

# Social Class Segregation in Landskrona

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## Introduction

The spatial distribution of households among social classes has long attracted the interest of scholars from the social sciences, especially when it results in residential segregation. This means that the distribution of different groups of people, defined by factors such as class, occupation, income, and education, is uneven across neighborhoods. Individuals in areas of high residential segregation experience separate lives regardless of socioeconomic status (SES), be it high or low. This may be related to the residential choices of members of different types of households, such as those with a high income having the financial means to realize their housing and neighborhood preferences (Hulchansky 2010; Tammaru et al. 2020), whereas those with a low-income live in areas in which housing is cheap.

High levels of residential segregation raise concerns regarding social sustainability. It may diminish the status of cities and urban areas as places of opportunity with equal prospects for all regardless of SES (van Ham et al. 2021). Much research has examined the effects of socioeconomic segregation; for example, one recent strand of literature has studied the way in which residential segregation influences the individual's education and labor market outcomes. Using geocoded micro-data from the city of Landskrona, Sweden, research shows that the social class of an individual's nearest neighbors during childhood was important for both their educational achievement and adult mortality, regardless of class origin and schooling (Hedefalk and Dribe 2020; Hedefalk et al. 2023). Similarly, children who came from a randomly selected family in a US neighborhood, be it high- or low-poverty, and who were offered housing vouchers, increased their chances of college attendance and earnings in later life even though the duration of their exposure to poverty and segregation was most likely an important determinant of long-term outcomes (Chetty et al. 2016).

Another strand in the literature has examined how neighborhoods and residential segregation affect outcomes for immigrants. Neighborhood conditions in the United States increased the achievement gap between native-born and

immigrants (Pong and Hao 2007). For Sweden, a positive effect on compulsory school grade point average (GPA) from a greater number of highly educated adults of the same ethnicity as the child in the residing neighborhood has been identified (Åslund et al. 2011; Bygren and Szulkin 2010). Taken together, although casual relationships in this kind of empirical research are generally difficult to establish (Wimark 2018), an interdisciplinary body of literature suggests that residential socioeconomic segregation can affect the life chances of the groups under study.

Despite the negative implications of residential segregation as suggested here, we have limited insight into how socioeconomic segregation have changed over time. Does the segregation we observe today mirror that in the past, or have there been major shifts in residential segregation over time? A longitudinal dimension is often lacking because of the limited access to data needed to construct the spatial distribution of socioeconomic outcomes over time. Research on European cities suggests that residential segregation between high- and low-income groups has increased in recent decades (cf. Fujita and Maloutas 2016; Musterd et al. 2017; Tammaru et al. 2020), but we have very limited insight into historical developments over long stretches of the twenty-first century—even developments covering more than ten to fifteen years in the same location.

This chapter examines how residential segregation, primarily by social class, evolved in the city of Landskrona over the twentieth century. In this regard, we address the following questions: Where did members of certain social classes reside in Landskrona? How has the residential pattern developed over time? Was there segregation in the city from the start, or did it emerge during our period of study?

Our main contribution is to examine residential segregation using geocoded information at the block level covering close to six decades. This period saw political transitions; economic crises; changes in housing policy, including measures to generate mixed-tenure forms within areas (Wimark et al. 2020); and increased migration flows to Sweden and, during certain periods, Landskrona in particular (see Chapter 4). We do not examine the determinants or effects of residential socioeconomic segregation but rather illustrate its development over time to better understand how it evolved in Landskrona and its main determinants.<sup>1</sup>

Put in general terms, measures of segregation map the distribution of individuals within a specific geographic area by examining how an area deviates from the expected social mix based on general demographic trends; however, other approaches are possible. Different measures of segregation have their own strengths and weaknesses (for a discussion on this see, e.g., Lloyd et al. 2014; Wilson 1987), and there is no standard way of applying them. In this chapter, we first map the concentration of several demographic and social class characteristics at the family level. Then we summarize social class segregation using the

Isolation Index, a preferred measure of segregation in spatial studies in the social sciences.

As discussed by Wimark (2018), the level of segregation, as well as the changes that affect it, relate to the geographical aggregation level to which segregation measures are applied. For practical reasons empirical research on residential socioeconomic segregation often relies on administrative divisions, but these divisions do not necessarily constitute a de facto method of assessing how residential segregation matters for the individual. In addition, when using larger geographic units, one may encounter difficulties related not only to modifiable areal units but also to the so-called uncertain geographic context problem (Fotheringham and Wong 1991; Kwan 2012). It is likely that important information on physical and social factors potentially affecting the individual's behavior is overlooked when using large geographical units for deriving neighborhood variables. This chapter uses geocoded data at the block level to produce fine-scale measures.

### Theory and Previous Research

Segregation research is mainly rooted in the US experience, with studies dating back to the turn of the twentieth century and the Chicago School (Park and Burgess 1925; Logan and Bellman 2016). This research field has changed over time, and recent research can be roughly separated into two groups of theoretical frameworks: (1) constraint models and (2) residential preference models. *Constraint models*, the most common of which are based on the spatial assimilation and place stratification theories, postulate that social and structural factors primarily constrain individuals' residential decisions (Massey and Denton 1985). That said, *preference models* argue that individual preferences related to network theory and homophily lead to self-segregation (Clark 1991).

*Spatial assimilation* suggests that spatial inequalities are the result of socioeconomic differences between social groups that become inscribed in the urban environment (Alba and Logan 1993). Following this reasoning, segregation should correlate with the overall socioeconomic inequalities among inhabitants of different neighborhoods. If these inequalities are eliminated over time, segregation should gradually disappear as individuals who were previously disadvantaged become increasingly more likely to make integrative moves.

