The relation between ethnic diversity and fear of crime: An analysis of police records and survey data in Belgian communities.

Hoog	he, M.,	, De V	roome,	Т.
------	---------	--------	--------	----

NOTE: post-print version, November 16, 2015

This article may not exactly replicate the final version published in the journal.

It is not the copy of record.

The definitive version will be available online:

Hooghe, M., De Vroome, T. (in press).

The relation between ethnic diversity and fear of crime:

An analysis of police records and survey data in Belgian communities.

International Journal of Intercultural Relations,

Abstract

In the framework of intergroup threat theory, it is routinely assumed that the presence of immigrant groups in a local community could contribute to fear of crime among the majority population. This could be explained by a direct relation between ethnic diversity and some forms of crime, but it can also be expected that stereotypes toward specific groups of the population contribute to a perception of group threat. In this article it is assessed how the real and perceived presence of immigrant groups and the occurrence of criminal acts are related to fear of crime. The analysis is based on a combination of newly available official police records and survey data for local municipalities in Belgium. The results show there is no significant relation between reported crime and fear of crime. The community level of ethnic diversity is, however, significantly related to fear of crime. The findings suggest that applications of group threat theory should not only focus on economic and cultural threat, but also on the perceived impact of diversity on crime and safety.

Keywords: Crime, fear of crime, ethnic threat, community, Belgium, police records

Literature

Both in popular discourse as in political rhetoric, the presence of ethnic minorities and immigrant groups is often related to crime and fear of crime (Bianchi, Buonanno & Pinotti, 2012; Sampson, Raudenbush & Earls, 1997). The majority population of a society shows a tendency to associate members of immigrant groups with specific forms of mostly violent crime, and anti-immigrant rhetoric in quite some cases focuses on the threat of crime that is associated with the presence of ethnic minorities (Chiricos, Hogan & Hertz, 1997; Ceobanu, 2011; Hummelsheim et al., 2011; Jackman & Volpert, 1996). From a theoretical perspective, this is an interesting association as it shows that crime could be an important component of perceived intergroup threat (Riek, Mania & Gaertner, 2006). At least three different possible causal mechanisms can be distinguished in this relation. First, some research hints at the fact that specific ethnic groups tend to specialize in specific forms of crime (Beckley, 2013; Hawkins, 2011; Ousey & Kubrin, 2009). A possible relation therefore could be that ethnic minorities tend to specialize in those forms of crime, like the drugs trade, that have a stronger impact on fear of crime than forms of crime that are apparently being practiced more frequently by members of the majority group (Paoli & Reuter, 2008). Violent crime, street and drug-related offences are obvious culprits in this regard, while on the other hand various forms of white-collar crime that might be practiced more often by majority group members seem less strongly related to fear of crime and threat among the population (Gordon, 1990). A second plausible mechanism is based on the assumption that those who have high levels of social dominance orientation are more likely to associate visible minorities with crime and threat, even disregarding the evidence that is being offered by objective figures with regard to crime prevalence and victimization. In that case, fear of crime could be considered as a precursor for anti-immigrant sentiments (Barkan & Cohn, 2005). Finally, a third possible causal mechanism is that members of the majority group are more likely to see crime as disturbing and threatening if it is being committed by a member of a visible minority group (Sweeney & Haney, 1992). The assumption here is that the same act is experienced as more threatening when it is being practiced by a member of a visible minority than when the same act is being practiced by a member of the majority group. Self-evidently, we should also pay attention to the possibility that these three mechanisms occur simultaneously and might even reinforce one another. Both from a scientific as from a social point of view, however, it is highly relevant to determine how exactly we can explain a relation between ethnic diversity in society and fear of crime.

In this article, we mainly pay attention to the first and the second possible mechanism. In other words, we examine the relation between diversity and fear of crime as a test of the intergroup threat perspective, suggesting that the relation largely stems from prejudiced perceptions, while controlling for the possibility that violent crime could in fact be associated with immigrant concentration in some neighborhoods. We do not have any information on the perpetrators of criminal acts, as police records obviously do not contain information on the ethnic origin of all perpetrators. An alternative strategy is to rely on spatial data that allow us to ascertain whether, at the aggregate level, there is at least a correlation between the presence of ethnic minorities and the occurrence of specific criminal acts (Sampson, 2008; Hooghe et al., 2011). While taking into account both the actual level of crime and the presence of ethnic minorities in local communities, we ascertain whether the relation between diversity and fear of crime can be explained by to the occurrence of anti-immigrant sentiments. This relation will be investigated using the results of a representative population survey in the northern Dutch speaking part of Belgium, where police records on crime and population records on the presence of ethnic minorities can be related to the attitudes expressed in the survey. It is important to note that we can rely on police data about registered crime, which can be located at the level of the community. As it is the first time the Belgian federal police has made these data available for scientific research, this allows us to move a step further than previous studies that did not have access to these data.

In the remainder of this article, we first review the literature on the relation between fear of crime and anti-immigrant sentiments, before we present data and methods. We close with some observations on why fear of crime is associated with the occurrence of anti-immigrant sentiments.

