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Exploring patterns of socioeconomic residential intermixing in Tallinn

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1. Introduction

For more than two decades, socioeconomic inequality and segregation have been on the rise in most European capital cities (Marcińczak, Musterd, van Ham, & Tammaru, 2016). The scale of income disparities and the level of class-based (ie. income-based) intra-urban spatial divisions depend upon a number of (macro-) structural factors, particular in regard to the intensity of globalisation, the type of welfare state and housing system in operation, and the size and ethnic/racial composition of the city's population and its population dynamics (Sassen, 1991; Arbaci, 2007; Maloutas & Fujita, 2012; Marcińczak et al., 2015; Tammaru, Marcińczak, van Ham, & Musterd, 2016a). Tallinn, the capital of Estonia, is neither the most populous nor the most globally-connected capital city in Europe; however, it does rank highly amongst those countries on the continent with the most segregated urban regions. The counterintuitive relationship between macrostructural factors, such as the globalisation of the economy and the level of socioeconomic segregation in Tallinn in the first decade of the twenty-first century, aptly illustrates the importance of a local context -an historically-shaped socioeconomic, demographic, and morphological profile of the city/region - in shaping the patterns of segregation (Musterd, Marcińczak, van Ham, & Tammaru, 2016).

The most recent comparative studies on socioeconomic spatial divisions in Europe are limited to global analyses that consider the level of segregation in a city (its urban region) (Tammaru, Kährik, Mägi, Novák, & Leetmaa, 2016c; Musterd et al., 2016). Being summary measures of segregation for the entire urban area, global indices of segregation generally lose sight of differentiated local patterns of class-based or ethnic intermixing. Furthermore, attempts to explain the current growth of socioeconomic segregation in Europe, as measured by segregation indices, generally accentuate macrostructural factors (Marcińczak et al., 2016). Despite the influential role of those factors in codetermining the scale and form of socioeconomic inequalities and segregation, the evolving patterns of socio-spatial divisions are also sensitive to national, regional, and local contexts (Fainstein, Gordon, & Harloe, 1992; Musterd & Ostendorf, 1998; Maloutas & Fujita, 2012). In other words, the complicated relationship between different aspects of the local context, the 'ground level' reality (Brown & Chung, 2008), and variegated patterns of residential intermixing for different social groups at the neighbourhood level in European cities is still an under-researched area. Therefore this paper seeks to answer the following questions:

1. What are the evolving local patterns of socioeconomic residential intermixing in the Tallinn Metropolitan Region in the first decade of the twenty-first century?
2. What is the role of demographic (ethnic background and migration history) and the built-environment characteristics of tracts in shaping socioeconomic spatial divisions?

Assuming that a local context (the 'ground level' reality) is an integral element of understanding (Brown, 1999), we hope to shed new light on the important, yet understudied, role of a local context in creating socioeconomic spatial divisions in Europe. In order to be able to explore the relationship between residential intermixing and neighbourhood characteristics we use a typology of tracts based on the composition of residents (Marcińczak et al., 2015) and, at a later stage of analysis, descriptive and multivariate statistical methods such as an analysis of variance and discriminate analysis. This contribution adds to the growing body of research on inequalities and segregation in urban areas on both sides of the Atlantic, and illustrates how the link between different neighbourhood characteristics and different forms of local residential socioeconomic intermixing can be rigorously investigated using variables other than income, such as the International Standard Classification of Occupations (ISCO). The following section presents the current debate on socioeconomic segregation. The next section introduces research design, data and methods. We then elaborate on the geography of socioeconomic residential intermixing, and on the link between local patterns of segregation and various neighbourhood characteristics. The last section concludes this work with key findings, and provides directions for future work.

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2. On socioeconomic segregation

2.1. Meaning

Socioeconomic segregation usually denotes the uneven geographical distribution of socioeconomic groups (in terms of class, social status, or income) in the city or wider urban region. Similar to other forms of segregation, such as those based on ethnic background or race (Kaplan and Woodhouse, 2005; Reardon, 2006), socioeconomic segregation most often refers to: 1) different social, economic, institutional, and demographic processes by which spatial divisions are produced, and 2) patterns - the intensity, scale and geography of socioeconomic disparities. In regard to the various processes that contribute to the level of socioeconomic segregation, income (economic) inequality is among the most prominent; it is often taken for granted that higher levels of socioeconomic inequality imply more acute segregation by class and/or income (van Kempen, 2007; Reardon & Bischoff, 2011).

Even if different macrostructural factors set the preconditions for the development of socio-spatial divisions (Castells, 1989; Sassen, 1991; Hamnett, 2012; Arbaci, 2007; and Musterd & Ostendorf, 1998), the local context is equally important in codetermining the patterns of segregation (Maloutas & Fujita, 2012; Marcińczak et al., 2015; Tammaru et al., 2016c). This broad concept, a 'local context', embodies the city's variegated characteristics such as, for example, its institutional setting and the trajectory of its economic and population development (Burgers & Musterd, 2002; Brown & Sharma, 2010), its urban morphology and tenurial structure (Galster & Booza, 2007; Marcińczak, Musterd, & Stępniak, 2012), and its topography (Meyer, 2005). Although all of these factors set the stage for the development of socioeconomic segregation, it is individuals and households that make actual residential choices and, therefore, drive socio-spatial change.