Support for the spatial assimilation theory has been found in both US and European studies. Research on the US context shows that socioeconomic inequality is positively correlated with segregation at the metropolitan level (Logan et al. 2004), even when controlling for other factors associated with residential segregation such as regional differences, size and growth of minority groups, and

group income levels. Furthermore, studies that look at differences within groups show that higher-SES members of minority groups have a greater likelihood of moving to advantaged neighborhoods (Iceland and Wilkes 2006) whereas higher income, further education, and greater family wealth are associated with moving to neighborhoods with a higher proportion of whites and lower poverty rates for broad racial groups (Krysan and Crowder 2017). In the European context, socioeconomic segregation is associated with increasing income inequality (Tammaru et al. 2020), which is in turn linked to rising social inequality, globalization and economic restructuring, welfare regimes, and housing systems (Musterd et al. 2017).

Given the focus of spatial assimilation theory on the socioeconomic composition of neighborhood populations, some authors have raised concerns that this framework neglects other factors leading to segregation, especially that of discrimination. The *place stratification theory* posits that the most advantaged members of society wish to distance themselves from minorities. As a result, formal and informal institutions and practices are implemented to effectively prevent disadvantaged groups from making integrative moves to those areas where the more advantaged reside. Research on place stratification focuses on mechanisms whereby the charter population keeps disadvantaged groups out of desirable locations, preventing them from converting any socioeconomic resources they might have into desirable residential outcomes (Massey and Denton 1993; Roscigno et al. 2009; Ross and Turner 2005).

While several of the most obvious and institutionalized forms of discrimination are historical (e.g., the apartheid system in South Africa and the Jim Crow laws in the United States), there is also evidence of subtle or informal contemporary practices (e.g., the way discrimination affects the different stages in the search for housing and the way its effects are still felt after the search is completed; Krysan and Crowder 2017). The mortgage industry is also singled out as a major offender. Here, the historical policy of the Home Owners Loan Corporation denying housing loans to residents in black minority neighborhoods (Yinger 1995) and contemporary predatory lending and nonexclusionary discrimination (Roscigno et al. 2009; Rugh et al. 2015) stand as examples of place stratification. In the European context, segregation is often linked to the experience of non-EU migrants, who tend to live in the most deprived neighborhoods (Andersson et al. 2018). Although the European context is usually seen as less exclusionary, there is still evidence that similar practices take place in contemporary housing markets (Auspurg et al. 2019; Gouveia et al. 2020), in financial institutions (Aldén and Hammarstedt 2016; Stefan et al. 2018), and in other arenas. In the case of Sweden, research also find that ethnic discrimination exists in the Swedish rental housing market (Ahmed and Hammarstedt 2008; Ahmed et al. 2010; Bengtsson et al. 2012).

The second framework—residential preference models—suggests that residential segregation is partly driven by own-group preference for residential location (Ibraimovic and Masiero 2014; Logan et al. 2002). In other words, residents of a certain ethnicity, race, or class, for example, tend to make an actively segregating move in the direction of an own-group–dominated neighborhood. Moves of this kind may be driven by networks based on kinship and friendship ties (Massey et al. 1993) and by homophily (i.e., the preference of individuals to interact with those who share their ethnic background, culture, and/or language; Ibraimovic and Masiero 2014). Moreover, the Schelling model of segregation proposes that even small differences in preference can be compounded over time to create highly segregated neighborhoods (Clark 1991). In the United States, whites show strong preferences for these, and show low tolerance for other-race neighbors, particularly blacks. Similar results are found for other minorities in terms of own-group preference (Aradhya et al. 2016; Charles 2006; Krysan and Bader 2007).

Whereas individual preferences cannot be ruled out as a complementary explanation for segregation, the residential segregation framework has been criticized for there being little empirical correlation between stated preferences and real neighborhood composition. Some research suggests that most of the “preference” is related to white residents’ rejection of integration (Farley et al. 1978), and some find that both black and white US metropolitan residents surveyed in the 1990s and 2000s expressed a preference for living in a more integrated neighborhood, but these preferences were seldom realized (Krysan and Crowder 2017). Finally, stated preferences for racial neighborhood composition can mask the “bundling” effect of previous exposure to the less attractive characteristics of minority neighborhoods, such as crime, disorder, and poverty, meaning that, in practice, it is difficult to distinguish between that attributable to preferences based on networks and homophily and the more material consequences of social disadvantage (Krysan and Crowder 2017; Sampson 2012).

Given that most segregation research deals with the United States, it can still be useful in a European context but does require an understanding of the ways in which the two contexts differ. Geographic patterns and local policies vary widely in the United States. The level of state intervention varies more between administrative units than it does in Europe, as does the overall level of state intervention in welfare in general, and segregation is lower (Andersson et al. 2018). Put in general terms, residential segregation is lower in Europe than in the United States (Musterd 2005) possibly because of the existence of more generous welfare policies and early state intervention through housing policies. Although immigrants in Europe are highly segregated, the glaring and historical racial discrimination of blacks as seen in the United States is not present in Europe to the same extent (Huttman 1991). At the same time,

segregation has been increasing in recent decades following the rise in social inequality (Tamaru et al. 2020), with consequences for social cohesion (Malmberg et al. 2013).