Group threat and feelings of unsafety

The feeling of group threat is a major determinant for anti-immigrant sentiments in Western Europe (Semyonov, Raijman & Gorodzeisky, 2006). For the majority population, the influx of new ethnic groups could be considered as a threat to their dominant position, as it introduces new competitors in the competition over scarce resources. The subjective feeling of being threatened thus is a major component of the occurrence of tensions between ethnic groups in a diverse society (Quillian, 1995). A meta-analysis has shown that various forms of threat tend to contribute to the occurrence of anti-immigrant sentiments, and these threats can

refer both to economic, realistic as symbolic issues. Security threat has been identified as one of the important elements within this framework (Riek et al., 2006). The perception of group threat can be economic, as immigrants are seen as competitors on the labor and the housing market, or are considered to be a potential burden for social security systems (Schlueter & Scheepers, 2010; Semyonov, Raijman & Yom-Tov, 2002). In these cases, it is assumed that negative attitudes will be directed mainly toward immigrants originating from poor countries, or those having a weak position on the labor market. Other authors have emphasized that immigration might also lead to a feeling of cultural or symbolic threat, because immigrant groups challenge the cultural hegemony of the dominant majority within society (Sniderman & Hagendoorn, 2007). This feeling of threat is especially present when the cultural distance with immigrant groups is perceived to be larger, e.g., because of a different religious or cultural background. The fear of crime, furthermore, can also be considered an element of realistic threat, as members of the majority group have been shown to become more worried about crime and safety as a result of the presence of ethnic minorities in their communities (Chiricos, McEntire & Gertz, 2001; Drakulich, 2013; Semyonov, Gorodzeiksy & Glikman, 2012; Solivetti, 2010; Wang, 2012; Wickes et al., 2013).

Various arguments can be invoked to explain why there is such a strong association between ethnic diversity and the social discourse on crime and safety. A first possible mechanism is that specific groups within the ethnic minority population indeed would be more active in specific criminal activities. For some specific forms of crime, studies have shown clear differences with regard to the prevalence within ethnic communities, although it has to be noted that most of these differences can be explained by socio-economic background variables (McNulty & Bellair, 2003; Paoli & Reuter, 2008). On an overall level, however, most studies do not show a significant relation between the presence of ethnic minorities and the occurrence of crime within a society (Peterson & Krivo, 2005; Reid, Weiss, Adelman & Jaret, 2005; Rumbaut & Ewing, 2007). Deprivation, a lack of collective efficacy, high levels of unemployment and the disruption of community ties have been shown to have a much stronger impact on crime rates (Hooghe et al., 2011; Reid et al., 2005). Studies actually show convincingly that, controlling for the most important correlates of crime rates, ethnic minority concentration in communities is actually strongly related to lower levels of violent crime (Martinez, Stowell & Lee, 2010; Morenoff & Astor, 2006; Ousey & Kubrin, 2009; Reid et al., 2005; Sampson, 2008; Stowell, Messner, McGeever & Raffalovich, 2009; Vélez, 2009). Relatedly, in the US context, authors have even suggested that immigration may have played an important role in the observed crime drop in the 1990s (Ousey & Kubrin, 2009; Nielsen & Martinez, 2011; Reid et al., 2005; Rumbaut & Ewing, 2007). Therefore, the possibility that visible minorities tend to specialize in those forms of criminal activity that have the strongest impact on fear of crime among the majority population, does not seem the most plausible explanation of the relations between immigration, fear of crime and anti-immigrant prejudice. Alternatively, the alleged relation between ethnic minority status and crime can be explained by a mechanism of ethnic stereotyping (Unnever & Cullen, 2012). For actors with a high level of ethnic prejudice and a tendency towards social dominance orientation, the association between ethnic status and criminal behaviour is much more salient than among social groups with lower bias levels as suggested by the ethnic threat perspective (Barkan & Cohn, 2005; Drakulich, 2013; Wang, 2012). This association might even become stronger as a result of media reporting that emphasizes the involvement of ethnic minority groups in some forms of crime (Chiricos & Eschholz, 2002; Durkin et al., 2012; Eschholz, Chiricos & Gertz, 2003). Recent research has shown that ethnic stereotypes to some extent help to explain the relation between perceived ethnic diversity of the community and perceived risk of victimization (Eschholz et al, 2003; Pickett et al., 2012). However, Pickett et al. (2012) acknowledge that stereotyping should be considered as only partly responsible for this strong relation.

It should be noted, furthermore, that all of these relations have been investigated at the aggregate level. As most citizens do not have a first-hand experience with serious criminal acts, it remains to be investigated whether similar experiences with regard to victimization, but with different categories of perpetrators, indeed would lead to different effects.

Since we can only rely on aggregate level data, disentangling the relation between ethnic diversity and the occurrence of crime is notoriously difficult, because neither immigrants nor crime are randomly distributed across a society. Especially large impoverished urban areas simultaneously tend to concentrate ethnic diversity, unemployment and relatively high levels of crime (Krivo & Peterson, 1996). These neighborhoods thus are specifically vulnerable for symptoms of social disorder, which can have a negative effect on residents' satisfaction with the living conditions in their neighborhood (Sampson, Morenoff & Raudenbusch, 2005). Another caveat to the existing research is that most analyses have been based on research in the United States, with Afro-Americans serving as the category that is most often associated with crime by White respondents. It remains to be investigated therefore, whether a similar logic also applies to other ethnic minorities, most notably in Western Europe, where ethnic diversity has increased as a result of 20th century migration movements.

The literature on the relation between diversity, ethnic threat and fear of crime leads to a number of hypotheses. A first hypothesis is that fear of crime actually reflects crime levels. Although research has shown that there is no clear or direct relation between crime and fear of crime, it is obvious that actual crime levels at least should serve as a control variable (Visser, Scholte & Scheepers, 2013). Previous studies have examined these relations without having access to reliable figures on the actual occurrence of crime (Hooghe & De Vroome, 2015) and the fact that police records now have become available for Belgium allows us to include this crucial element. This leads to our first hypothesis:

H1. The prevalence of crime in the community is positively related to fear of crime.

