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The neighbourhood context and changes in self-reported ethnic identity

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ABSTRACT

Although many studies claim that the residential context is an important factor in shaping the ethnic identity of minorities, there are few studies which actually measure this relationship. This study contributes to filling this gap by investigating the relationship between the ethnic composition of neighbourhoods and changes in the self-reported ethnic identity of Russian-speaking minorities living in post-Soviet Estonia. Additionally, we observe Estonians who have changed their ethnic identity to Russian. We used data from the 2000 and 2011 Estonian censuses, which were geo-coded and linked at the individual level, enabling us to follow individuals over time. We estimated multi-level and fixed effects regression models to explore the relationship between the neighbourhood context and changes in ethnic identity. The main results show that ethnic minorities who live in majority-dominated neighbourhoods and regions, are the most likely to change their ethnic identity. We also show that members of the majority population who live in minority-dense neighbourhoods are more likely to change their ethnic identity than other majority group members. The results suggest that opportunities to meet people from other ethnic groups are important in processes of integration and assimilation, and it affects members of the majority and minority population alike.

Introduction

Ethnic residential segregation has often been considered as a challenge for integration processes. It is widely debated that minority group members who live among co-ethnics in minority concentration neighbourhoods are less likely to integrate into their host society (e.g. Gijsberts and Dagevos 2007; Johnston, Poulsen, and Forrest 2006). High spatial ethnic minority concentrations can lead to the establishment of parallel societies in which minorities get by without interacting with members of the native majority population (Danzer and Yaman 2013). However, contact with the majority population is especially important for developing native language skills, promoting mutual acceptance and for acculturation processes in general (Danzer and Yaman 2013; Gijsberts and Dagevos 2007). For ethnic minorities, living with native people in the same

neighbourhood, and having contact with them, may also have an impact on how they position themselves in society, for example, how they self-identify in terms of ethnic identity.

Ethnic identity is a very complex social construction which broadly refers to an individual's sense of self in terms of membership of a particular ethnic group (Liebkind 2006). Ethnic identity becomes especially meaningful when immigrants arrive in a new society where they come into contact with other cultural groups (Phinney et al. 2001). Prior to migration, people may not have a very clear sense of their own ethnic identity as this is taken for granted. After arriving into a new cultural environment and getting exposed to other ethnic groups, different levels of self-identification and feelings of belonging develop (Constant, Gataullina, and Zimmermann 2009). Therefore, ethnic identity may also be thought of as an aspect of acculturation (Sam 2006). Literature on immigrant ethnic identity mostly concentrates on the development and retention of ethnic identity, especially among adolescents (e.g. Liebkind 1993; Phinney and Chavira 1992). Change in self-categorization, which has been considered to be a basic element of ethnic identity, has been given less attention; over time people may develop a different view of their own ethnic identity. Although many authors claim that the residential context and local circumstances (for example, dispersal versus high concentration of an ethnic group) are essential factors that influence ethnic identity (e.g. Phinney 1990), few studies actually investigate changes in ethnic identity over time and how contextual factors affect these changes.

This paper aims to contribute to the understanding of the role of the residential context as a factor influencing ethnic identity. Most studies on change in ethnic identity have been done in societies where the group of ethnic minorities is culturally very heterogeneous. The current study is set in Estonia, a country with a relatively homogeneous minority population. In Estonia, ethnic minorities form a third of the population, and they arrived mainly during the Soviet era when large-scale migration from other Soviet republics to Estonia took place. This migration flow largely stopped after the disintegration of the Soviet Union in 1991, and the minority population has been homogeneous (mainly Russians, Ukrainians and Byelorussians) and stable until today. Despite the fact that most minorities have lived in Estonia for decades, there is little change in integration indicators and some studies even indicate the persistence of parallel societies within the country (Mägi et al. 2016). This paper contributes to a better understanding of the acculturation process of ethnic groups by studying ethnic identity changes of both members of the native majority (Estonians) and minority populations in Estonia.

We use linked individual-level data from the 2000 and 2011 censuses, and multi-level and fixed effects models, to explore changes in ethnic identity (ethnic and linguistic self-identification) over a period of almost 12 years. The data allows us to identify those people who filled in their own census form in both years. We observe people who identify themselves as Russian or Russian-speaker in one census and Estonian or Estonian-speaker in the next census. In addition, we observe Estonians and Estonian-speakers in 2000 who identify themselves as Russians and Russian-speakers in 2011 census.

Theoretical background

When people migrate from one country to another, they experience a loss of the familiar, including language, cultural norms, values and social structures (Bhugra and Becker 2005);

they have to adjust to a new society and engage in intercultural contact. This will lead to processes of acculturation. The classic definition of acculturation is a culture change that results from continuous, first-hand contact between two cultural groups (Redfield, Linton, and Herskovits 1936, 149). More recent contributions to the theory of acculturation (Berry 1997, 2006) highlight the psychological aspects of the acculturation process and define it as a process of cultural and psychological change that results from the continuing contact between cultural groups and their individual members. According to Berry (1990), it is important to make a distinction between group-level (cultural) and individual-level (psychological) changes because the changes at these two levels are different. At the group level, the changes may occur in the social structure and cultural practices of a group or in a group's political organisation. At the individual level, the changes taking place may be in identity, values, motives, and behaviour (Sam 2006, 14).

Berry (1997) has suggested that there are two independent dimensions underlying processes of minority acculturation: preservation of one's cultural heritage (to what extent cultural identity and characteristics are considered to be important and their maintenance strived for) and adaptation to the host society (to what extent they should became involved in other cultural groups or remain primarily among themselves). When these two dimensions are considered simultaneously, a conceptual framework is generated which posits four acculturation strategies: assimilation, separation, integration and marginalisation. If individuals wish to maintain their original cultural identity and are interested in interacting with host society members at the same time, they are said to be moving towards integration. When individuals do not wish to maintain their cultural identity and seek contact with members of the host society, then this is categorised as assimilation. Individuals aim at separation if they want to maintain their original identity and at the same time wish to avoid interaction with others. Finally, marginalisation occurs when individuals reject their original culture and show little interest in having relations with others (Berry 1997).

Berry's (1997) model of acculturation gives a good starting point for understanding and exploring ethnic identity, which is considered to be a salient part of the acculturation process (Liebkind 2006). Ethnic identity deals with how individuals and groups define and make sense of themselves in terms of the ethnic group they belong to (Sam 2006). Analogous to the two-dimensional model of acculturation, Phinney et al. (2001) have proposed an interactional approach where ethnic identity and identity as a member of one's new society can be thought of as two dimensions of group identity that vary independently (each identity can be either strong or weak). There are four identity choices in this approach: integrated (bicultural), assimilated, separated and marginalised. The possible identity categories will depend on a number of factors, including characteristics and preferences of immigrants and of the places where they have settled (Phinney et al. 2001). The strength and nature of ethnic identification with the ingroup will determine much of the individual's response to acculturation (Liebkind 2006).

Ethnic identity is a multifaceted concept that may change over time and evolve in response to a variety of social domains (e.g. neighbourhood, family, school) (Liebkind 2006; Phinney 1990). The formation of ethnic identity depends on a process of exploration that includes pre-existing ethnic attitudes and searching into the past and present experiences of one's group and its relation with other groups (Phinney 1996). Thus, the experiences of individuals and contact between cultural groups are essential to the process of identity change. This is also why the factor "immigrant generation" is one of the strongest

predictors of change in ethnic identity (Liebkind 2006; Phinney 1990). This change is unlikely for first-generation immigrants. However, it becomes more common for second- and third-generation immigrants (Phinney 2003). It is clear that individuals' ethnic identity is part of a wider social process and is influenced by the world in which they live (Fenton 1999).