The patterns of socioeconomic segregation are also sensitive to other forms of spatial divisions, especially those that are based on race and ethnic background (van Ham and Manley, 2009). In general, there is a clear tendency towards a more globally-connected economy, a market-orientated institutional environment, and higher levels of social inequality being positively related to higher levels of socioeconomic segregation (Maloutas & Fujita, 2012; Tammaru et al., 2016a). Moreover, the results of the recent comparative study on socioeconomic segregation in Europe clearly indicate that the legacies of the former housing and spatial policies and the historically-developed local patterns of segregation still underpin the current level and geography of socioeconomic disparities (Marcińczak et al., 2016). Interestingly, it appears that when a more significant role is taken by the national government in planning control and housing provision, this often contributes to large-scale concentrations of affordable housing, usually housing estates which consist of publicly-owned blocks of flats (Arbaci, 2007; Andersson and Kährik, 2016).

2.2. Socio-spatial differentiation in the post-socialist city

The role of the formerly developed residential structure and implemented housing policies in shaping contemporary patterns of segregation and housing inequality is especially evident in the former socialist countries (Marcińczak et al., 2015; Stephens, Lux, & Sunega, 2015). When it comes to the socio-spatial structure, the great majority of cities in Eastern Europe consist of three major zones: the historical (pre-socialist) core, socialist-era housing estates and industrial areas, and post-socialist suburbs (French & Hamilton, 1979, Sykora, 2009; Kovacs & Herfert, 2012). In broad strokes, lower quality, usually undermaintained and decaying, older housing stock dominated in the inner-city (pre-socialist tenements) and the peripheral zone (pre-socialist villages), and those areas were often home to lower social categories in the late socialism period; socialist-era blocks of flats and housing estates and selected inner-city and pre-socialist villa neighbourhoods were overrepresented by higher and middle social groups (Marcińczak, Gentile, & Stępniak, 2013; Sykora, 2009). Irrespective of suburbanisation and initial gentrification (Boren & Gentile, 2007), the socio-spatial structure of post-socialist urban regions did not change much in the 1990s (Marcińczak et al., 2015). The social upgrading of city centres (Bernt, Gentile, & Sz, 2015) and the migration of middle and higher social categories into the suburbs (Stanilov & Sykora, 2014), a process involving new-build housing, gained momentum in the twenty-first century. As the gentrifies and suburbanisers often recruit from the local population (in the city/urban region), these two processes alone have inevitably led to changes in the social composition of the three zones in the post-socialist city. Housing estates that consist of blocks of flats have not yet deteriorated (Kährik and Tammaru, 2010; Marcińczak & Sagan, 2011); however those areas seem gradually to lose their better-off residents. In other words, both under socialism and afterwards, there appears to be a strong relationship between social composition and the built environment of neighbourhoods - the tenure, make-up, form, and age of housing in particular (Kovacs & Herfert, 2012; Marcińczak et al., 2012).

Already in the late 1990s, but also later, many scholars heralded the deepening of socio-spatial divisions, or even the polarisation of urban space, in the aftermath of the post-socialist transition (Szelenyi, 1996; and Smith & Timar, 2010). However, irrespective of the growing income inequality in CEE after 1990, levels of social segregation either did not particularly change, or were even seen to have decreased in the last decade of the twentieth century (Sykora, 2009; Marcińczak et al., 2013). With some delay, the scale of socio-spatial divisions has started to catch up with growing income disparities since the early 2000s but, twenty-five years after the end of socialism, the levels of social (socioeconomic) segregation in the post-socialist city are still (very) far from indicating the socio-spatial polarisation (dualisation) of urban areas (Marcińczak et al., 2016). Interestingly, the available results clearly demonstrate that the process of producing an ever more professional workforce, not polarisation or dualisation, characterises the evolving employment structures in large CEE cities (Marcińczak et al., 2015).

2.3. Measurement

Whereas commonly-used single number indices summarise the extent of racial/ethnic diversity in a given tract, typologies add important information on which ethnic/racial or social group dominates in a spatial unit. Illustrated in choropleth maps, classifications of neighbourhoods according to the ethnic/racial or social composition of residents additionally reveal the local geography of residential intermixing (Holloway, Wright, & Ellis, 2012; Delmelle, 2015). Essentially, it appears that typologies provide a deeper insight into local variations of residential mix than can be provided by single number summary measures.

When it comes to patterns of segregation, two main strands of research can be distinguished. The first of these advocates the use of single number (global) indices of segregation (Peach, 2009). Global indices provide an easy way of interpreting summary measures for different dimensions of segregation in a given city (Massey & Denton, 1988; Brown & Chung, 2008). A new model-based method, one that shows segregation values complete with confidence intervals for significance testing, has been an important extension to the index-based approach (Manley, Johnston, Jones, & Owen, 2015a, 2015b).

The second, more recent, approach was developed in order to supply a telling insight into various local forms of residential intermixing; this strand is concerned mainly with the extent to which particular groups share residential neighbourhoods (Reardon, 2006). Even though local versions of global indices are sometimes used to investigate racial/ethnic residential intermixing (Brown and Sharma, 2011), some scholars introduced typologies for residential neighbourhoods that demonstrate the extent of ethnic and racial mix in a given tract (Johnston, Poulsen, & Forrest, 2007; Holloway et al., 2012). Studies