While the contact theory assumes that ethnic diversity will be associated with more positive contacts with outgroup members, and thereby reduce levels of prejudice, this kind of approach seems less relevant given our current focus on crime and feelings of unsafety. Following the intergroup threat hypothesis, one can assume that members of the majority will feel threatened by the mere presence of visible minorities within the community (Wang, 2012). On the one hand, this feeling of threat can lead to higher levels of prejudice toward these minority groups, but at least US-based research also suggests that ethnic diversity as such would be associated with higher levels of fear of crime:

H2. Following intergroup threat theory, we expect that the (perceived) presence of immigrant groups is positively related to fear of crime.

These two hypotheses will guide us through the analysis, which is based on police records and survey data in Belgium.

The Belgian case

The hypotheses will be tested using data on Belgium. This country can be considered as a good test case, since it is close to European averages, both with regard to the level of ethnic diversity and with regard to the prevalence of crime (Semyonov, Raijman, & Gorodzeisky, 2006; Van Dijk, Van Kesteren & Smit, 2008). In the Belgian context, ethnic diversity mainly refers to the presence of migrant populations, originating from Turkey, Morocco and other

Mediterranean countries. In comparative research, Belgium is often considered as a diverse society, because of the linguistic divide between the Dutch and the French language groups in the country. It has to be remembered, however, that there is a rather strict geographical segregation, with the Dutch language group living in the northern autonomous region of Flanders, and the French language group in the southern region of Wallonia. In practice, therefore, negative feelings toward outgroups are mainly directed toward immigrants and their descendants, and not toward the other language community in the country (Hooghe & De Vroome, 2015). Although this average European position does not imply that findings on Belgium could be generalized toward other European countries, there is no obvious reason to assume that Belgium would be an exceptional case in the European context. An additional advantage of using data from Belgium is that we can rely on the results of a uniform police system of registering criminal acts across the territory of the country.

Data and Methods

First, to measure our variables at the individual level, including fear of crime, anti-immigrant sentiments and perceived ethnic diversity, we use the Social Cohesion Indicators in Flanders (SCIF) survey. This survey was conducted in 2009 among a representative sample of the adult population of the Dutch-speaking region of Belgium. The survey consisted of 2,085 face-toface interviews, and the response rate of the survey was 54 %, resulting in a reliable and representative sample of the population of that region (Hooghe, Vanhoutte and Bircan 2009). Considering the nature of our research questions, only the respondents who are themselves Belgian-born and whose parents were Belgian-born were included in the analysis (n= 1,838). Self-evidently, it is theoretically just as relevant to investigate fear of crime and prejudice among ethnic minorities, but given the distribution of the sample, no reliable analyses can be conducted using the results of this subgroup. Therefore it is a safer strategy to concentrate only on those respondents that are regarded Belgian natives themselves (van Craen, 2013). We have deleted cases with missing values listwise. All in all, the sample in the analysis therefore includes 1,756 respondents. These respondents are concentrated in 40 Flemish municipalities, selected via stratified random sampling to ensure a good distribution according to municipality size, rendering this dataset ideally suited to conduct multilevel analysis.

Belgium can be considered as a good case for this kind of study: the pattern of immigration and diversity is close to the average for Western European countries. Ethnic minorities mainly

settled in from the 1960s on, from countries like Turkey, Morocco, and other countries in the Mediterranean area. This population, and their descendants, still tend to be concentrated in the main urban areas of Belgium (Teney, Jacobs, Réa & Delwit, 2010). Also with regard to migration and integration policy, Belgium in generally is considered to be a moderate country compared to its European neighbours (Niessen & Huddleston, 2009).

The macro level data available for the smallest geographic unit in Belgium are situated at the municipal level. The Flemish region of Belgium is divided in 308 municipalities with a large degree of autonomy (Wauters, Verlet & Ackaert, 2012). The region has a population of 6,250,000, and the average population size of a municipality is 20,300 which is sufficiently small to provide a sense of community for most inhabitants. Both the real-life data on ethnic diversity as well as the real-life data on incidence of crime were collected at the municipal level. Regarding the level of ethnic diversity in municipalities, statistical data was obtained from the Belgian National Institute of Statistics, that keeps the official population records. The data on the incidence of registered criminal acts was provided by the Belgian Federal Police, and it includes the registration of both the federal police and the local police forces. These data are comprehensive, as they include all criminal facts registered by the police force in Belgium, including the exact location of the reported crime. Because of data restrictions, however, these police data are not yet routinely used in scientific research and have only recently been made available.

Measurements

The dependent variable in this study, the scale variable for fear of crime, was measured with three Likert-type items. The items included: (1) 'How much have you feared the crime that went on in your neighborhood over the past twelve months?', (2) 'How much have you feared that you could become a victim of burglary over the past twelve months?', and (3) 'How much have you feared that you could become a victim of physical violence over the past twelve months?'. For the first question on the neighbourhood, the respondents received the instruction that they should consider as their neighbourhood the entire area they could reach in a ten minute walk. Respondents could answer with 'not at all', 'not much', 'somewhat', 'quite much', or 'intensely'. The three items proved to be a one-dimensional scale, with one factor, Eigenvalue 1.74, and 58.07 per cent explained variance. The scale represents the average of the three items, and is internally coherent with a Cronbach's α of 0.62.

Independent variables

Regarding explanatory variables at the individual level, anti-immigrant sentiments was measured with a three item scale that is exactly the same as the scale used in the European Social Survey. Previous research has shown convincingly that these items can be regard as a valid operationalization of the concept (Semyonov & Glikman, 2009). The items include: (1) 'Would you say it is generally bad or good for the Belgian economy that people come to live here from other countries?', (2) 'Would you say that Belgian cultural life is generally undermined or enriched by people coming to live here from other countries?', and (3) 'Is Belgium made a worse or a better place to live by people coming to live here from other countries?'. The three items proved to be a one-dimensional scale, with one factor, Eigenvalue 1.94, and 64.51 per cent explained variance. The scale represents the average of the three items, and is internally coherent with a Cronbach's α of 0.73. As is customary with research on anti-immigrant sentiments, this can be considered as a strong and reliable attitudinal scale.