Previous literature on ethnic identity has highlighted the role of contextual factors in the development of identity. For example, Kinket and Verkuyten (1997) argue that immediate context is a central factor in understanding ethnic identity and particularly ethnic identification; Phinney (1990) brings out that ethnic identity is to a large extent defined by context. Verkuyten (2000) has suggested that the actual local conditions may be much more important for the development of ethnic identity than national immigration policies because of experiences with stereotyping and discrimination, and the opportunities for supportive social networks. According to Rosenberg (1979), the individual's social similarity or dissimilarity to those in their surroundings affects individual's experiences and, therefore, the self-concept. Regardless of the numerous authors who have emphasised the role of context in changing ethnic identity, empirical research on this topic is relatively scarce and there is not enough detailed research on the specific contextual factors that affect and cause transitions in ethnic identity.

Segregation studies indicate more clearly how the context which frames people's experiences and contact is a key factor in influencing acculturation processes. Although many researchers challenge the precise link between residential segregation and integration (Bolt, Sule Özüekren, and Phillips 2010; Drever 2004; Musterd 2003), there is still a consensus about the negative effect of segregation on acculturation processes (Gijsberts and Dagevos 2007; Martinovic, van Tubergen, and Maas 2009; van der Laan Bouma-Doff 2007). Lack of contact with the majority population is emphasised as one of the most important causes of the negative effects of living in minority neighbourhoods (Bolt, Burgers, and van Kempen 1998). Interaction with members of the majority population is considered a prerequisite for successful integration into mainstream society (Danzer and Yaman 2013). Contact between ethnic groups can help minorities to learn the language of the host country (Chiswick and Miller 2001), accept the customs and values of the mainstream society (Heckmann 2005) and influence the way people feel about their identity (Danzer and Yaman 2013). Social interactions can also reduce ethnic prejudice and improve intergroup attitudes (Wagner et al. 2003). Thus, when minorities live in less segregated environments, they have more contact with the members of the majority population and thereby it is easier for them to become a part of mainstream society.

However, it is pointed out that the residential neighbourhood is only one of many domains of our lives in which people meet and interact, so other domains (e.g. workplaces, family/partner relationships) should also be taken into account when studying ethnic segregation and integration (van Ham and Tammaru 2016). There are many important social environments where people from different ethnic backgrounds can meet. It has been found that increasing intergroup interaction occurs at workplaces (Ellis, Wright, and Parks 2004); leisure-time activities have a potential for more interethnic contact as well (Kamenik, Tammaru, and Toomet 2015). In addition, majority-minority intermarriage and family relationships play an important role in intergroup relations; they reveal profound relations between members of different groups and promote social integration

(Blau, Beeker, and Fitzpatrick 1984, 591). In spite of the fact that people are increasingly mobile and can meet in many different places, home is still a very important anchor point for our daily activities (Silm and Ahas 2014) and the residential neighbourhood is a significant context in the lives of people where a substantial part of their social interaction is taking place (van der Laan Bouma-Doff 2007).

Framing the case of Estonia

In Estonia, large-scale immigration began after WWII when the country was already incorporated into the Soviet Union (Kulu 2004). Immigration was mainly stimulated by political and ideological motives, and it brought to Soviet-occupied Estonia a wave of Communist Party members, Soviet military personnel and a large industrial workforce (Katus and Sakkeus 1993). During the Soviet period, the share of ethnic minorities in Estonia increased from 3% in 1945 to 39% in 1989, and 80% of the minorities consist of Russians (Tammaru and Kulu 2003). In the territory of the Soviet Union, Russian became the dominant language of a number of different ethnic groups, including Russians, Ukrainians, Belorusians and other smaller ethnic groups (Zabrodskaja 2015, 224). The majority of these people consider Russian as their mother tongue or speak it fluently (Tammaru and Kulu 2003). Thus, the common identity of Russian-speakers (distinct from Russian identity) is mainly based on the Russian language. At the same time, the group of Russian-speakers is quite diverse in respect to their ethnic backgrounds as well as in terms of their beliefs and attitudes towards culture and language maintenance (Ehala and Zabrodskaja 2014).

At the time of their arrival in Estonia, the Russian-speaking immigrants settled mainly in larger cities and industrial areas where they were accommodated in new, standardised high-rise housing estates. There they were also provided with an ethnic infrastructure (Russian-language schools and kindergartens). Migrants became strongly over-represented in newly built housing estates, while a large number of Estonians lived in the inner-city housing stock and in older suburban areas (Ruoppila and Kährik 2003). This resulted in high levels of ethnic residential segregation. In addition, a separated Estonian-language and Russian-language school system was established during the Soviet period (Lindemann and Saar 2012) and the labour market was ethnically segmented as well (Lindemann 2009, 4). Due to these factors, there was a lack of common communication space for ethnic groups in Estonia, and interethnic contact remained modest (Vihalemm 2007, 479).

At the beginning of the 1990s, a substantial proportion of the Russian-speakers left Estonia. Nevertheless, the majority of the Russian-speaking population stayed and, according to the 2011 census, they now constitute 30% of the total population. Today, Estonians and the Russian-speaking minority population have been living side by side for many decades, and although to some extent the location patterns of Estonians and Russian-speakers have started to change, the residential behaviour of minorities tends to follow pre-existing ethnic networks (Mägi et al. 2016). The Russian-speaking minority population still lives segregated in the settlement system. In addition, the majority and minority populations continue to go to different schools (Lindemann and Saar 2012) and there is evidence of persisting ethnic divisions in the labour market (Lindemann and Kogan 2013). Furthermore, there are ethnic differences in leisure activities

(Kamenik, Tammaru, and Toomet 2015; Kukk, van Ham, and Tammaru, forthcoming) and activity spaces in general (Silm and Ahas 2014).

As it turns out, the wider context in which an individual's values, attitudes and identities are shaped is ethnically divided, and although there are some signs of improvement in the integration of the minority population (Kaldur et al. 2017), social networks of ethnic groups remain separated and this limits interaction and acceptance. Contact between Estonians and the Russian-speaking minority population tends to be confined to the public sphere (e.g. in the service sector or public transport) (Korts 2009), but this has little impact on personal networks. Research into the identity patterns of Estonia's majority and minority populations has shown that individual feelings of ethnic belonging are responsive to the patterns of inter-group communication (Vihalemm 2007, 497). In addition, recent studies show continuing ethnic polarisation in identity and value patterns; ethnic identity has become more important for the minority population and has received a central place in individuals' self-determination (Kalmus and Vihalemm 2017). Cheskin (2015), who investigated identity and integration patterns of Russian-speakers in the Baltic states, also indicated that cultural identification with Russia remains relatively strong as Russia maintains influence through media and the Russian language.

Due to its historical context, Estonia is a very interesting place to study changes in self-reported ethnic identity. There is a large and stable immigrant population who has lived in Estonia for decades. Although we might expect that over time more people from the Russian-speaking minority population would identify themselves with Estonian society, recent studies have shown that Russian-speakers have very strong feelings about their ethnic identity.

