14.940	2.325	1692
Income per month				
Low	0 – 1	0.348	-	1479
Middle	0 – 1	0.381	-	1479
High	0 – 1	0.271	-	1479
Employment (employed = 1)	0 – 1	0.882	-	1544
Religiosity (religious = 1)	0 – 1	0.336	-	1717

#### 4.5 Statistical analysis

This study looked at two outcome variables that were expected to both increase under more ethnic diversity in the neighbourhood: perceived ethnic threat and interethnic contact. Thus, an appropriate method of analysis simultaneously accounts for effects on both dependent variables. Multivariate multiple linear regression has been used to test the effect of each predictor separately and to test the entire regression models. The assumptions of the analysis method were met, as was demonstrated by tests for independence of observations, linearity, normality, multicollinearity and homoscedasticity (not shown here<sup>1</sup>).

Three models were tested, including only cases that had valid scores on all variables (*N listwise = 1151*). Model 1 included only ethnic diversity as explanatory variable together with the control variables. For Model 2 collective efficacy and economic circumstances are added, together with the interaction term of ethnic diversity and collective efficacy. In Model 3 the interaction term of ethnic

<sup>1</sup> Results available upon request.



diversity and economic circumstances is included. Before conducting the analyses, the variable for ethnic diversity was centralized around the mean to prevent heteroscedasticity in the interaction variables and make interpretation easier.

## 5. Results

### 5.1 The effect of neighbourhood ethnic diversity

For Model 1 ethnic diversity and the control variables were simultaneously entered as predictors of perceived ethnic threat and of interethnic contact (see Table 2). The analysis yielded a significant multivariate effect on perceived ethnic threat,  $F(8, 1142) = 26.778, p < .001$ , and on interethnic contact,  $F(8, 1142) = 17.110, p < .001$ . The residual correlation between the two dependent variables in Model 1 was  $-0.064$ , whereas the initial correlation outside of the model was:  $r = -0.117, p < .001$ . About 16% of the variance in perceived ethnic threat was explained, compared to 11% of the variance in interethnic contact.

Contrary to what was expected under H1, neighbourhood ethnic diversity had a significant negative effect on perceived ethnic threat with control variables held constant,  $b = -0.010, t(1141) = -3.337, p = .001$ . Without taking the control variables into account this effect was very similar, meaning that the effect was robust. This suggests that natives in neighbourhoods with a greater share of non-western minorities perceive less ethnic threat than natives in neighbourhoods with less ethnic diversity (see Figure 2). Consistent with H2, ethnic diversity had a significant positive effect on interethnic contact with control variables held constant,  $b = 0.031, t(1141) = 8.297, p < .001$ . Natives that live in ethnically diverse neighbourhoods thus seem to have more interethnic contact than natives that do not live in such neighbourhoods (see Figure 3).

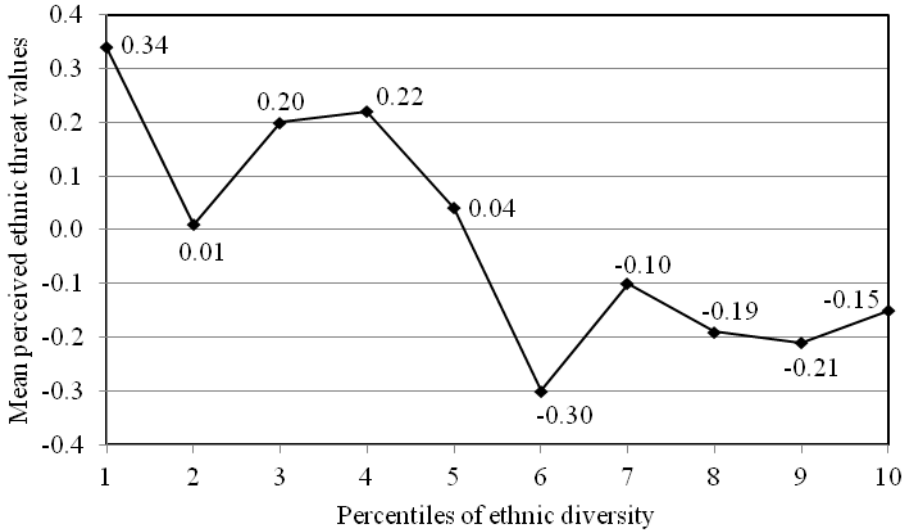
In line with previous research (Gijsberts et al. 2010; Tolsma et al. 2008), an additional test (not shown here<sup>2</sup>) was conducted to control for the reversed causal order, also called selection effect. Natives who already perceived ethnic threat could have moved to non-diverse neighbourhoods, explaining the former unexpected result. Likewise, natives with more interethnic contact could have moved to more diverse neighbourhoods. Because people with higher income have the means to meet their neighbourhood preferences, an interaction term of ethnic diversity and high income (1 = yes) was tested. This test revealed that the effect of ethnic diversity on perceived ethnic threat and on interethnic contact was not different for natives with or without a high income, making selection effects less likely to explain the found relationships.