Earlier research has shown that not the actual level of ethnic diversity has an effect on antiimmigrant sentiments, but rather the perceived level of ethnic diversity (Eschholz et al. 2003; Semyonov et al., 2004). Therefore, the perceived percentage of non-Belgians in the population was measured by asking respondents how many out of every hundred people in Belgium they think are non-Belgians. As in earlier research, it is obvious that native respondents tend to overestimate the percentage of visible minorities within their country. Respondents were also asked to indicate how many hours they spent on average on watching television each day, as television consumption has previously been suggested to be a major factor contributing to perceptions of ethnic threat (Chiricos, Padgett & Gertz, 2000; Eschholz et al, 2003). Regarding control variables at the individual level, we take into account gender, age, and level of education (measured as a six-point scale ranging from no education to university education), as these background characteristics have been shown to have an effect on anti-immigrant sentiments (Schneider, 2008).

Following our hypotheses on the effect of the real-life incidence of crime and actual levels of diversity, we further take into account independent variables at the municipality level. Regarding the concentration of immigrants, we focus on the percentage of non-EU nationals in the municipality, calculated as the stock of non-EU nationals divided by the population size of the municipality (Semyonov et al., 2006). Non-EU nationals refers to immigrants from countries outside the EU-15 countries (Schneider, 2008). We selected this criterion because previous analyses suggest that in the Belgian context, anti-immigrant sentiments are almost

exclusively directed toward this group, rather than towards immigrants from neighboring countries and other countries within the European Union (Meuleman, Davidov & Billiet, 2009).

Based on the data provided by the Belgian federal police, we can investigate the influence of the occurrence of violent crime on fear of crime and anti-immigrant sentiments. We focus on violent crime as it can be assumed that this form of crime has the strongest impact on fear of crime among the population (Ferraro & Grange, 1987; Hawdon et al., 2014). Violent crime is associated more strongly with a general sense of local disorder than e.g. white collar crime (Drakulich, 2013). The variable for violent crime captures the incidence in the year 2009 of the following acts: armed robbery, violent robbery without weapon, intra-family violence, violence against public officials, murder, manslaughter, physical assault, stalking, sexual assault and rape. The total incidence of these acts in each municipality was used to calculate the violent crime rate. The violent crime rate was then calculated as the number of incidents divided by the municipality population size, multiplied by 1000, giving the relative incidence of violent crime per 1000 members of the population in each municipality. In the analysis, we included two control variables at the macro level. First, based on data of the national statistics agency, we have included the average net income per resident in the analysis as deprivation can play a role in explaining feelings of unsafety. Second, population size was also used as a control variable as lack of collective efficacy and social disorder tend to be concentrated in urban areas (Sampson, Raudenbusch & Earls, 1997).

Method

Because of the nested structure of the SCIF survey research design, and considering that our research questions also focus on the influence of municipality level variables, we use a multilevel model in our analysis. This method allows simultaneously modeling of the effects of individual level and municipality level predictors, while variance explained by attributes of the municipality and variance explained by attributes of the individual can be distinguished, and standard errors are estimated correctly (Hox 2002; Snijders and Bosker 1999). We have also tested interactions, to evaluate whether the effects of age and female gender interact with the proportion of non-EU nationals in the municipality to predict fear of crime. We therefore included random slopes for age and for female gender in the respective models that tested these cross-level interactions.

Results

Descriptive results

As can be observed from Table 1, the reported fear of crime levels are rather low. The average is .30 on a scale ranging from 0 to 4. Despite the fact that crime is often considered as an important political issue in Belgium, the Belgian population apparently is not overly concerned about being victimized by crime. The average perceived percentage of non-Belgians in the population is 28 per cent which, though the reference group is not exactly the same, is in stark contrast to the actual percentage of non-EU nationals at 2 per cent. On average, people are found to spend about two-and-a-half hours a day watching television. Furthermore, levels of anti-immigrant sentiments are on average around the neutral midpoint of the scale.

At a bivariate level, we find a positive correlation between fear of crime and the real-life violent crime rate (Table 2). The correlation, however, is not all that strong. The violent crime rate is negatively associated with anti-immigrant sentiments, leading to the rather counterintuitive conclusion that in communities with high levels of violent crime (i.e., mainly urban centers), levels of anti-immigrant sentiments tend to be lower. Furthermore, there is a clear correlation between anti-immigrant sentiments and fear of crime.

Multilevel regression results

Following this first bivariate exploration of the data, we now move to the multivariate analysis. The first model in Table 3 does not include any predictors, but shows the variance at the individual and municipality levels and the intraclass correlation (ICC). This model shows that the variance at the municipality level is relatively small, compared to the individual level variance, and the ICC relatively low (.013).

The results, presented in the second model of Table 3, indicate that the relative prevalence of violent crime in the municipality does not have an impact on fear of crime. Despite the fact that we can rely on a reliable measurement at the community level, apparently the frequency of registered violent crime is not related at all to the fear of crime among the population of that community.

Regarding the percentage of non-EU nationals, we do observe a significant relation with fear of crime. Respondents living in a municipality with a higher percentage of non-EU nationals tend to feel more unsafe. It has to be remembered that this effect occurs while controlling for the actual level of registered crime, so the conclusion has to be that the mere presence of non-EU-nationals is responsible for this effect, not their alleged impact on crime levels in the local community.

Regarding our control variables at the municipality level, we find that population size is not related to fear of crime and anti-immigrant sentiments. Despite the fact that there is a strong positive association between population size and the occurrence of violent crime, as well as the occurrence of property crime and drug-related crime (as is routinely the case in this kind of research), apparently there is no significant difference in fear of crime between respondents living in a rural area and those living in an urban center. The average net income in the municipality is also unrelated to fear of crime.