Data and methods

For our empirical analysis we use linked individual-level data from the 2000 and 2011 Estonian censuses. As individuals can be followed over 12 years, this database provides powerful research data on the social, demographic and cultural changes of individuals. In this study we explore changes in ethnic identity, which we make operational by investigating self-reported ethnicity and mother tongue. There is no general consensus among scientists on the main components of ethnic identity; however, self-categorization (sense of belonging) and ethnic behaviours (e.g. speaking the language) are considered by many researchers to be among the key components of ethnic identity (e.g. Phinney 1990; Phinney and Ong 2007). Ethnicity shows a sense of belonging to a particular ancestry and origin and it is considered to be the most pervasive part of ethnic identity (Liebkind 2006). People can also self-identify themselves with more than one ethnic group. Language is the most widely assessed cultural practice used with ethnic identity (Phinney 1990) and commonly people have just one mother tongue. Mother tongue usually refers to the language that an individual has been exposed to from childhood or for a very long period of time, and which is a person's principal home language (Bugarski 2017).

In Estonian censuses, people could choose only one ethnic group and mother tongue category. Since some people can identify themselves with multiple ethnic groups, Statistics Estonia allowed for multiple responses during the pilot census, but since very few people used that option, this possibility was left out in the official census. The lack of option to choose multiple ethnic identities is suboptimal for our research, and that is another

reason why we also investigate the reported mother tongue to get a deeper understanding of the changes in the ethnic identity in Estonia. As mentioned earlier, in Estonia, language is a very important basis for internal feelings of belonging, and it has a strong impact on the formation of the collective identity of the Russian-speaking population (Vihalemm 1999). Hence, it allows us to make inferences on the identity changes as well.

The limited number of other studies that investigated changes in ethnic identity faced major data limitations. For example, it is often not known who in the household completes the census form (Lieberson and Waters 1993), and questions and categories have changed between censuses (Simpson and Akinwale 2007). In the Estonian censuses, questions and categories about ethnicity and mother tongue were the same in the 2000 and 2011 censuses. All respondents get questions on ethnicity and mother tongue (except for children under 15, whose parents answer for them), and crucially, we know from the census form who in the household has completed the form. Thus, it is possible to track only those people who filled in the census forms themselves in both years.

Analytical approach

The research population (aged 15 years and over in 2000) consists of people from the two largest ethno-linguistic groups in Estonia: ethnic Estonians and Russians and Estonian-speakers and Russian-speakers (in addition to Russians, Ukrainians and Belorusians belong to this group). In the first part of the analysis we use descriptive measures to provide a general overview of the changes which have taken place between 2000 and 2011 in two components of ethnic identity – ethnicity and mother tongue. In the second part of the analysis we examine the relationship between self-reported ethnic identity and the residential context by estimating multilevel mixed-effects logistic regression models. We use multi-level models because we have nested data with individuals (level 1) in 2000 neighbourhoods (level 2). Additionally, we use conditional fixed effects logit models to estimate the change in ethnic identity.

Our main interest is in the effect of the residential context on ethnic identity. The residential context (the ethnic composition of neighbourhoods) is measured based on mother tongue (the share of Russian-speaking population). This residential ethnic context of an individual can change as the result of either a residential move to another type of neighbourhood, or as the result of changes in the ethnic composition of a neighbourhood between 2000 and 2011. In both years we have classified neighbourhoods into three types using a classification used and tested in previous studies (e.g. Marcińczak et al. 2015):

1. Majority neighbourhoods: Neighbourhoods which are dominated by Estonians where Russian-speakers are largely absent; natives constitute 80% or more of the population;
2. Mixed neighbourhoods: Neighbourhoods with a substantial presence of Russian-speakers; natives constitute 50%–79% of the population;
3. Minority neighbourhoods: Minority-dense neighbourhoods where Russian-speakers constitute more than 50% of the population.

Based on these three categories we have constructed a variable which indicates the change in neighbourhood type between 2000 and 2011. The reference category is living in minority neighbourhoods in both 2000 and 2011, and we compare this with staying in the

other neighbourhood types (majority neighbourhood, mixed neighbourhood) and with changes in neighbourhood type between 2000 and 2011 censuses. In Models 1a, 2a, 3a and 4a, we treat neighbourhood change as a categorical variable. As a robustness check, we also run multi-level models where we measure change in the neighbourhood ethnic context between 2000 and 2011 as a continuous variable (see Models 1b, 2b, 3b and 4b).

We also include a regions variable in the multi-level models as an important control variable. The regions variable has three categories 1) Tallinn Urban Region (almost equal share of Estonians and minorities); 2) North-Eastern part of Estonia (ethnic minorities at a national scale form a majority there); 3) the rest of Estonia (Estonians are in majority) (see Figure 1). We also run models without the regions variable to explore how much of the effect of neighbourhood is explained by region. The odds ratios were a bit higher in these models, however, otherwise the results remained the same. We did not include region as an additional level in the multi-level models because we only work with three regions. The models also include a set of socio-demographic control variables; gender, age (measured at the moment of 2000 census) and education (a time-varying variable). In addition, we included a mixed-ethnicity household variable in the models. We also added immigrant generation to the models of Russians and Russian-speakers and country of birth to the models of Estonians and Estonian-speakers.

In the fixed effects (FE) models we focus on the association between the change in ethnic identity and the change of the ethnic residential context. Additionally, education is added to the models. Only two variables are included in FE models as these are the
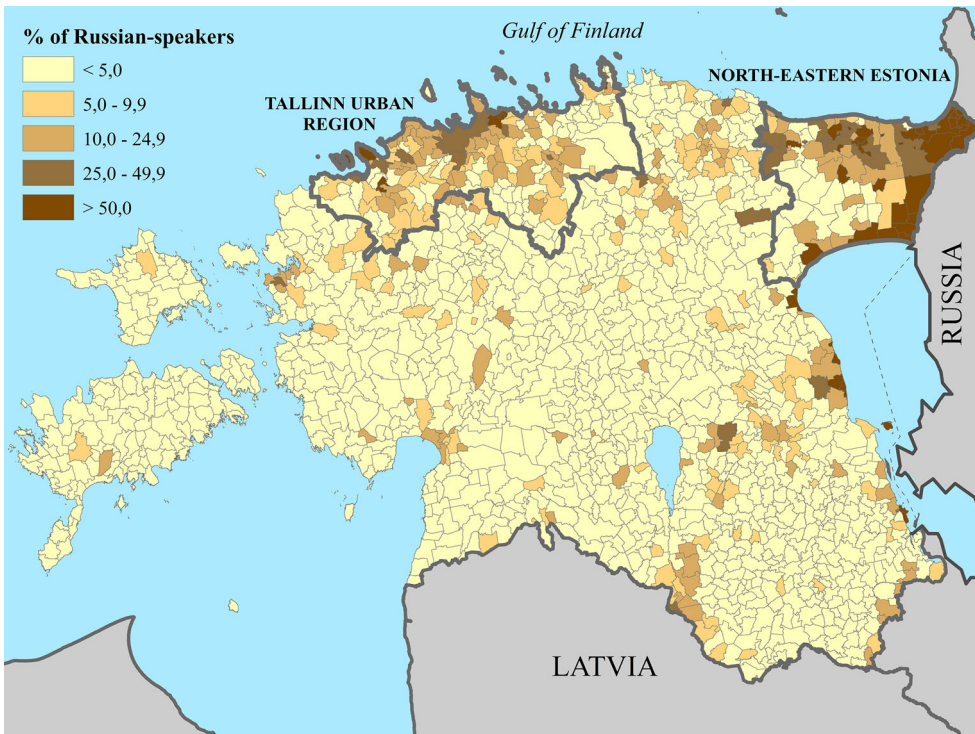

Figure 1. The share of Russian-speakers in Estonian rural and urban neighbourhoods (2011).

two variables of interest that change over time. The FE models are included as an additional robustness check as these models only investigate within person variation.