Some of the control variables also had significant effects. A higher education and age were associated with perceiving less ethnic threat (1 year of education led to a 0.127 reduction in the scale of perceived ethnic threat, 1 year older to a 0.016 reduction). Natives in the highest income category

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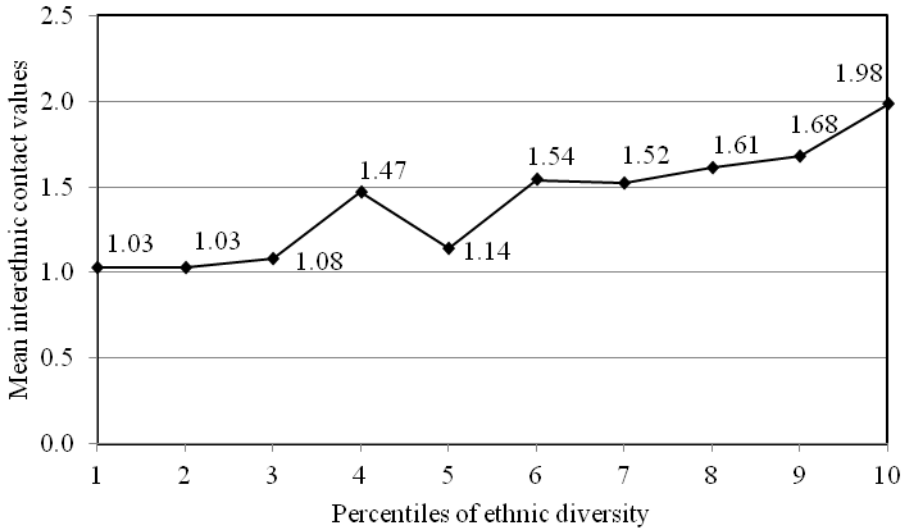
<sup>2</sup> Results available upon request.

also perceived less ethnic threat as compared to the lowest income category (0.162 less to be precise). Religiosity, however, had a positive effect on perceived ethnic threat. Religious natives scored 0.152 higher on the perceived ethnic threat scale than their non-religious counterparts. Males scored 0.185 higher on the interethnic contact scale than females. Also, natives who were employed scored 0.742 higher than unemployed natives. Finally, having a middle income was associated with less interethnic contact as compared to having a low income (a difference of 0.207). These results are mostly in line with previous research, except for the effect of age, which will be discussed in the final section.



**Figure 2.** Perceived Ethnic Threat for Different Percentages of Ethnic Diversity

*Note:* 1<sup>st</sup> Percentile Equals 1% or Less Non-Western Minorities; 10<sup>th</sup> Percentile Equals 21% or More Non-Western Minorities



**Figure 3.** Interethnic Contact for Different Percentages of Ethnic Diversity

*Note:* 1<sup>st</sup> Percentile Equals 1% or Less Non-Western Minorities; 10<sup>th</sup> Percentile Equals 21% or More Non-Western Minorities

## 5.2 Interaction effects of collective efficacy and economic circumstances

For Model 2 ethnic diversity, collective efficacy, economic circumstances, the interaction term ethnic diversity\*collective efficacy and the control variables were simultaneously entered as predictors of perceived ethnic threat and of interethnic contact (see Table 2). The analysis yielded a significant multivariate effect on perceived ethnic threat,  $F(11, 1139) = 19.730, p < .001$ , and on interethnic contact,  $F(11, 1139) = 13.306, p < .001$ . The residual correlation between the two dependent variables in Model 2 was  $-0.061$ . Only slightly more variance in perceived ethnic threat and interethnic contact was explained by Model 2 as compared to Model 1.