Looking at Model 2 in Table 3, we only find significant relations at the individual level regarding the control variables, age and gender. Fear of crime is lower among men and decreases with age. This means that the perceived percentage of non-Belgians is not associated with fear of crime levels. It has to be remembered in this regard that this relation also controls for the actual level of non-EU nationals in the community, so the estimated effect of the perceived level of diversity does not inform us about reality but rather about the worldview of the respondent. Regarding our second hypothesis, we can thus conclude that only actual levels of diversity appear to have an impact on fear of crime. It can however be argued that prejudice lies behind this association, which is why we control for anti-immigrant sentiments in the third model in Table 3. It can be observed, however, that while antiimmigrant sentiments are positively related to fear of crime, the direct relation between community level diversity and fear of crime remains exactly the same. Moreover, the bivariate correlation between community level diversity and anti-immigrant sentiments is negative (see Table 2), suggesting that positive interethnic contacts outweigh the perceived threat associated with ethnic diversity. Furthermore, an interaction between the level of diversity in communities and fear of crime, tested in the fourth model in Table 3, is not significant. This means that the relation between anti-immigrant sentiments and fear of crime does not depend on the level of ethnic diversity in the community, and in other words it further demonstrates that the direct relation between community level diversity and fear of crime is independent from anti-immigrant prejudice.

To investigate whether the relation between ethnic diversity and fear of crime is stronger among specific social groups that are more vulnerable to violent crime, such as older residents and women, we have tested interaction effects. Because these interaction effects did not turn out to be significant, we have not included them in the main results presented here (available from the authors). The effects that emerge in the analysis, therefore, should be considered as more general effects, they are not specific to groups at risk within society.

Interestingly, it is the percentage of non-EU nationals, rather than the violent crime rate, that is significantly associated with fear of crime. To put it in a more provocative manner: the presence of ethnic minorities in one's community has a much stronger impact on fear of crime than actual registered crime rates.

For the sake of conciseness, we have focused on our main results in this section. However, it should be noted that we have carried out some robustness analyses to cross-validate our results. First, the federal police has provided us with a complete range of statistics on crime in Belgium. This means that, in addition to information on violent crime, we also have information on property crime and drug-related offenses. We have investigated the effects of violent crime in our main analysis because it can be expected that this form of crime is most closely associated with respondent's fear of crime. Moreover, because the relative frequency of violent crime, property crime and drug-related crime is highly correlated at the level of municipalities, as they are much more frequent in the major urban centers of the country, it is not possible to include all three crime rates simultaneously in our analysis. Alternative models with the rates of property crime and drug-related crime instead of violent crime confirm our main results. Furthermore, as also the measures of violent crime, percentage of non-EU nationals and population size are highly correlated, we have also tested the influence of these factors in separate models, which also confirm our main results.

Discussion

In this article, we investigated the prevalence and determinants of fear of crime in Belgian communities, capitalizing on the availability of crime records that have been collected and registered in a uniform manner by the Belgian federal police. A first, sobering, conclusion is that we do not find any significant relation between the actual occurrence of criminal acts and fear of crime. To put it bluntly: apparently these two elements are not related. This non-finding obviously is open to a number of interpretations. A counter-argument might be that the Belgian federal police does not offer a reliable data source with regard to criminal

offenses. It should be remembered however that since the 1998 police reform in Belgium, the federal police has made a strong effort to set up a reliable policy on crime statistics and there is no apparent reason why there should be any regional variation in the reliability of these statistics. Furthermore, it has to be realized that the police statistics depend on the willingness of victims to report crime. In urbanized areas, victims might be less willing to report a crime than in rural areas. While this is plausible, it has to be kept in mind that the police statistics are actually in line with what one could expect about the prevalence of violent crime. While in the urban center of Antwerp (almost 500,000 inhabitants) the violent crime rate was 29.72 acts/1000 inhabitants, in the rural municipality of Hoeilaart (10,000 inhabitants) this was 8.32 acts/1000 inhabitants. So despite the fact that residents in rural areas might be more willing to report crime than in urban centers, there is still an obvious urban/rural division. Nevertheless, we do not find any relation between crime levels and fear of crime. A possible explanation for this phenomenon might be that city-dwellers more or less take a background level of crime and disorder for granted, so this does not have a strong effect on their feeling of safety. For residents of rural communities, on the other hand, even a low number of criminal acts might be perceived as challenging their daily routines within their community.

The main finding of the current study therefore is that, despite controlling for actual levels of crime and all the strong control variables that have been included, the ethnic diversity of the municipality is positively related to fear of crime. Furthermore, the relation between diversity and fear of crime seems to be independent from anti-immigrant prejudice. Actually, the negative correlation between community diversity and anti-immigrant sentiments suggests that the effect of diversity is in line with an intergroup contact logic in our sample, meaning that diversity is associated with more positive attitudes toward immigrants because of increased (opportunities for) positive intergroup contacts, rather than a prejudice-threat logic. This means that the conclusions of previous studies on the relation between ethnic diversity and fear of crime that have been conducted in the United States apparently are not entirely valid in the Western European context. While the US studies thus far were predominantly based on the feeling of threat experienced by White Americans as a result of the presence of Afro-Americans, it is theoretically relevant to observe whether the same mechanisms are present in Western Europe, despite the fact that the characteristics of visible minorities are totally different in this context. Our results suggest that the prejudice-threat mechanism may not be as adequate in explaining the relation between diversity and fear of crime in other cultural contexts. It appears that, instead of explicit prejudiced attitudes, other factors that can explain the relation between ethnic diversity and fear of crime, such as implicit stereotypes,

and the influence of diversity on majority members' social capital and feelings of collective efficacy, should be investigated.