Findings of the study

Descriptive statistics

Tables 1 and 2 show that 10,746 Russians (3.1 percent of all Russians in Estonia) changed their ethnicity from Russian to Estonian between 2000 and 2011, and 6,255 (1.5 percent) Russian-speakers changed their mother tongue to Estonian. However, when we focus on those people who filled in the census form themselves in both 2000 and 2011, we can see that these figures drop considerably (the numbers in brackets: 4,346 persons changed their ethnicity and 2,825 their language). These results illustrate that a considerable proportion of the change in ethnicity and language may be the result of the fact that not everyone fills in their own census form. Although part of these changes may still be genuine, it is not possible to know what is a measurement error.

Interestingly, there were also 8,342 Estonians (0.9 percent) and 5,945 Estonian-speakers (0.6 percent) (in 2000) who changed their ethnicity and mother tongue to Russian (by the year 2011), and among them there were 3,324 Estonians and 2,643 Estonian-speakers who completed the census form themselves. Since Russian-speakers have lived in Estonia for decades, we expected to find that people changed their ethnic identity from Russian to Estonian. But the finding that also Estonians and Estonian-speakers changed their identity was somewhat surprising, even when the percentages are very small. Although most of the changers among Estonians have an immigrant background (first- or second-generation immigrants) (Table 3), there are still more than 20 percent of Estonians and Estonian-speakers who are born in Estonia and whose parents are born in Estonia, but who have still changed their ethnic identity from Estonian to Russian.

In Table 4 we present the summary statistics of people who changed their identity by neighbourhood type (our main explanatory variable). More than 70 percent of people who changed their ethnic identity lived in the same neighbourhood type (majority, mixed or minority) both in 2000 and 2011. Based on Table 4, we may already assume that the residential context has some effect on ethnic identity: 34 percent of Russians and more that 50 percent of Russian-speakers who changed their ethnic identity to Estonian lived in neighbourhoods dominated by native Estonians in both 2000 and 2011. Additionally, 41 percent of Estonians and 32 percent of Estonian-speakers who changed their ethnicity and mother tongue to Russian, lived in minority neighbourhoods in both census years. Next, we take a closer look at how the residential context and other socio-demographic factors are associated with changes in ethnic and linguistic identity.

Table 1. Ethnicity in 2000 and 2011: Estonian and Russian.

		2011 categories	
		Estonian	Russian
2000	Estonian	741,885	8,342 (3,324*)
categories	Russian	10,746 (4,346*)	253,246

*Note: The number of people who filled the census form themselves in 2000 and 2011 and who were at least 15 years old in 2000.

Table 2. Mother tongue in 2000 and 2011: Estonian and Russian.

		2011 categories	
		Estonian	Russian
2000	Estonian	737,404	5,945 (2,643*)
categories	Russian	6,255 (2,825*)	304,336

Note: The number of people who filled the census form themselves in 2000 and 2011 and who were at least 15 years old in 2000.

Table 3. Immigrant background characteristics of individuals who changed their ethnic identity (%).

Immigrant generation	Estonian→Russian	Estonian-speaker→Russian-speaker
First	14.9	24.3
Second	55.8	51.5
Third or native	29.2	24.2

Change in self-reported ethnicity and mother tongue: Russians and Russian-speakers

We continue our analysis with only those individuals who filled in the census form themselves in 2000 and 2011. First, we investigate how the residential context influences the likelihood of someone changing their self-reported ethnic identity (Models 1a and 1b in Table 5) and changes in mother tongue (Model 2a and 2b in Table 5). We find that Russians and Russian-speakers who lived in majority neighbourhoods in both 2000 and 2011 are the most likely to change their ethnicity and mother tongue from Russian to Estonian (Model 1a and 2a). We also find that those Russians and Russian-speakers whose neighbourhood has changed to the majority category or who have been living in neighbourhoods dominated by Estonians have a considerably higher propensity to change their ethnic identity compared with those who lived in minority neighbourhoods in both 2000 and 2011 (the reference category). In Models 1b and 2b we have included a continuous variable of ethnic change and these models show that with an increasing share of minorities in the residential neighbourhood, Russians and Russian-speakers are less likely to change their ethnic identity to from Russian to Estonian.

Model 1a and 1b (Table 5) also indicate that Russians who lived in the rest of Estonia (mainly Estonian dominated) in 2000 are more likely to change their ethnicity to Estonian

Table 4. Variable summary statistics: people who changed their ethnic identity by neighbourhood type.

	Russians		Russians-speakers		Estonians		Estonian-speakers	
Neighbourhood transitions	Number	%	Number	%	Number	%	Number	%
Majority – majority	1480	34.1	1454	51.6	720	21.8	737	28.0
Majority – mixed	128	2.9	90	3.2	87	2.6	62	2.4
Majority – minority	84	1.9	65	2.3	82	2.5	85	3.2
Mixed – majority	240	5.5	191	6.8	127	3.8	126	4.8
Mixed – mixed	571	13.2	339	12.0	497	15.0	465	17.6
Mixed – minority	251	5.8	93	3.3	249	7.5	177	6.7
Minority – majority	141	3.2	98	3.5	88	2.7	61	2.3
Minority – mixed	130	3.0	61	2.2	108	3.3	77	2.9
Minority – minority	1316	30.3	425	15.1	1349	40.8	846	32.1
	4341	100	2816	100	3307	100	2636	100

Table 5. Results of the multi-level analysis: change in self-reported ethnicity and mother tongue. Models of Russians and Russian-speakers.

	Models 1a and 1b – ethnicity		Models 2a and 2b – mother tongue	
	1 – changed ethnicity to Estonian; 0 – stayed Russian		1 – changed mother tongue to Estonian; 0 – mother tongue Russian	
	MODEL 1a	MODEL 1b	MODEL 2a	MODEL 2b
	Exp (B)		Exp(B)	
Neighbourhood transitions (ref. minority – minority)				
Majority – majority	6.63***		17.02***	
Majority – mixed	4.03***		8.37***	
Majority – minority	2.62***		6.12***	
Mixed – majority	4.06***		8.25***	
Mixed – mixed	1.77***		2.73***	
Mixed – minority	1.87***		1.81***	
Minority – Majority	2.35***		4.83***	
Minority – mixed	1.39***		1.95***	
Change in neighbourhood context		0.99***		0.98***
Region (ref. North-East Estonia)				
Tallinn Urban Region 2000	0.89	1.26	0.99	1.96**
The rest of Estonia 2000	1.32*	3.73***	2.11***	10.47***
Gender (ref. women)				
Men	0.97	0.97	0.93	0.93
Age	0.99***	0.99***	1.00	1.00
Education change (ref. less than secondary in 2000 and 2011)				
Secondary in 2000 and 2011	0.65***	0.66***	0.63***	0.65***
High in 2000 and 2011	0.55***	0.56***	0.53***	0.55**
Received secondary	0.97	0.98	0.69***	0.71***
Received high	0.68***	0.69***	0.57***	0.59***
Immigrant generation (ref. first generation)				
Second generation	2.35***	2.67***	2.40***	2.45***
Third generation	3.47***	3.47***	3.48***	3.54***
Mixed-ethnicity household (ref. not mixed)				
Mixed	2.68***	2.77***	2.54***	2.63***
Individuals	134 565		157 537	

*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

compared to Russians who lived in Russian-dominated north-eastern Estonia and in the Tallinn Urban Region. This effect becomes strongly significant in Model 1b, which includes the continuous neighbourhood ethnic change variable. We can see similar results with regard to mother tongue in Model 2a, which includes the categorical neighbourhood change variables. Model 2b, in which the continuous change variable is included, shows that Russian-speakers who lived in native-dominated regions of Estonia in 2000 are the most likely to change their mother tongue to Estonian. In general, living in the minority-dense North-Eastern part of Estonia in 2000 reduces the probability of that Russians change their ethnic identity to Estonian.