While most research on segregation focuses on the race, ethnicity, or country of origin of disadvantaged groups, this chapter focuses on residential segregation between social classes. In contrast to contemporary contexts, there was a relatively high level of economic equality in Landskrona, whose ethnic composition remained homogeneous for most of the study period, and the few immigrants it had originated mostly from Scandinavia and Northern Europe (see Chapter 4). In such a setting, segregation is more likely to arise from distinctions in SES in a rapidly changing economic structure. Accordingly, research conducted in the United States has explained the factors determining the increase in segregation due to the proliferation of ethnic enclaves.<sup>2</sup> These enclaves can lead to more segregation given that they can serve as important social and cultural hubs for residents, providing a sense of belonging, access to familiar resources, and opportunities for cultural preservation and exchange (Massey and Denton 1988). Additionally, American scholars have noted increased segregation due to the presence of goods and services tailored for specific ethnic or racial groups in segregated neighborhoods (Waldfoegel 2008). However, ethnic goods can also have positive aspects because they contribute to neighborhoods' social and economic vitality, which in turn bring a strong sense of community identity and cohesion (Iceland and Wilkes 2006).

Nevertheless, unlike many American cities, Landskrona in the second half of the twentieth century had a less diverse ethnic composition. In this context, one theoretical model of segregation that could explain potential increases or shifts in segregation is *Schelling's tipping model* (1971). Schelling proposed that when neighborhoods originally predominantly composed of one ethnic or social group experience an influx of individuals from different demographic, ethnic, or socioeconomic backgrounds, it can result in a relatively rapid change in the neighborhood's composition. For example, in traditionally working-class neighborhoods, the arrival of more economically advantaged individuals may lead to the displacement of less wealthy residents through a process of gentrification, although the reverse pattern could also occur.

In addition to the distinctions mentioned, this chapter explores other relevant factors. Early twentieth-century Sweden had a welfare state that was in its infancy, and the institutions capable of intervening in urban areas or the housing sector, as seen today, were still decades away. Unlike the sprawling metropolises commonly studied, Landskrona was a small and compact city. As a result, one can reasonably anticipate lower levels of segregation in Landskrona compared to contemporary cities, and the growth of industrialization may have further widened these disparities over time.

Finally, this chapter contributes to our understanding of segregation patterns in the transition from a pre-industrial to an industrial economy. For example, some scholars argue that segregation is essentially a permanent feature of urbanization throughout history, but this evidence is centered on highly segregated areas where there often exist strong institutional settings that create and maintain them (Nightingale 2016). In contrast, some point to several potential drivers of segregation that may operate in a given historical context, though these processes are far from universal and there is much variation in patterns and consequences (York et al. 2011).

### Data and Measures

To illustrate the patterns of social class segregation in Landskrona from 1905 to 1967, we used detailed geographic, demographic, and occupational information from the Scanian Economic-Demographic Database (SEDD; Bengtsson et al. 2021; see Chapter 1). Regarding the geographic information, we geocoded Landskrona's total population at the block level for the period 1905–1967. In brief, we digitized blocks in the form of historical maps, harmonized the block names given in the population registers, and linked individuals to the digitized blocks where they lived. The geographic information about the blocks is recorded annually, whereas each move made by an individual and household is recorded continuously throughout the year. In addition to the geocoded data, we have historical geographic information on roads, buildings, schools, and some major industries. For all the measures we used, in cases where an individual lived in multiple blocks in the same year, we defined their block of residence in that year as the one where they lived longest.

We captured Landskrona's socioeconomic characteristics using the social class position of individuals.<sup>3</sup> It is a comprehensive measure of advantage when studying the individual's ability to access resources, material well-being, and status. It is also a stable measure of SES over an individual's life span, embracing economic resources and cultural attitudes and capturing likely group identity (see, e.g., Breen and Jonsson 2005; Curtis 2016; Erikson and Goldthorpe 2010). We measured social class by year based on individual and family-level occupations (commonly the father's occupation). As explained in Chapter 1 and Chapter 3, occupations are grouped according to the Historical International Social Class Scheme (HISCLASS), which we have used to define six classes: higher white-collar workers, lower white-collar workers, medium-skilled workers, lower-skilled workers, unskilled workers, and farmers. Most classes broadly reflect a status hierarchy from lowest status (unskilled workers) to highest status (higher white-collar workers).

As well as depicting segregation patterns in terms of social class, we studied spatial patterns of demography and family composition. We therefore computed for each block the average household size and age of family members, as well as the share of children and families headed by women.

We focused on two main sets of descriptive segregation measures: averages and shares at the block level and global indices capturing segregation at the town level. First, we derived the averages and shares of social class and demographic characteristics of families by block in Landskrona for the years 1920, 1940, and 1960. These three specific years represent each of the first three periods covered by this book's periodization (1905–1929, 1930–1949, 1950–1975). We separated the outcomes under study into two sets: demographic characteristics and social class. We gathered the demographic information at the family level to look at family size, age of family head, number of children, and number of families headed by women. Thereafter, we presented all these indicators averaged by block in each year for our maps, reporting the mean or shares of the different outcomes. We then produced the corresponding measures by social class, counting the different social classes the family heads belonged to by block and year.

Second, we measured segregation by computing the yearly measures of the Isolation Index for the period 1905–1967. This index is widely used in the socioeconomic segregation literature (Lloyd et al. 2015; Malmberg et al. 2013). The Isolation Index measures the probability of members of a certain social minority (e.g., higher white-collar or unskilled workers) meeting or interacting with their equals were social contact to happen at random (Massey and Denton 1988). This means that the higher its value, the more isolated a social class is, denoting more profound segregation.<sup>4</sup> The social structure can be divided into two groups here: the minority group (e.g., unskilled workers) and the other social classes combined as a *majority* group. The Isolation Index ranges from 0, representing no segregation, to 1, denoting the highest level of segregation.