Not in line with what was expected under H3 and H4, more collective efficacy in a neighbourhood had no significant effect on the relationships between ethnic diversity and perceived ethnic threat and interethnic contact. Ethnic diversity actually had a negative effect on perceived ethnic threat, as was also found in the previous model. This already refuted H3 because collective efficacy could not weaken a non-existent positive relationship even if the interaction term was significant. Furthermore, the results do not support the expectation that collective efficacy strengthens the positive relationship between ethnic diversity and interethnic contact, thereby also refuting H4.

There was, however, a direct positive effect found of collective efficacy on interethnic contact keeping other variables constant,  $b = 0.084, t(1138) = 2.130, p = .033$ . This suggests that there is more interethnic contact in neighbourhoods where more collective efficacy is perceived by its residents, independent of the share of ethnic minorities in the neighbourhood. Economic circumstances had no direct effect on perceived ethnic threat and on interethnic contact. These results were also robust to changes in the included predictors.

Moreover, no relevant changes have been observed for the other effects in Model 2 as compared to Model 1. The control variable of high income changed to non-significant, but this variable was already just significant in Model 1.

For Model 3 ethnic diversity, collective efficacy, economic circumstances, the interaction term ethnic diversity\*economic circumstances and the control variables were simultaneously entered as predictors of perceived ethnic threat and of interethnic contact (see Table 2). The analysis yielded a significant multivariate effect on perceived ethnic threat,  $F(11, 1139) = 20.079, p < .001$ , and on interethnic contact,  $F(11, 1139) = 13.641, p < .001$ . The residual correlation between the two dependent variables in Model 3 was  $-0.058$ . Only slightly more variance in perceived ethnic threat and interethnic contact was explained by Model 3 as compared to Model 1 and Model 2.

The interaction term of ethnic diversity and economic circumstances had significant effects on the relationship between ethnic diversity and perceived ethnic threat and interethnic contact. No relevant changes have been observed for the other effects in Model 3 as compared to the previous models. The interaction term of ethnic diversity\*economic circumstances had a significant negative effect on

perceived ethnic threat while keeping other variables constant,  $b = -0.005$ ,  $t(1138) = -2,349$ ,  $p = .019$ . This is an extra effect of ethnic diversity ( $-0.016 + -0.005*i$ ) on perceived ethnic threat, where  $i$  is the respondents' score on the economic circumstances scale. Thus suggesting that while more ethnic diversity already relates to less perceived ethnic threat, this is even less in neighbourhoods with better economic circumstances. Still, H5 must be refuted because there was no positive relationship found between ethnic diversity and perceived ethnic threat that could be weakened by better economic circumstances. Instead, better economic circumstances strengthened the negative relationship between ethnic diversity and perceived ethnic threat. Conversely this means that under poorer economic circumstances the negative relationship between ethnic diversity and perceived ethnic threat weakens. In line with H6, the interaction term of ethnic diversity\*economic circumstances had a significant positive effect on interethnic contact while keeping other variables constant,  $b = 0.007$ ,  $t(1138) = 2,375$ ,  $p = .018$ . This is an extra effect of ethnic diversity ( $0.044 + 0.007*i$ ) on interethnic contact, where  $i$  is the respondents' score on the economic circumstances scale. This result seems to indicate that while more ethnic diversity already relates to more interethnic contact, this is even more the case in neighbourhoods with better economic circumstances. Conversely this means that under poorer economic circumstances the positive relationship between ethnic diversity and interethnic contact weakens.