These findings clearly show that there is a strong relationship between the place of residence and changes in ethnic identity. However, our data do not allow the identification of causal effects as we do not know exactly when people moved from one place to another or when their neighbourhood changed. And we also do not know the timing of changes in ethnic identity. For example, it may be that first individuals change their mind about their ethnic identity and then change their place of residence. Nevertheless, there are many people who have lived in the same neighbourhood throughout the whole inter-

census period, and the results clearly show that those who continuously live in neighbour-hoods with a low percentage of Russian-speakers are the most likely to change their self-reported ethnicity to Estonian. Minorities who live in Estonian-dominated areas have more contact with people from the majority population, they are faced with the need to speak and learn the Estonian language, and are more likely to accept the values and norms of the mainstream society. This can change the way people think about their ethnic identity and lead to changes in ethnic and linguistic self-identification. In the neigh-bourhoods and regions where the proportion of Estonians remains low (e.g. the North-Eastern part of Estonia with large housing estates in the bigger cities), the Russian-speak-ing population can work and study in Russian, they consume Russian media and their social networks are mainly Russian. Thus, for those people there are fewer incentives and opportunities to learn Estonian and to get to know Estonian culture, and they are also less likely to change their ethnic identity.

Table 5 also shows the effects of a selection of demographic and social status variables on changes in self-reported ethnicity and mother tongue. Here we obtained similar results in models including the categorical neighbourhood change variables or the continuous change variables. There are no significant gender differences in the probability of changing ethnic identity. As age increases, we found that Russians are less likely to change their self-reported ethnic identity (Model 1a and 1b). This result is in line with earlier research, which has shown that acculturation processes are generally smoother for younger age groups and do not proceed so easily in later life (Berry 1997). We found no age effects on the probability of changing mother tongue (Model 2a and 2b). Our results also indicate that people with a lower level of education are more likely to change their ethnic identity from Russian to Estonian. This is interesting because higher education is often considered to be an essential factor for successful integration into the mainstream society. However, our analysis show that there can be other mechanisms behind the change in ethnic iden-tity. It might be that Russians and Russian-speakers with a lower level of education try to increase their social status by identifying themselves as Estonians and Estonian-speakers (cf. Zhou 2004). This assumption, however, needs to be studied more in further research.

The effect of immigrant generation in the models in Table 5 is as expected: second- and third-generation immigrants are more likely to change their ethnic identity from Russian to Estonian than first-generation immigrants. An analysis of mixed-ethnicity households shows that immigrants who live in mixed-ethnicity households are more likely to change their ethnic identity to Estonian compared to people who live with others from the same ethnic background. These results suggest that the more ties minorities have with Estonia and the majority population, the higher the probability is that they will change their iden-tity. These findings also support our results about the contextual factors (place of resi-dence, household, time spent in the country).

Change in self-reported ethnicity and mother tongue: Estonians and Estonian-speakers

Table 6 focuses on those who self-reported as Estonians and Estonian-speakers in 2000. Again we use multi-level models to model the probability of changing self-identified eth-nicity (Models 3a and 3b) and mother tongue (Model 4a and 4b) from Estonian to Russian. Models 3a and 4a show that Estonians and Estonian-speakers (measured in

Table 6. Results of the multi-level analysis: change in self-reported ethnicity and mother tongue. Models of Estonians and Estonian-speakers.

	Models 3a and 3b – ethnicity 1 – changed ethnicity to Russian; 0 – stayed Estonian		Model 4a and 4b – mother tongue 1 – changed mother tongue to Russian; 0 – mother tongue Estonian	
	MODEL 3a	MODEL 3b	MODEL 4a	MODEL 4b
	Exp (B)		*Exp(B)*	
Neighbourhood transitions (ref. minority – minority)				
Majority – majority	0.06***		0.08***	
Majority – mixed	0.09***		0.09***	
Majority – minority	0.23***		0.40***	
Mixed – majority	0.10***		0.15***	
Mixed – mixed	0.29***		0.35***	
Mixed – minority	0.73**		0.81	
Minority – majority	0.22***		0.22***	
Minority – mixed	0.48***		0.54***	
Change in neighbourhood context		1.02***		1.02***
Region (ref. North-East Estonia)				
Tallinn Urban Region 2000	0.77**	0.52***	0.83	0.65**
The rest of Estonia 2000	0.76**	0.17***	0.74*	0.22***
Gender (ref. women)				
Men	0.98	0.98	1.06	1.05
Age	0.97***	0.97***	0.98***	0.98***
Education change (ref. less than secondary in 2000 and 2011)				
Secondary in 2000 and 2011	0.90*	0.91	1.01	1.04
High in 2000 and 2011	0.80***	0.81***	0.96	0.98
Received secondary	0.94	0.95	0.89	0.90
Received high	0.84***	0.84***	1.03	1.05
Country of birth (ref. Estonia)				
Russia	9.23***	9.28***	14.05***	14.11***
Other	7.15***	7.27***	12.59***	12.76***
Mixed-ethnicity household (ref. not mixed)				
Mixed	7.20***	7.55	7.67***	8.00***
Individuals	403 683		402 355	

*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

2000) who live in neighbourhoods with a high share of Russian-speakers in both 2000 and 2011 (the reference category) have the highest probability of changing their ethnic identity to Russian. Also those whose neighbourhood has changed from being a mixed neighbourhood to a minority neighbourhood are likely to change their ethnic identity to Russian. In addition, people who have lived in neighbourhoods with a low share of Russian-speakers (majority-majority) or whose neighbourhood type has changed to a majority neighbourhood are the least likely to change their ethnicity and mother tongue to Russian. The results for the continuous neighbourhood change variable in Models 3b and 4b show similar results: Estonians and Estonian-speakers are more likely to change their ethnic identity to Russian when the share of Russian-speakers in the neighbourhood increases.

The region variable shows that generally speaking Estonians and Estonian-speakers who lived in north-eastern Estonia in 2000 (reference category) are the most likely to change their identity to Russian. Only in Model 4a this effect is not significant. All models show that Estonians who live in the rest of Estonia in 2000 have the lowest probability of changing their ethnic identity to Russian. These findings again show that the ethnic context that surrounds individuals has an effect on people's ethnic self-concept. It seems that a sense of ethnic belonging tends to grow if the person and surrounding

population have similar ethnic characteristics. Thus, even majority population members can be influenced by the surrounding ethnic context in a way that they start to rethink their ethnic identity.

Model 3a, 3b, 4a and 4b show no significant differences for gender. Similar to the previous models for Russians, with increasing age, Estonians and Estonian-speakers are less likely to change their ethnic identity. Thus, our results imply that older people are more stable in their ethnic identity and are less sensitive to their surrounding context. Younger people are more open and still explore who they are, and they are more responsive to the context they live in. Differences between education groups are modest.