However, the index is asymmetric and depends on the size of the group when used for more than two groups, so if we want to consider each social class separately and at the same time adjust for changes in the class structure and weight of each social class, the index requires an adjustment and will no longer total 1 (Massey and Denton 1988; Lloyd et al. 2014). Moreover, the larger social classes may bias the index, overestimating the Isolation Index.<sup>5</sup>

### **Demographic and Social Class Residential Patterns in Landskrona**

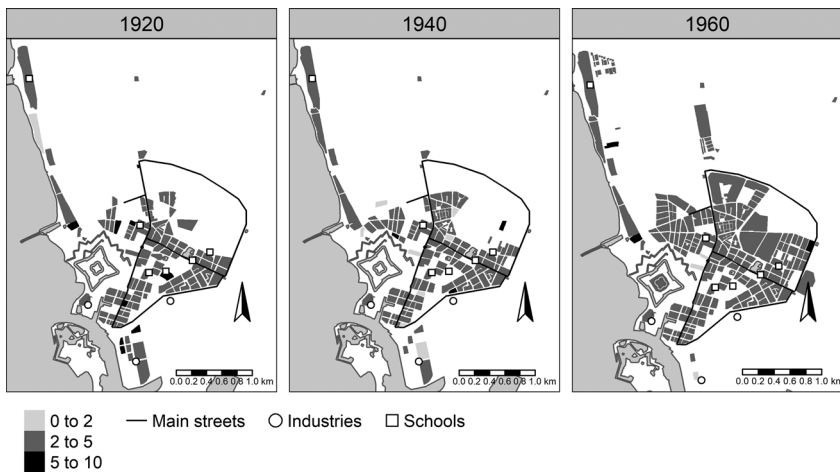
This section depicts some of the most important demographic and social class patterns for families residing in the city of Landskrona during the first half of the



twentieth century. The geocoded information at the block level serves as a good indicator of the main familial and social class characteristics and their spatial distribution during a period of economic and social transformation.

### Demographic Residential Patterns

Figure 5.1 displays the geographic distribution by block of average family size in 1920, 1940, and 1960, respectively. In 1920, the range of mean family size for most blocks in Landskrona was between two and five household members. This range was still the modal family size in 1940 and 1960, but the overall family size decreased from just under five in most blocks in 1920 to three in 1960 (not shown in the figure). A clear pattern seen in Figure 5.1 is that the share of blocks with an average family size of more than five members decreased between 1920 and 1960, and we also see that these types of blocks, originally located in the city center, began appearing over time on Landskrona's periphery. The noted decrease in average family size by block in the city and the continuous homogenization resulting in an average family of four members coincide with two demographic developments during the first half of the twentieth century in Sweden: a general decrease in fertility, ongoing since the beginning of the century (Bengtsson and Dribe 2014), and the almost universal pattern of family nuclearization and a two-child norm.

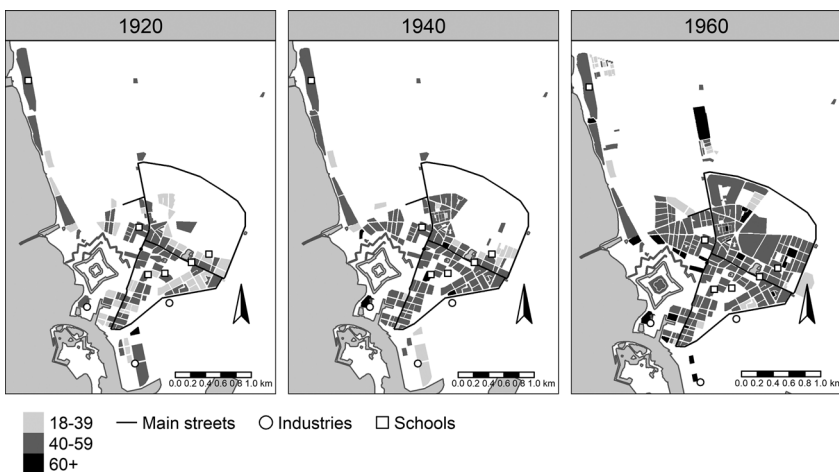


**Figure 5.1** Mean family size in Landskrona by block in 1920, 1940, and 1960.

Source: Scanian Economic-Demographic Database (SEDD; Bengtsson et al. 2021).

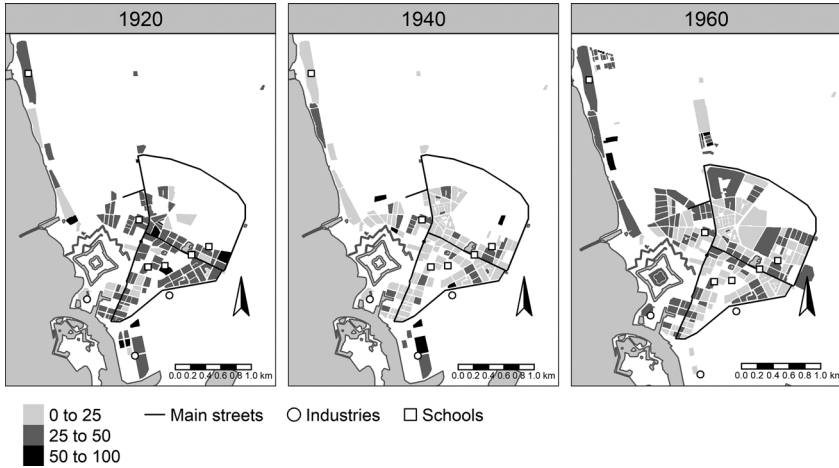
Figure 5.2 shows the mean age of the family heads by block. We observe a transition over time from a relatively young city population in 1920, where the family heads in most blocks were younger than 40, to a more mixed composition in 1960, where they were on average aged between 40 and 50. This pattern coincides with the industrialization of the city during the same period. During the 1920s, industrial expansion was highly dependent on the shipyard attracting migratory flows from rural areas which consisted of lower-skilled and unskilled young manual laborers (see Chapter 4). Conversely, in the 1960s, Landskrona's industrial economy was much more diversified than it had been a few decades earlier, resulting in a more varied age composition (see Chapter 2).