**Table 2.** Summary of Multivariate Multiple Linear Regression Model 1, Model 2 and Model 3 ( $N = 1151$ )

	Model 1				Model 2				Model 3			
	Perceived ethnic threat		Interethnic contact		Perceived ethnic threat		Interethnic contact		Perceived ethnic threat		Interethnic contact	
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Intercept	2.498***	0.225	0.260	0.293	2.469***	0.226	0.324	0.294	2.460***	0.226	0.335	0.293
<i>Independent variables</i>												
Ethnic diversity	-0.010***	0.003	0.031***	0.004	-0.011**	0.004	0.037***	0.005	-0.016***	0.005	0.044***	0.006
Collective efficacy	-	-	-	-	-0.014	0.031	0.084*	0.040	-0.031	0.030	0.107**	0.039
Economic circumstances	-	-	-	-	0.000	0.034	0.032	0.044	0.007	0.034	0.023	0.044
<i>Interaction terms</i>												
Ethnic diversity	-	-	-	-	-0.004	0.003	0.005	0.003	-	-	-	-
* Collective efficacy												
Ethnic diversity	-	-	-	-	-	-	-	-	-0.005*	0.002	0.007*	0.003
* Economic circumstances												
<i>Control Variables</i>												
Male	-0.016	0.052	0.185**	0.068	-0.017	0.053	0.198**	0.068	-0.021	0.053	0.202**	0.068
Age	-0.016***	0.003	0.007	0.004	-0.015***	0.003	0.006	0.004	-0.015***	0.003	0.006	0.004
Education in years	-0.127***	0.012	0.016	0.016	-0.127***	0.012	0.018	0.016	-0.127***	0.012	0.018	0.016
Income middle (Income low = ref)	0.030	0.068	-0.207*	0.089	0.038	0.069	-0.237**	0.089	0.036	0.069	-0.235**	0.089
Income high (Income low = ref)	-0.162*	0.076	-0.104	0.099	-0.148	0.078	-0.152	0.101	-0.158*	0.077	-0.139	0.100
Having work	-0.013	0.088	0.742***	0.115	-0.010	0.089	0.723***	0.115	-0.009	0.088	0.722***	0.115
Being religious	0.152**	0.055	-0.071	0.072	0.147**	0.056	-0.078	0.072	0.146**	0.055	-0.076	0.072
<b>R<sup>2</sup></b>	0.158		0.107		0.160		0.114		0.162		0.116	

Notes: b = unstandardized regression coefficient; SE = standard error; R<sup>2</sup> = amount of variance explained in dependent variable; \* p ≤ .05; \*\* p ≤ .01; \*\*\* p ≤ .001.

## 6. Discussion

There is no consensus among scholars whether ethnic diversity leads to more positive or negative attitudes towards minorities. On the one hand, scholars say that ethnic diversity leads to more perceived threat and this leads to more negative attitudes (e.g., Cernat, 2010; Quillian, 1995). On the other hand, scholars say that diversity leads to more interethnic contact and therefore more positive attitudes (e.g., Dirksmeier, 2014; Oliver & Wong, 2003; Wagner, Christ, Pettigrew, Stellmacher & Wolf, 2006). However, few studies have actually investigated if perceived ethnic threat and interethnic contact are really an outcome of ethnic diversity (Laurence, 2014). This study made two contributions to the existing literature. Firstly, it investigated the direct effect of ethnic diversity on perceived ethnic threat and on interethnic contact. Multivariate multiple linear regression analyses were used in which threat and contact were both dependent variables at the same time. The second contribution of this study was that it tested if neighbourhood collective efficacy and economic neighbourhood characteristics could change or influence the relationship between ethnic diversity and perceived ethnic threat or interethnic contact.

In contrast to the expectations, the results of this study showed that natives that live in more ethnic diverse neighbourhoods perceive *less* threat from non-western ethnic minorities, but, as expected, they have more contact with non-western ethnic minorities. An additional analysis was performed to control for selection effects. This showed that the effect of ethnic diversity on perceived ethnic threat and interethnic contact did not differ for natives with or without a high income. Therefore, it makes it unlikely that selection effects could explain the found relationships. Neighbourhood collective efficacy did not have an influence on the relationship between ethnic diversity and threat and contact. The economic circumstances of a neighbourhood were found to positively influence the relationship between ethnic diversity and perceived ethnic threat and interethnic contact. These findings supplement previous research about the response of natives to ethnic minorities. There is now a clearer view that ethnic diversity is directly related to less perceived ethnic threat and more interethnic contact.