With regard to the country of birth variable, Estonians with an immigrant background have a much higher probability of changing their ethnic identity to Russian than others. Estonians (in 2000) whose country of birth is Russia have 9.2 times higher odds of changing their self-reported ethnicity compared to Estonians born in Estonia (Model 3a and 3b). Similarly, Estonian-speakers who are born in Russia have 14 times higher odds of changing their mother tongue to Russian compared to Estonian-speakers born in Estonia (Model 3a and 3b). These results suggest that there is a group of Estonians with an immigrant background who do not have a very clear sense of who they are in terms of ethnic identity. It may be that they define themselves as Estonians in one context and Russians in another. These people are especially influenced by their surrounding context.

The models in Table 6 also highlight the effect of living in a mixed-ethnicity household on the probability of changing ethnic identity: Estonians and Estonian-speakers who live in a mixed-ethnicity household are more likely to change their ethnic identity to Russian compared to people who do not live in mixed-ethnicity households. These findings again indicate that the immediate context that surrounds individuals and close relationships between ethnic groups have a big role in influencing changes in ethnic identity.

Results of the fixed effects models

Table 7 presents the results from the Fixed Effects (FE) models. The FE models allow us to investigate the within-person variation in ethnic identity over time, and the models only include those people from the Census who have experienced a change in the dependent variable. Hence, the research population for the FE models is much smaller than for the

Table 7. Results of the conditional fixed effects (FE) logit models: change in self-reported ethnicity and mother tongue.

	Russians		Russian-speakers		Estonians		Estonian-speakers	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Neighbourhood context (share of Russian-speakers)	0.00	0.00	−0.01***	0.00	0.01***	0.00	0.01***	0.00
Education	2.00***	0.08	1.69***	0.09	1.87***	0.09	1.61***	0.09
N observations (n individuals)	8,528 (4,264)		5,522 (2,761)		6,488 (3,244)		5,130 (2,565)	
Log likelihood	−2383.91		−1660.46		−1835.49		−1538.05	

*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

Notes: For the models of Russians and Russian-speakers the dependent variable is 0 – Russian/Russian-speaker, 1 – Estonian/Estonian-speaker; for the models of Estonian and Estonian-speakers the dependent variable is 0 – Estonian/Estonian-speaker, 1 – Russian/Russian-speaker.

multi-level models. In general, the results from the FE models confirm the previous findings. We find that for Russian-speakers, with an increasing share of Russian-speakers in the neighbourhood the likelihood of changing mother tongue from Russian to Estonian decreases. The models for Estonians and Estonian-speakers show that people are more likely to change their ethnic identity from Estonian to Russian when the share of Russian-speakers in the neighbourhood increases. Interestingly, a change in the ethnic composition of the neighbourhood context does not have a significant effect in the FE model for Russians. This suggests that staying in a neighbourhood with a similar ethnic composition (between two census periods) is the strongest predictor of a change of ethnic identity (this is what Model 1 clearly showed).

The effect of education is highly significant in all the FE models and the effect of education change is much clearer in these models than in the multi-level models. The Models for Russians and Russian-speakers show that with increasing level of education, the likelihood to change ethnicity and mother tongue to Estonian also increases. In the models for Estonians and Estonian-speakers, the likelihood of changing ethnic identity to Russian also increases with increasing level of education. This is an interesting result and it suggests a clear link between education and ethnic identity change.

Discussion of the main findings

The aim of this study was to contribute to a better understanding of the role of the ethnic residential context in changes in the ethnic identity of people. Previous research has suggested that the context which frames individuals' lives and experiences is essential in the development of ethnic identity (Kinket and Verkuyten 1997; Phinney 1990; Rosenberg 1979; Verkuyten 2000, 2018). The ethnic composition of the residential neighbourhood, and its related ethnically based infrastructure, signs and symbols (churches, shops, restaurants, etc), create a collective milieu that has an influence on social interactions of the individuals living there (Bauder 2002; Bolt and van Kempen 2010). The residential context can both lead to the strengthening of ones' ethnic identity or lead to identity change, for example in the form of assimilation. However, there is hardly any empirical evidence on how contextual factors affect the process of ethnic identity change. This is one of the first studies that empirically investigates the relationship between place of residence and changes in self-reported ethnic identity.

The first main finding of this study is that only a very small proportion of the Russian-speaking minority population changed their ethnic identity between 2000 and 2011. This might point to the fact that in a multi-ethnic society with a sizable, homogenous and stable minority population, ethnic identity remains strong. Alternatively, ethnic minorities in Estonia are still in a stage where they are adapting to the situation after the dissolution of the Soviet Union in 1991, and this adaptation takes time (Laitin 1998; Pavlenko 2006). Phinney (1990, 31) argues that ' … ethnic identity may change over time, both as a function a particular context, the time spent in that context, and the way in which individuals have explored and resolved issues concerning to the implications of their ethnic group membership'. The time element is thus important and ethnic identity change over generations follows the expectations of the straight-line assimilation hypothesis (cf. Alba and Nee 2003); ethnic minorities who have lived in Estonia for three generations (grandchildren of migrants) are the most likely to both identify themselves as

Estonians as well as to switch to Estonian mother tongue than second generation immigrants who in turn are more likely to undertake such changes compared to first generation immigrants.

The second main finding of this study shows that Russians and Russian-speakers who live in Estonian-dominated neighbourhoods and regions are more likely to change their self-identified ethnicity and mother tongue to Estonian compared to those who live in minority-dense areas. In addition, the results showed that with an increasing share of minorities in the residential neighbourhood, Russians and Russian-speakers are less likely to change their ethnic identity to from Russian to Estonian. However, FE model showed that a change in the ethnic composition of the neighbourhood context does not have a significant effect for Russians. This indicates that staying in a neighbourhood with a similar ethnic composition has the strongest effect to the change in ethnic identity. One explanation is that in majority neighbourhoods there is less ethnic minority infrastructure, signs and symbols that are important for maintaining ones' ethnic identity (cf. Phinney 1990). Also, being in daily proximity of majority group neighbours may lead to similar aspirations, daily practices and behaviours that lead to ethnic assimilation, ultimately signified by identity change. The acculturation theory considers that first-hand contact is very important in the process of self-identification of people, and in the choices that people make (Berry 1992; Sam 2006). The strongest first-hand contacts with 'the other group' emerge from mixed ethnic marriages (Gordon 1964), and we find that having an Estonian partner significantly increases the probability an ethnic identity change from Russian to Estonian.

Thus, the stronger the spatial presence of members of the majority population and the stronger the social ties, the higher the probability that Russians change their ethnic identity to Estonian. Hence, both the spatial dimension (co-presence) and the social dimensions (interaction) affect changes in ethnic identity. These results clearly confirm the expectations from previous studies (Kinket and Verkuyten 1997; Phinney 1990; Rosenberg 1979; Verkuyten 2000, 2018) that the ethnic context which surrounds minorities has a considerable impact on their ethnic identification.

The third main finding of this study shows that ethnic assimilation can take place also for the majority population. These results support the findings of Sam (2006) showing the reciprocal nature of acculturation processes. And again, the ethnic context in which members of the majority population live is very important in identity and language change. Estonians living in minority-dense neighbourhoods and regions, or whose residential neighbourhood has turned more Russian between 2000 and 2011, have a significantly elevated probability for ethnic and language change to Russian. In addition, Estonians with an immigrant background and Estonians who are in a mixed marriage are the most likely to change their ethnic identity. But notably, also people who are born and raised in Estonia and who do not have an immigrant background, can still change their ethnic identity to Russian. These results once again highlight the role of the residential context and the importance of opportunities to meet people from other ethnic groups in the process of identity change. When individuals live in neighbourhoods where there is an abundant presence of minority infrastructure, signs and symbols, and when they are surrounded by other ethnic groups influencing their views, values and behaviours, people may change their feelings about ethnic belonging too. In other words, the co-evolving ethnic and symbolic transformation of neighbourhoods leads to the formation

of new boundaries (Barth 1969), or even social frontiers of sharp differences in social/ ethnic characteristics, in cities with a high presence of immigrants and ethnic minorities (Dean et al., forthcoming).