Figure 5.3 shows the proportion of children (younger than 18) in each block in Landskrona. We can discern a natural U-shaped pattern in their presence for the three points in time under study. On the one hand, in many blocks located in the northern and western parts of the city almost 50 percent of the inhabitants were younger than 18 in 1920, further confirming that this was a relatively young city, as noted in Figure 5.2. On the other hand, the concentration of children was well below 30 percent, except in the case of a few blocks on the city's outskirts. In 1960, there was an increase once more in the number of city blocks where more than 30 percent of the inhabitants were children. Unlike at the start of our period, these blocks were more concentrated on the outskirts, as in Sandvången, which was newly built at the time. In all, families with children seem to have moved to different residential areas of Landskrona in different periods.



**Figure 5.2** Mean age of the family head (FH) in Landskrona by block in 1920, 1940, and 1960.

Source: Scanian Economic-Demographic Database (SEDD; Bengtsson et al. 2021).



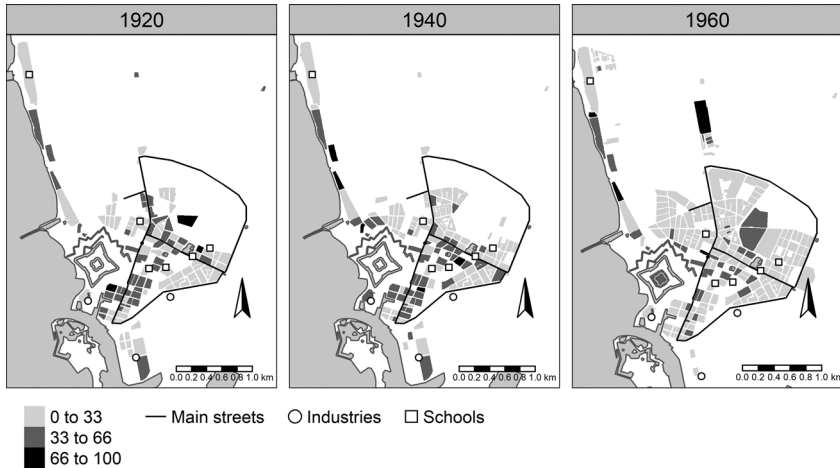
**Figure 5.3** Share of children (<18 years old) in Landskrona by block in 1920, 1940, and 1960.

Source: Scania Economic-Demographic Database (SEDD; Bengtsson et al. 2021).

Finally, we examine trends in the proportion of families headed by women across city blocks. The number and distribution of such households are traditionally linked to socioeconomic inequality, poverty, and segregation because they tended to be concentrated in the poorest neighborhoods (Massey et al. 1991). As illustrated in Figure 5.4, the share of families headed by women was high in some blocks, ranging between 30 and 50 percent of the total number of families per block in each of the three years under study. In a few blocks it even reached just below 60 percent. At the same time, the mean size of these families by block in each of the years under study was close to one, implying that most of these families were single adult women. Additionally, we note that the distribution density of the mean age of female family heads was high for those aged either older than 50 or younger than 30, denoting the presence of widows on the one hand and young single women on the other.

### Residential Patterns by Social Class

Knowing the social class distribution and each class's share by block provides an indication and a general view of how segregated the city of Landskrona was at different points in time and how segregation increased over the years. We focused on the highest occupational information per year of family heads and have



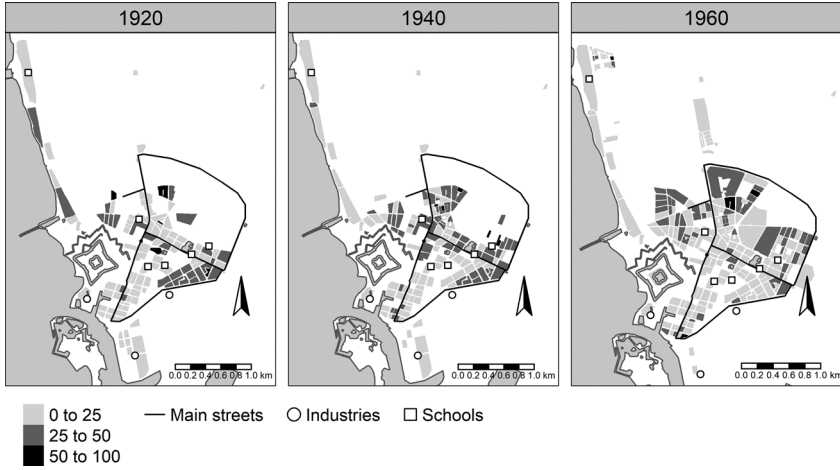
**Figure 5.4** Share of families headed by women in Landskrona by block in 1920, 1940, and 1960.