The finding that natives in more ethnic diverse neighbourhoods perceive less ethnic threat is surprising, as it contrasts earlier research by Schlueter & Scheepers (2010). This study showed that only ethnic diversity is simply not enough to make natives perceive more ethnic threat. In fact, ethnic diversity is even related to less perceived ethnic threat. This is an important finding, because perceived ethnic threat is related to more negative attitudes or more prejudice towards minorities (Blumer, 1958; Bobo, 1983; Quillian, 1995; Tajfel & Turner, 1997). In more ethnically diverse neighbourhoods there will probably be less prejudice and negative attitudes towards minorities, because natives perceive less ethnic threat. The finding that ethnic diversity leads to less perceived ethnic threat could be explained by the fact that perceived ethnic threat and interethnic contact are negatively related to each other (as

shown in the results section). It could be argued that when natives have more contact with ethnic minorities, they would get more familiar with them and would therefore perceive less threat (Schneider, 2008). Future research could investigate what factors influence the relationship between perceived ethnic threat and interethnic contact. Another reason that the findings from this study contradict with previous findings from Schlueter and Scheepers (2010) could be because they used another measure of ethnic diversity. Schlueter and Scheepers (2010) used ethnic diversity as perceived by the respondents while this study used the actual percentage of ethnic minorities in a neighbourhood as measure for ethnic diversity using neighbourhood level data of Statistics Netherlands. Maybe the respondents from the data used by Schlueter and Scheepers (2010) overestimated the share of ethnic minorities in their neighbourhood and therefore also perceive more competition over resources from minorities. Furthermore, there should be other factors that could explain when natives perceive more ethnic threat. One of those factors is the way in which ethnic minorities are portrayed in media and politics. Schlueter and Davidov (2013) already showed that negative immigration-related news reports relates to more perceived ethnic threat. Another factor that could influence threat is the 'colorization' of a neighbourhood. Colorization is the speed of the inflow of ethnic minorities in the neighbourhood. Gijsberts and Dagevos (2004) found that a faster colorization is related to more negative attitudes towards minorities. It could be investigated in future research whether this colorization also leads to more perceived threat. There are some studies that found that ethnic diversity is related to more negative attitudes towards minorities (e.g. Cernat, 2010, Quillian, 1995). While those studies often assumed that perceived ethnic threat is an underlying mechanism between ethnic diversity and negative attitudes, this study showed that this assumption is wrong. Further research should investigate what the underlying mechanism between ethnic diversity and negative attitudes towards minorities is.

Furthermore, this study showed that Dutch natives that live in a more ethnic diverse neighbourhood have more contact with non-western ethnic minorities. This was in line with expectations based on previous research (Gijsberts et al., 2010). It could be assumed that natives that live in an ethnically diverse neighbourhood simply have more opportunity to meet ethnic minorities (Kalmijn, 1998) and therefore will have more ethnic contact. This finding is important because interethnic contact leads to more positive attitudes towards minorities (Pettigrew & Tropp, 2006). More contact also helps ethnic minorities to integrate better in the society, because they gain access to social capital from natives (Hagendoorn, Veenman & Vollebergh, 2003; Martinovic, Van Tubergen & Maas, 2009).

Contrary to the expectations, there is no effect found of collective efficacy on the relationship between ethnic diversity and perceived ethnic threat. Collective efficacy is an overarching concept of social circumstances that consists of social trust and neighbourhood connectedness among residents, combined with a willingness to intervene and use social control on behalf of the common good (Sampson, Raudenbush & Earls, 1997). This finding means that natives will not perceive more ethnic threat in an ethnically diverse neighbourhood with low collective efficacy than in a diverse neighbourhood with high collective efficacy. With this finding there is no support found for the

scapegoat theory of Allport (1948). That means that when a neighbourhood does not have the ability to deal with social problems in the neighbourhood and ethnic minorities are more frequently encountered by natives, these minorities will probably not be blamed for the inability to deal with social problems. So, it appears that social circumstances of the neighbourhood do not have an effect on the relationship between ethnic diversity and perceived ethnic threat. However, one could argue that other social circumstances than collective efficacy do have an effect. Maybe collective efficacy is not a good measurement of a social neighbourhood characteristic. Collective efficacy was constructed as a scale from survey items. These survey items only ask one person in the neighbourhood about the collective efficacy and it could be argued that the items are therefore not representative for the entire neighbourhood. The concept collective efficacy could be too subjective and a more objective factor is needed to see if social circumstances have any influence. Havekes et al. (2014) found that social disorder (for example youth nuisance, crime and street litter) in a neighbourhood influences the relationship between ethnic diversity and interethnic attitudes. Maybe social disorder influences the relationship between ethnic diversity and perceived ethnic threat as well.