To conclude, this study has provided new insights in the effects of the residential context on changes in self-reported ethnic identity of both members of the minority and majority populations. The study showed that changes in ethnic identity are not common, but are most likely to occur when people are exposed to the 'other' ethnic group in their residential environment. Living in a neighbourhood/region with a high share of members of the majority population (for ethnic minorities) or in a neighbourhood/region with high share of members of the minority population (for ethnic majorities) increases the probability to change one's self-reported ethnicity and mother tongue.

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References

Alba, Richard, and Victor Nee. 2003. *Remaking the American Mainstream*. Cambridge, MA: Harvard University Press.

Barth, Fredrik. 1969. *Ethnic Groups and Boundaries: The Social Organization of Culture Difference*. Boston: Little, Brown and Company.

Bauder, Harald. 2002. "Neighbourhood Effects and Cultural Exclusion." *Urban Studies* 39 (1): 85–93.

Berry, John W. 1990. "Psychology of Acculturation." In *Nebraska Symposium on Motivation, 1989: Vol. 37. Cross-Cultural Perspective*, edited by John J. Berman, 201–234. Lincoln: University of Nebraska.

Berry, John W. 1992. "Acculturation and Adaptation in a New Society." *International Migration* 30 (1): 69–85.

Berry, John W. 1997. "Immigration, Acculturation and Adaptation." *Applied Psychology: An International Review* 46 (1): 5–68.

Berry, John W. 2006. "Contexts of Acculturation." In *The Cambridge Handbook of Acculturation Psychology*, edited by David L. Sam and John W. Berry, 27–41. Cambridge: Cambridge University Press.

Bhugra, Dinesh, and Matthew Becker. 2005. "Migration, Cultural Bereavement and Cultural Identity." *World Psychiatry* 4 (1): 18–24.

Blau, Peter M., Carolyn Beeker, and Kevin M. Fitzpatrick. 1984. "Intersecting Social Affiliations and Intermarriage." *Social Forces* 62 (3): 585–606.

Bolt, Gideon, Jack Burgers, and Ronald van Kempen. 1998. "On the Social Significance of Spatial Location: Spatial Segregation and Social Inclusion." *Netherlands Journal of Housing and the Built Environment* 13: 83–95.

Bolt, Gideon, A. Sule Özüekren, and Deborah Phillips. 2010. "Linking Integration and Residential Segregation." *Journal of Ethnic and Migration Studies* 36 (2): 169–186.

Bolt, Gideon, and Ronald van Kempen. 2010. "Ethnic Segregation and Residential Mobility: Relocations of Minority Ethnic Groups in the Netherlands." *Journal of Ethnic and Migration Studies* 36: 333–354.

Bugarski, Ranko. 2017. "Ethnicity and Mother Tongue in Population Censuses: From Yugoslavia to Serbia and Montenegro." *Journal of Multilingual and Multicultural Development* 38 (8): 742–752.

Cheskin, Ammon. 2015. "Identity and Integration of Russian Speakers in the Baltic States: A Framework for Analysis." *Ethnopolitics* 14 (1): 72–93.

Chiswick, Barry R., and Paul W. Miller. 2001. "A Model of Destination-language Acquisition: Application to Male Immigrants in Canada." *Demography* 38 (3): 391–409.

Constant, Amelie F., Liliya Gataullina, and Klaus F. Zimmermann. 2009. "Ethnosizing Immigrants." *Journal of Economic Behavior & Organization* 69 (3): 274–287.

Danzer, Alexander M., and Firat Yaman. 2013. "Do Ethnic Enclaves Impede Immigrants' Integration? Evidence from a Quasi-Experimental Social- Interaction Approach." *Review of International Economics* 21 (2): 311–325.

Dean, Nema, Guanpeng Dong, Aneta Piekut, and Gwilym Pryce. forthcoming. "Frontiers in Residential Segregation: Understanding Neighbourhood Boundaries and Their Impacts." *Tijdschrift Voor Economische En Sociale Geografie* (online).

Drever, Anita I. 2004. "Separate Spaces, Separate Outcomes? Neighbourhood Impacts on Minorities in Germany." *Urban Studies* 41 (8): 1423–1439.

Ehala, Martin, and Anastassia Zabrodskaja. 2014. "Ethnolinguistic Vitality and Acculturation Orientations of Russian-speakers in Estonia." In *The Russian Language Outside the Nation*, edited by Lara Ryazanova-Clarke, 166–188. Edinburgh: Edinburgh University.

Ellis, Mark, Richard Wright, and Virginia Parks. 2004. "Work Together, Live Apart? Geographies of Racial and Ethnic Segregation at Home and at Work." *Annals of the Association of American Geographers* 94 (3): 620–637.

Fenton, Steve. 1999. *Ethnicity: Racism, Class and Culture*. Basingstoke: Macmillan.

Gijsberts, Mérove, and Jaco Dagevos. 2007. "The Socio-Cultural Integration of Ethnic Minorities in the Netherlands: Identifying Neighbourhood Effects on Multiple Integration Outcomes." *Housing Studies* 22 (5): 805–831.

Gordon, Milton M. 1964. *Assimilation in American Life: The Role of Race, Religion and National Origins*. New York: Oxford University Press.

Heckmann, Friedrich. 2005. *Integration and Integration Policies: IMISCOE Network Feasibility Study*. Bamberg: European Forum for Migration Studies.

Johnston, Ron, Michael Poulsen, and James Forrest. 2006. "Ethnic Residential Segregation and Assimilation in British Towns and Cities: A Comparison of those Claiming Single and Dual Ethnic Identities." *Migration Letters* 3 (1): 11–30.

Kaldur, Kristjan, Raivo Vetik, Laura Kirss, Kats Kivistik, Külliki Seppel, Kristina Kallas, Märt Masso, and Kristi Anniste. 2017. *Eesti ühiskonna integratsiooni monitooring 2017* (Estonian Integration Monitoring 2017). Tartu: Balti Uuringute Instituut.

Kalmus, Veronika, and Triin Vihalemm. 2017. "Väärtused ja identiteedid (Values and Identities)." In *Eesti ühiskond kiirenevas ajas. Uuringu „Mina. Maailm. Meedia" 2000–2014 tulemused* (Estonian Society in an Accelerating Time: Results of the Survey "Me. The World. The Media" 2000–2014), edited by Peeter Vihalemm, Marju Lauristin, Veronika Kalmus, and Triin Vihalemm, 111–133. Tartu: Tartu Ülikooli Kirjastus.

Kamenik, Kristiina, Tiit Tammaru, and Ott Toomet. 2015. "Ethnic Segmentation in Leisure Time Activities in Estonia." *Leisure Studies* 34 (5): 566–587.

Katus, Kalev, and Luule Sakkeus. 1993. "Foreign-born Population in Estonia." EKDK working papers, B 19. Tallinn: Estonian Interuniversity Population Research Centre.