Source: Scanian Economic-Demographic Database (SEDD; Bengtsson et al. 2021).

reported this for five social classes as defined above: higher and lower white-collar workers, medium and lower-skilled workers, and unskilled workers.<sup>6</sup>

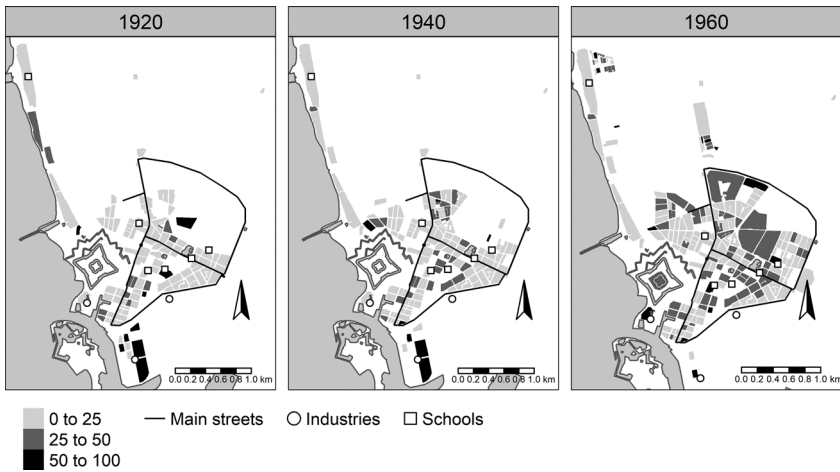
The class structure in Landskrona was relatively stable during the period 1905–1967 for both family heads and working-age individuals (see Chapter 3). For the three years shown in Figures 5.5–5.9, about 70 percent of the family heads were distributed across three classes: lower-skilled workers (25 percent); medium-skilled workers (24–26 percent); and lower white-collar workers (22–25 percent). Among these groups, the medium-skilled workers were the most homogeneously distributed across the blocks in Landskrona from 1920 to 1960 (Figure 5.5), with a concentration of 20–40 percent in most of these. Lower white-collar family heads were initially more concentrated in the southernmost blocks in the city, but this concentration was relatively sparsely allocated in 1940 and 1960, whereby their share was in most cases below 30 percent, and in only five cases was it more than 80 percent (Figure 5.6). The location of lower-skilled workers shows a similar trend over time. While the blocks in the northwest of the city, in the traditional fishing village of Borstahusen, had a slightly higher concentration of lower-skilled workers’ families (around 60–80 percent of the total share) in 1920 and 1940, the distribution of lower-skilled workers was highly homogeneous across the city by 1960 (Figure 5.7).

The remaining two social classes, both of which made a significant contribution to Landskrona’s social stratification, consisted of family heads in the upper



**Figure 5.5** Share of families headed by a medium-skilled worker family head in Landskrona by block in 1920, 1940, and 1960.

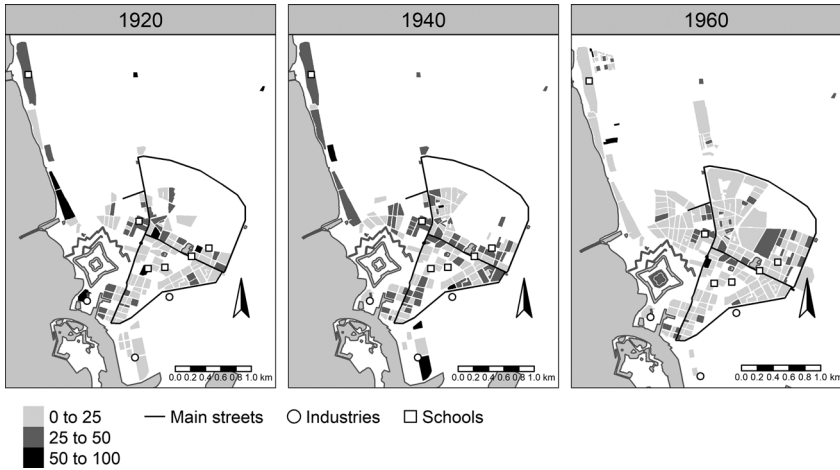
Source: Scanian Economic-Demographic Database (SEDD; Bengtsson et al. 2021).



**Figure 5.6** Share of families headed by a lower white-collar family head in Landskrona by block in 1920, 1940, and 1960.

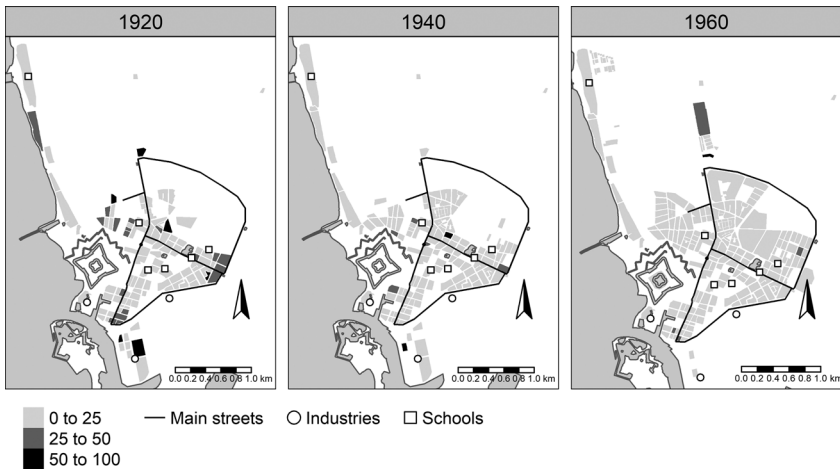
Source: Scanian Economic-Demographic Database (SEDD; Bengtsson et al. 2021).

and bottom tails of the social class distribution: namely higher white-collar and unskilled workers. Family heads among unskilled workers accounted for around 15 percent of the entire occupational structure in 1920, 1940, and 1960 (Figure 5.8). In terms of their block concentration, we observe a progressive



**Figure 5.7** Share of families headed by a lower-skilled worker family head in Landskrona by block in 1920, 1940, and 1960.