In conclusion, research following the ethnic threat perspective routinely focuses on what might be called the usual suspects in the threat literature, that are based on economic and cultural or religious threat. The perceived criminal threat, however, might be equally important, especially with regard to geographical segregation. If members of the native majority group feel more unsafe because of the presence of minority groups, even controlling for actual crime levels, inevitably this will also have behavioral consequences. People who feel unsafe will also cut down on their public activities and their level of social interaction. If one feels economically or culturally threatened by the presence of ethnic minorities, there is not much point in moving, e.g., from a diverse urban neighborhood to a less diverse suburb. The competition on the labor market does not become less intense if one moves ten kilometers outside a city center. But with regard to fear of crime and feeling unsafe, moving toward the suburbs of course does make sense, and this feeling might function as an incentive for White affluent families to move to the suburbs. Most of the research on intergroup conflict theory thus far has dealt with issues like unemployment, job scarcity and the housing market. The current research, however, suggests that security threat might be equally important in explaining the relation between these phenomena.

References

- Barkan, S.E. & S. Cohn (2005). Why whites favor spending more money to fight crime: The role of racial prejudice. *Social Problems*, *52*(2), 300-314.
- Beckley, A. (2013). Correlates of war? Towards an understanding of nativity-based variation in immigrant offending. *European Journal of Criminology*, 10(4), 408-423.
- Bianchi, M., Buonanno, P., & Pinotti, P. (2012). Do immigrants cause crime? *Journal of the European Economic Association*, 10(6), 1318-1347.
- Ceobanu, A. (2011). Usual suspects? Public views about immigrants' impact on crime in European countries. *International Journal of Comparative Sociology*, *52*(1-2), 114-131.
- Chiricos, T. & Eschholz, S. (2002). The racial and ethnic typification of crime and the criminal typification of race and ethnicity in local television news. *Journal of Research in Crime and Delinquency*, 39(4), 400-420.
- Chiricos, T., Hogan, M., & Gertz, M. (1997). Racial composition of neighborhood and fear of crime, *Criminology*, 35(1), 107-132.
- Chiricos, T., McEntire, R. & Gertz, M. (2001). Perceived racial and ethnic composition of neighborhood and perceived risk of crime. *Social Problems*, 48(3), 322-340.
- Chiricos, T., Padgett, K. & Gertz, M. (2000). Fear, TV news, and the reality of crime. *Criminology*, 38(3), 755-786.
- Drakulich, K. (2013). Perceptions of the local danger posed by crime: Race, disorder, informal control, and the police. *Social Science Research*, 42(3), 611-632.
- Durkin, K., Nesdale, D., Dempsey, G., & McLean, A. (2012). Young children's responses to media representations of intergroup threat and ethnicity. *British Journal of Developmental Psychology*, 30(3), 459-476.
- Eschholz, S., Chiricos, T. & Gertz, M. (2003). Television and fear of crime: Program types, audience traits, and the mediating effect of perceived neighborhood racial composition. *Social Problems*, *50*(3), 395-415.
- Ferraro, K. & Grange, R. (1987). The measurement of fear of crime. *Sociological Inquiry*, 57(1), 70-97.
- Gordon, R. (1990). Attributions for blue-collar and white-collar crime: The effects of subject and defendant race on simulated juror decisions. *Journal of Applied Social Psychology*, 20(12), 971-983.

- Hawdon, J., Rasanen, P., Oksanen, A., & Vuori, M. (2014). Social responses to collective crime: Assessing the relationship between crime-related fears and collective sentiments. *European Journal of Criminology*, 11(1), 39-56.
- Hawkins, D. (2011). Things fall apart: Revisiting race and ethnic differences in criminal violence amidst a crime drop. *Race and Justice*, *1*(1), 3-48.
- Hooghe, M., & De Vroome, Th. (2015). The Perception of ethnic diversity and antiimmigrant sentiments: a multilevel analysis of local communities in Belgium. *Ethnic* and Racial Studies, 38(1), 38-56.
- Hooghe, M., Vanhoutte, B. & Bircan, T. (2009). Technical report for the social cohesion survey Flanders 2009 (SCIF 2009). Leuven: Centre for Citizenship and Democracy.
- Hooghe, M., B. Vanhoutte, W. Hardyns & T. Bircan (2011). Unemployment, inequality, poverty and crime: Spatial distribution patterns of criminal acts in Belgium, 2001–06. *British Journal of Criminology*, 51(1), 1-20.
- Hox, J. (2002). Multilevel analysis. Techniques and applications. Mahwah: Erlbaum.
- Hummelsheim, D., Hirtenlehner, H., Jackson, J. & Oberwittler, D. (2011). Social Insecurities and Fear of Crime: A Cross-National Study on the Impact of Welfare State Policies on Crime-related Anxieties. *European Sociological Review*, 27(3), 327-334.
- Jackman, R. & Volpert, K. (1996). Conditions favouring parties of the extreme right in Western Europe. *British Journal of Political Science*, 26(4), 501-521.
- Krivo, L. & Peterson, R. (1996). Extremely disadvantaged neighborhoods and urban crime. *Social Forces*, 75(2), 619-648.
- Martinez, R., Stowell, J.I. & Lee, M.T. (2010). Immigration and crime in an era of transformation: A longitudinal analysis of homicides in San Diego neighborhoods, 1980-2000. *Criminology*, 48(3), 797-829.
- McNulty, T. & Bellair, P. (2003). Explaining racial and ethnic differences in serious adolescent violent behavior. *Criminology*, *41*(3), 709-748.
- Meuleman, B., Davidov, E., & Billiet, J. (2009). Changing attitudes toward immigration in Europe, 2002–2007: A dynamic group conflict theory approach. *Social Science Research*, 38(2), 352-365.
- Nielsen, A.L. & Martinez, R. (2011). Nationality, immigrant groups, and arrest: Examining the diversity of arrestees for urban violent crime. *Journal of Contemporary Criminal Justice*, 27, 342-360.
- Niessen, J. & Huddleston, T. (ed., 2009). *Legal frameworks for the integration of third-country nationals*. Leiden: Brill.