Furthermore, there is no effect found of collective efficacy on the relationship between ethnic diversity and interethnic contact. This is a surprising finding, because it means that even though the ethnically diverse neighbourhood has more connectedness and social trust and thus provides more meeting opportunities for everyone, this will not lead to even more interethnic contact. This surprising finding could also be blamed on the subjective measure of social circumstances. Future research can investigate the effect of objective forms of social contextual factors on the relationship between ethnic diversity and perceived ethnic threat and interethnic contact.

Although this research was not interested in the direct effects of collective efficacy on threat and contact, a direct effect of collective efficacy on interethnic contact was found. This means that in a neighbourhood with more social trust, control and connectedness people will have more interethnic contact, regardless of whether there live many ethnic minorities or not. This is not surprising because when someone has more interethnic contact with other persons in his neighbourhood, he will probably perceive that other residents in his neighbourhood are connected with each other as well.

Economic circumstances of a neighbourhood had an influence on the relationship between ethnic diversity and perceived ethnic threat. The results show that while more ethnic diversity relates to less perceived ethnic threat, this is even more the case in neighbourhoods with better economic circumstances. This finding is still in line with the existing literature about perceived ethnic threat. According to Quillian (1995), natives perceive more threat when their position is perceived poorer, which may be experienced through the economic status of the neighbourhood (Tolsma et al., 2008). That means that natives perceive less ethnic threat when their position is perceived higher. Thus, under more affluent economic circumstances there is less economic group conflict and thus less perceived ethnic threat.



Moreover, better economic circumstances were also found to strengthen the positive relationship between ethnic diversity and interethnic contact. These findings indicate that while more ethnic diversity already relates to more interethnic contact, this is even more the case in neighbourhoods with better economic circumstances. A plausible explanation for this found effect could be that in neighbourhoods with better economic circumstances, there are more social institutions like churches, sports clubs, school and voluntary organizations (Browning & Cagney, 2002). Those institutions can give more opportunity to natives to meet ethnic minorities and therefore they will have more interethnic contact. Overall, economic circumstances thus have a moderating effect on the relationship between ethnic diversity and perceived ethnic threat or interethnic contact.

There are some limitations of this research that should be addressed. Firstly, there is a problem with generalization to the whole population. Firstly, the sample consisted only of people in the age group 15 to 45 years old. Quillian, (1995) and Schlueter and Davidov (2013) found that natives with a higher age perceive more ethnic threat. Our contrasting finding that older people would perceive less ethnic threat could be explained by our limited sample. Therefore, conclusions about older age groups should be taken with care.

The second limitation is about generalization to other countries. Many European countries have seen similar immigration processes as the Netherlands after the Second World War. So the finding of this study could be applicable in other European countries with relatively high number of non-western minorities. However, the United States has a different immigration history and therefore another composition of neighbourhoods. Unlike in the Netherlands, in the USA there are mono-ethnic neighbourhoods: neighbourhoods that are (almost) completely segregated and where only people from one group of ethnic minorities live (Gijsberts, Van der Meer & Dagevos, 2012). In cities with these kind of neighbourhoods, perceived ethnic threat and interethnic contact might work different.

While this study looked at non-western immigrants in general, future research could make a distinction in different ethnic groups. Ethnic groups can differ in a cultural, racial or economical way with natives. This could effect in which way threat will be experienced. For example, if minorities have the same position as natives, natives could perceive more competition over scarce goods and therefore more threat (Quillian, 1995).

To conclude, this study gives a rather positive view about ethnic diversity in neighbourhoods. Natives that live in ethnically diverse neighbourhoods perceive less threat from ethnic minorities and have more contact with them. More interethnic contact and less perceived threat can lead to more positive attitudes towards ethnic minorities. This can have positive effects on the lives of ethnic minorities. Ethnically diverse neighbourhoods give space to less discrimination and more acceptance of minorities. Therefore, segregation of minorities should be counteracted and more ethnically diverse neighbourhoods should be supported. Furthermore, economic circumstances are especially important in ethnically diverse neighbourhoods. There should be given more attention and support to improve the situation of ethnically diverse neighbourhoods with poor economic circumstances.

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