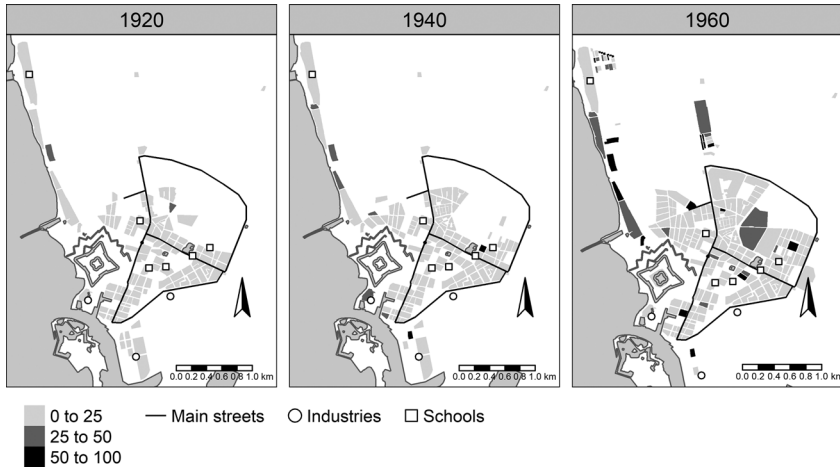
Source: Scanian Economic-Demographic Database (SEDD; Bengtsson et al. 2021).



**Figure 5.8** Share of families headed by an unskilled worker family head in Landskrona by block in 1920, 1940, and 1960.

Source: Scanian Economic-Demographic Database (SEDD; Bengtsson et al. 2021).

pattern of homogenization over time. In 1920, a few blocks housed between 40 and 80 percent of unskilled workers, while in 1960, almost all blocks in the city housed fewer than 20 percent. When we examine the concentration of higher white-collar workers, we see the opposite pattern (Figure 5.9). Family heads in



**Figure 5.9** Share of families headed by a higher white-collar family head in Landskrona by block in 1920, 1940, and 1960.

Source: Scanian Economic-Demographic Database (SEDD; Bengtsson et al. 2021).

this group accounted for 6 percent of the total share of social classes in 1920 and 1940, and this increased to almost 10 percent in 1960 alongside a general increase of the white-collar groups (see Chapter 3). However, despite this increase over time, the concentration of higher white-collar family heads in 1960 was denser than could have been expected. Whereas most blocks in Landskrona in 1920 and 1940 housed fewer than 10 percent of family heads who were higher white-collar workers, the general increase in this group seems to have been mostly absorbed by just a few blocks in 1960. We see a concentration of these blocks in the northwestern suburb of Borstahusen and several newly built areas in the northern part of the city, such as Sandvången. This simple visual illustration suggests an increase in segregation in this group, which we analyze in more detail in the next section.

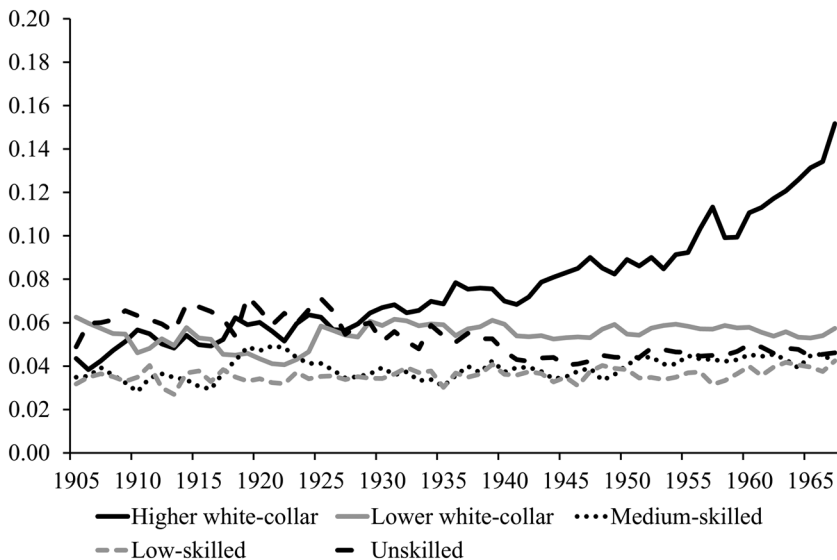
### Social Class Segregation in Landskrona

The exploratory spatial analysis just presented suggests that, with some variation over time, socioeconomic segregation always existed in Landskrona. Below we analyze segregation for the whole city using the Isolation Index. This index suggests that the social classes we have observed would have interacted with each other had all social contact been random. In other words, it tells us how isolated a certain social class was in their block.

Figure 5.10 shows the Isolation Index. Until the beginning of the 1940s, the index was relatively low for all social classes, with levels ranging between 0.03 and 0.04 for the lower white-collar workers and lower-skilled, and between 0.04 and 0.06 for the other classes.