- Ousey, G. & Kubrin, C. (2009). Exploring the connection between immigration and violent crime rates in US cities, 1980-2000. *Social Problems*, 56(3), 447-473.
- Paoli, L. & Reuter, P. (2008). Drug Trafficking and Ethnic Minorities in Western Europe. *European Journal of Criminology*, 5(1), 13-37.
- Peterson, R. & Krivo, L. (2005). Macrostructural analyses of race, ethnicity, and violent crime: Recent lessons and new directions for research. *Annual Review of Sociology*, 31, 331-356.
- Pickett, J., Chiricos, T., Golden, K. & Gertz, M. (2012). Reconsidering the relationship between perceived neighborhood racial composition and Whites' perceptions of victimization risk: Do racial stereotypes matter? *Criminology*, 50(1), 145-186.
- Quillian, L. (1995). Prejudice as a Response to Perceived Group Threat. Population composition and anti-immigrant and racial prejudice in Europe. *American Sociological Review*, 60(4), 586-611.
- Reid, L.W., Weiss, H.E., Adelman, R.M. & Jaret, C. (2005). The immigration-crime relationship: Evidence across US metropolitan areas. *Social Science Research*, *34*, 757-780.
- Riek, B., Mania, E. & Gaernter, S. (2006). Intergroup threat and outgroup attitudes. A meta-analytical review. *Personality and Social Psychology Review*, 10(4), 336-353.
- Rumbaut, R.G. & Ewing, W.A. (2007). The myth of immigrant criminality and the paradox of assimilation: Incarceration rates among native and foreign-born men. Washington, DC: American Immigration Law Foundation.
- Sampson, R.J. (2008). Rethinking crime and immigration. *Contexts*, 7(1), 28-33.
- Sampson, R.J., Morenoff, J. & S.W. Raudenbush (2005). Social anatomy of racial and ethnic disparities in violence. *American Journal of Public Health*, *95*, 224-232.
- Sampson, R.J., Raudenbush, S.W. & Earls, F. (1997). Neighborhoods and violent crime. A multilevel study of collective efficacy. *Science*, 277(5328), 918-924.
- Schlueter, E., & Scheepers, P. (2010). The relationship between outgroup size and antioutgroup attitudes: A theoretical synthesis and empirical test of group threat- and intergroup contact theory. *Social Science Research*, 39(2), 285-295.
- Schneider, S. (2008). Anti-immigrant attitudes in Europe: Outgroup size and perceived ethnic threat. *European Sociological Review*, 24(1), 53–67.
- Semyonov, M. & Glikman, A. (2009). Ethnic Residential Segregation, Social Contacts, and Anti-Minority Attitudes in European Societies. *European Sociological Review*, 25(6), 693-708.

- Semyonov, M., Gorodzeisky, A., & Glikman, A. (2012). Neighborhood Ethnic Composition and Resident Perceptions of Safety in European Countries. *Social Problems*, 59(1), 117-135.
- Semyonov, M., Raijman, R. & A. Gorodzeisky (2006). The rise of anti-foreigner sentiment in European societies, 1988-2000. *American Sociological Review*, 71(3), 426-449.
- Semyonov, M., R. Raijman & Yom-Tov, A. (2002). Labor market competition, perceived threat, and endorsement of economic discrimination against foreign workers in Israel. *Social Problems*, 49(3), 416-431
- Semyonov, M., Raijman, R., Yom-Tov, A. & Schmidt, P. (2004). Population size, perceived threat, and exclusion: A multiple-indicators analysis of attitudes toward foreigners in Germany. *Social Science Research*, *33*(4), 681-701.
- Sniderman, P. & L. Hagendoorn (2007). When ways of life collide. Princeton: Princeton University Press.
- Snijders, T. & Bosker, R. (1999). Multilevel analysis. London: Sage.
- Solivetti, L. (2010). *Immigration, Social Integration and Crime: A Cross-National Approach*. Abington: Routledge.
- Stowell, J.I., Messner, S.F., McGeever, K.F. & Raffalovich, L.E. (2009). Immigration and the recent violent crime drop in the United States: A pooled, cross-sectional time-series analysis of metropolitan areas. *Criminology*, 47(3), 889-928.
- Sweeney, L. & Haney, C. (1992). The influence of race on sentencing: A meta-analytic review of experimental studies. *Behavioral Sciences & the Law*, 10(2), 179-195.
- Teney, C., Jacobs, D., Réa, A. & Delwit, P. (2010). Ethnic voting in Brussels: Voting patterns among ethnic minorities in Brussels (Belgium) during the 2006 local elections. *Acta Politica*, 45(3), 273-297.
- Unnever, J. & Cullen, F. (2012). White perceptions of whether African Americans and Hispanics are prone to violence and support for the death penalty. *Journal of Research in Crime and Delinquency*, 49(4), 519-544.
- Van Craen, M. (2013). Explaining majority and minority trust in the police. *Justice Quarterly*, 30(6), 1042-1067.
- Van Dijk, J., van Kesteren, J. & Smit, P. (2008). *Criminal victimisation in international perspective. Key findings from the 2004-2005 ICVS and EU ICS.* The Hague: Boom.
- Vélez, M.B. (2009). Contextualizing the immigration and crime effect: An analysis of homicide in Chicago neighborhoods. *Homicide Studies*, *13*, 325-335.