Kinket, Barbara, and Maykel Verkuyten. 1997. "Levels of Ethnic Self- Identification and Social Context." *Social Psychology Quarterly* 60 (4): 338–354.

Korts, Külliki. 2009. "Inter-Ethnic Attitudes and Contacts Between Ethnic Groups in Estonia." *Journal of Baltic Studies* 40 (1): 121–137.

Kukk, K., Maarten van Ham, and Tiit Tammaru. forthcoming. "EthniCity of Leisure: A Domains Approach to Ethnic Integration During Free Time Activities." *Journal of Economic and Social Geography (TESG)* (online).

Kulu, Hill. 2004. "Determinants of Residence and Migration in the Soviet Union after World War 2: The Immigrant Population in Estonia." *Environment and Planning A* 36 (2): 305–325.

Laitin, David D. 1998. *Identity in Formation: The Russian-Speaking Populations in the Near Abroad.* New York: Cornell University Press.

Lieberson, Stanley, and Mary C. Waters. 1993. "The Ethnic Responses of Whites: What Causes their Instability, Simplification and Inconsistency?" *Social Forces* 72 (2): 421–450.

Liebkind, Karmela. 1993. "Self-Reported Ethnic Identity, Depression and Anxiety among Young Vietnamese Refugees and their Parents." *Journal of Refugee Studies* 6 (1): 25–39.

Liebkind, Karmela. 2006. "Ethnic identity and acculturation." In *The Cambridge Handbook of Acculturation Psychology*, edited by David L. Sam, and John W. Berry, 78–96. Cambridge: Cambridge University Press.

Lindemann, Kristina. 2009. "Ethnic Inequalities in Labour Market Entry in Estonia. The Changing Influence of Ethnicity and Language Proficiency on Labour Market Success." Working Paper No. 125. Mannheim: Mannheimer Zentrum für Europäische Sozialforschung.

Lindemann, Kristina, and Irena Kogan. 2013. "The Role of Language Resources in Labour Market Entry: Comparing Estonia and Ukraine." *Journal of Ethnic and Migration Studies* 39 (1): 105–123.

Lindemann, Kristina, and Ellu Saar. 2012. "Ethnic Inequalities in Education: Second Generation Russians in Estonia." *Ethnic and Racial Studies* 35 (11): 1974–1998.

Mägi, Kadi, Kadri Leetmaa, Tiit Tammaru, and Maarten van Ham. 2016. "Types of Spatial Mobility and the Ethnic Context of Destination Neighbourhoods in Estonia." *Demographic Research* 34 (41): 1161–1192.

Marcińczak, Szymon, Tiit Tammaru, Magnus Strömgren, and Urban Lindgren. 2015. "Changing Patterns of Residential and Workplace Segregation in the Stockholm Metropolitan Area." *Urban Geography* 36 (7): 969–992.

Martinovic, Borja, Frank van Tubergen, and Ineke Maas. 2009. "Dynamics of Interethnic Contact: A Panel Study of Immigrants in the Netherlands." *European Sociological Review* 25 (3): 303–318.

Musterd, Sako. 2003. "Segregation and Integration: A Contested Relationship." *Journal of Ethnic and Migration Studies* 29 (4): 623–641.

Pavlenko, Aneta. 2006. "Russian as a Lingua Franca." *Annual Review of Applied Linguistics* 26: 78–99.

Phinney, Jean S. 1990. "Ethnic Identity in Adolescents and Adults: Review of Research." *Psychological Bulletin* 108: 499–514.

Phinney, Jean S. 1996. "Understanding Ethnic Diversity: The Role of Ethnic Identity." *American Behavioral Scientist* 40 (2): 143–152.

Phinney, Jean S. 2003. "Ethnic Identity and Acculturation." In *Acculturation: Advances in Theory, Measurement, and Applied Research*, edited by Kevin M. Chun, Pamela B. Organista, and Gerardo Marin, 63–81. Washington, DC: American Psychological Association.

Phinney, Jean S., and Victor Chavira. 1992. "Ethnic Identity and Self-Esteem: An Exploratory Longitudinal Study." *Journal of Adolescence* 15 (3): 271–281.

Phinney, Jean S., Gabriel Horenczyk, Karmela Liebkind, and Paul Vedder. 2001. "Ethnic Identity, Immigration, and Well-Being: An Interactional Perspective." *Journal of Social Issues* 57 (3): 493–510.

Phinney, Jean S., and Anthony D. Ong. 2007. "Conceptualization and Measurement of Ethnic Identity: Current Status and Future Directions." *Journal of Counseling Psychology* 54 (3): 271–281.

Redfield, Robert, Ralph Linton, and Melville J. Herskovits. 1936. "Memorandum for the Study of Acculturation." *American Anthropologist* 38: 149–152.

Rosenberg, Morris. 1979. *Conceiving the Self*. New York: Basic Books.

Ruoppila, Sampo, and Anneli Kährik. 2003. "Socio-Economic Residential Differentiation in Post-Socialist Tallinn." *Journal of Housing and the Built Environment* 18: 49–73.

Sam, David L. 2006. "Acculturation: Conceptual Background and Core Components." In *The Cambridge Handbook of Acculturation Psychology*, edited by David L. Sam, and John W. Berry, 11–26. Cambridge: Cambridge University Press.

Silm, Siiri, and Rein Ahas. 2014. "Ethnic Differences in Activity Spaces: A Study of Out-of-Home Nonemployment Activities with Mobile Phone Data." *Annals of the Association of American Geographers* 104 (3): 931–969.

Simpson, Ludi, and Bola Akinwale. 2007. "Quantifying Stability and Change in Ethnic Group." *Journal of Official Statistics* 23 (2): 185–208.

Tammaru, Tiit, and Hill Kulu. 2003. "The Ethnic Minorities of Estonia: Changing Size, Location, and Composition." *Eurasian Geography and Economics* 44 (2): 105–120.

van der Laan Bouma-Doff, Wenda. 2007. "Confined Contact: Residential Segregation and Ethnic Bridges in the Netherlands." *Urban Studies* 44 (5/6): 997–1017.

van Ham, Maarten, and Tiit Tammaru. 2016. "New Perspectives on Ethnic Segregation Over Time and Space. A Domains Approach." *Urban Geography* 37 (7): 953–962.

Verkuyten, Maykel. 2000. "The Benefits to Social Psychology of Studying Ethnic Minorities." *European Bulletin of Social Psychology* 12 (3): 5–21.

Verkuyten, Maykel. 2018. *The Social Psychology of Ethnic Identity*. 2nd ed. London: Routledge.

Vihalemm, Triin. 1999. "Group Identity Formation Processes among Russian- Speaking Settlers of Estonia: A Linguistic Perspective." *Journal of Baltic Studies* 30 (1): 18–39.

Vihalemm, Triin. 2007. "Crystallizing and Emancipating Identities in Post- Communist Estonia." *Nationalities Papers* 35 (3): 477–502.

Wagner, Ulrich, Rolf van Dick, Thomas F. Pettigrew, and Oliver Christ. 2003. "Ethnic Prejudice in East and West Germany: The Explanatory Power of Intergroup Contact." *Group Processes and Intergroup Relations* 6 (1): 22–36.

Zabrodskaja, Anastassia. 2015. "'What is My Country to Me?' Identity Construction by Russian-Speakers in the Baltic Countries." *Sociolinguistic Studies* 9: 217–242.

Zhou, Min. 2004. "Are Asian Americans Becoming 'White'?" *Contexts* 3 (1): 29–37.