- Visser, M., Scholte, M. & Scheepers, P. (2013). Fear of crime and feelings of unsafety in European countries: Macro and micro explanations in cross-national perspective. *Sociological Quarterly*, *54*(2), 279-301.
- Wang, X. (2012). Undocumented immigrants as perceived criminal threat: A test of the minority threat perspective. *Criminology*, *50*(3), 743-776.
- Wauters, B., Verlet, D. & Ackaert, J. (2012). Giving more weight to preferential votes: Welcome or superfluous reform? The case of the local elections in Flanders (Belgium). *Local Government Studies*, 38(1), 91-111.
- Wickes, R., Hipp, J., Zahnow, R. & Mazerolle, L. (2013). "Seeing" minorities and perceptions of disorder. Explicating the mediating and moderating mechanisms of social cohesion. *Criminology*, *51*(3), 519-560.

Table 1: Descriptive statistics of dependent and independent variables, N=1,756

	Min.	Max.	Mean	SD
Individual level				
Fear of crime	0	4	.298	.580
Anti-immigrant sentiments	0	10	4.973	1.864
Perceived % non-Belgian	1	99	27.701	17.105
Hours spent watching TV	0	18	2.441	1.624
Gender: Male	0	1	.484	
Age	18	85	48.767	17.931
Education level	0	5	3.035	1.136
Municipality level				
% non-EU nationals	.14	8.77	2.022	2.138
Violent crime rate	3.64	29.72	14.036	6.597
Population size (x1000)	5.14	477.94	67.794	114.354
Average income per resident (x1000)	13.27	21.67	16.243	1.680

Source: SCIF 2009, own calculations.

Table 2: Bivariate correlations, N=1,756

	Fear of	Anti-immigrant	Perceived %	Hours spent			
	crime	sentiments	non-Belgian	watching TV	Female	Age	
Fear of crime	1	.091***	.089***	.015	.108***	050 [*]	
Anti-immigrant sentiments	.091***	1	.182***	.203***	.008	.186***	
Perceived %	.089***	.182***	1	.142***	.268***	068**	
non-Belgian	.069	.102	1	.142	.208	008	
Hours spent	.015	.203***	.142***	1	.037	.298***	
watching TV					.037	.296	
Female	.108***	.008	.268***	.037	1	.013	
Age	050*	.186***	068**	.298***	.013	1	
Education level	012	327***	193***	359***	.010	282***	
% non-EU nationals	.107***	050 [*]	.093***	.078***	010	.037	
Violent crime rate	.065**	057*	.060*	.083**	007	.039	
Population size	.082**	050*	.060*	.081**	004	.039	
Average income	041	113***	032	083***	006	019	
	Education	% non-EU		Population			
	level	residents	Violent crime rate	size	Average income		
Fear of crime	012	.107***	.065**	.082**	041		
Anti-immigrant sentiments	327***	050 [*]	057*	050 [*]	113***		
Perceived %	193***	.093***	.060*	.060*	032		
non-Belgian	193	.093	.000	.000	032		
Hours spent	359***	.078***	.083**	.081***	083***		
watching TV	339	.078	.083	.081	083		
Female	.010	010	007	004	006		
Age	282***	.037	.039	.039	019		
Education level	1	.035	.021	.013	.121***		
% non-EU nationals	.035	1	.820***	.922***	237***		
Violent crime rate	.021	.820***	1	.816***	278***		
Population size	.013	.922***	.816***	1	257***		
Average income	.121***	237***	278***	257***	1		

Source: SCIF 2009, own calculations. *** p < .001; ** p < .01; * p < .05. N =1,756.

Table 3: Multilevel Regression Analysis of Fear of Crime, N=1,756

	Model 1		Model 2		Model 3			Model 4				
	В	SE	р	В	SE	р	В	SE	p	В	SE	р
Intercept	.296	.017	***	.451	.159	**	.452	.159	**	.451	.158	**
Municipality level predictors												
% non-EU nationals				.065	.018	**	.065	.018	**	.065	.018	**
Violent crime rate				005	.004	.262	005	.004	.264	004	.004	.267
Population size				001	.000	.141	001	.000	.140	001	.000	.137
Average income				008	.009	.380	008	.009	.381	008	.009	.382
Individual level predictors												
Perceived % non-Belgians				.001	.001	.197	.001	.001	.505	.001	.001	.395
Hours spent watching TV				.000	.009	.995	002	.009	.799	004	.009	.637
Gender=male				118	.029	***	122	.028	***	124	.028	***
Age				002	.001	*	002	.001	**	002	.001	**
Education level				014	.013	.295	002	.014	.861	001	.014	.966
Anti-immigrant sentiments							.032	.008	***	.021	.015	165
Cross level interaction												
% non-EU nationals *										.006	.005	.277
Anti-immigrant sentiments												
Individual level variance	.332	.011	***	.327	.011	***	.324	.011	***	.318	.011	***
Municipality level variance		.002	.091	.001	.002	.607	.001	.002	.590	.001	.002	.554
Variance slope anti-immigrant sentiments										.002	.001	.054
Intraclass correlation				.003			.003			.003		

Source: SCIF 2009, own calculations. *** p < .001; ** p < .01; * p < .05.

Notes: Entries are the result of a multilevel regression analysis in SPSS. Reported are the parameter estimates (B), standard errors (SE) and p-values.

Endnote

^{1.} Since the distribution on fear of crime can be considered as skewed, we have conducted a robustness analysis with a dichotomous variable for fear of crime. This analysis leads to similar conclusions, though the percentage of non-EU nationals in the municipality is not significantly related to the dichotomous fear of crime variable, while the perceived percentage of non-Belgians is. Complete results of this analysis are available upon request.