From the 1940s onward, we observe an important change in segregation. Whereas most social classes experienced similar levels of isolation throughout the period, the Isolation Index for higher white-collar workers increased sharply from only 0.07 or thereabouts in 1940 to almost 0.16 in 1967. Such an increase shows how Landskrona changed from having essentially no segregation in the first half of the twentieth century to having a relatively high level in the last twenty years of our period of study. It is notable that segregation existed among the very highest social classes yet remained low among the low and middle social classes throughout the period. Looking at the spatial patterns in Figure 5.5, we see that the increase in the Isolation Index as shown in Figure 5.10 is partly explained by a large share of higher white-collar workers moving to residential areas on the periphery of the city, such as the northwestern suburb of Borstahusen.

Given the trend toward increasing segregation driven by the higher white-collar class, we analyzed the possible main drivers that resulted in the isolation once again of this specific class. The share of white-collar workers increased, and this class became more diversified in the city from the 1950s



**Figure 5.10** Adjusted isolation index ( $\eta^2$ ) in Landskrona by year and social class (1905–1967).

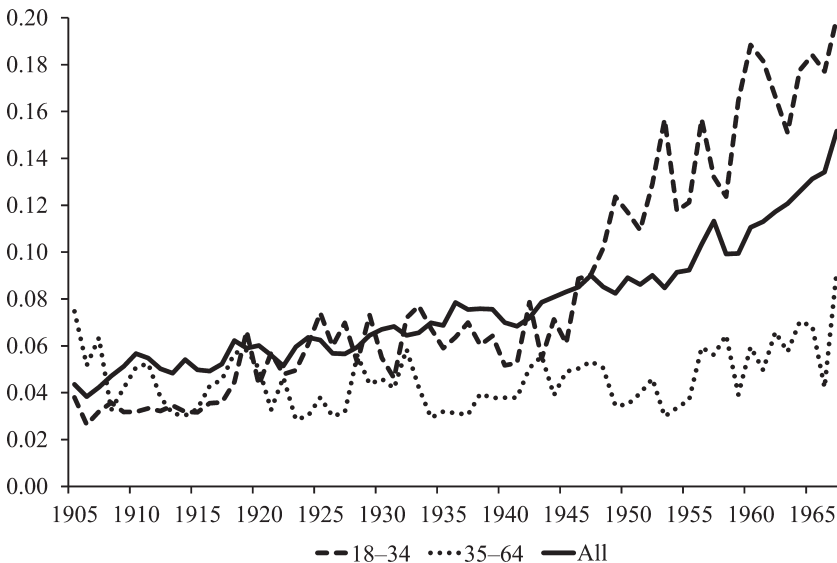
Source: Scanian Economic-Demographic Database (SEDD; Bengtsson et al. 2021).



onward (see Chapters 2 and 3). The increasing isolation of higher white-collar workers from the 1940s onward could either have been a new phenomenon associated with younger generations of family heads who had received training or education, or it could have resulted from the movement of all higher white-collar workers regardless of age. We therefore split the data for all our family heads into two broad age groups—younger (18–34 years) and older (35–64 years)—and then calculated the Isolation Index for each social class separately by age group of family head.

Figure 5.11 displays the normalized Isolation Index for higher white-collar workers, given separately for the two age groups. We observe wide age differences between the two age groups regarding isolation; the younger age group was the driver behind the segregation described above. The isolation of the older family heads (ages 35–64) remained relatively stable with values between 0.04 and 0.06 during the whole 1940–1967 period, which is similar to all other social classes, for which the index does not differ by age group. In contrast, the isolation experienced by the young family heads (ages 18–34) increased sharply and rapidly from about 0.07 in 1945 to 0.2 in 1967.

The trend toward segregation as driven by the younger share of higher white-collar workers may be the result of two factors. First, given that the mean and median ages of the younger group of higher white-collar family heads had



**Figure 5.11** Adjusted isolation index ( $\eta^2$ ) in Landskrona for higher white-collar workers by the age of the family head (1905–1967).

Source: Scania Economic-Demographic Database (SEDD; Bengtsson et al. 2021).

been around 27 and 29 years since the 1950s, these individuals belonged to the first generation to benefit from the educational expansion and rapid economic growth that took place in Sweden in that period. Second, from the 1950s and especially from the 1960s onward, new residential areas consisting mainly of single and chain houses were built—areas such as Borstahusen and other smaller residential areas on the periphery of the city. Sandvången, which was built in the 1960s, did not attract the highest social classes but rather lower white-collar and higher blue-collar workers. Hence, in the 1950s and 1960s, newly established higher white-collar families, often with small children, would deliberately move into the enhanced physical and architectural living environment offered by these new areas, leading to the isolation of these classes from other social classes. In addition, these families had the necessary purchasing power to escape the housing shortage in Landskrona at the time and were thus able to acquire their homes in a restricted housing market. Although it is likely that the older higher white-collar families also had sufficient economic means to move, they may have been less motivated to move to areas further out from the city. It is notable that young lower white-collar and higher blue-collar families may have had enough purchasing power to move to the relatively cheaper newly built areas such as Sandvången (with its “multi-storey” or “apartment” buildings), but the relatively stable residential patterns of the lower-skilled workers indicate that young families of this social class did not do the same. In all, the trend in segregation in Landskrona during our period of study seems to have been driven by the interaction of supply and demand (which differed among the age groups) at the city level and perhaps also by changing factors at the macro level.

## Conclusion

Landskrona changed from a relatively integrated city in the early industrial period to a more segregated urban center at the height of its industrial phase. Whereas the demographic patterns reflect only modest changes with little segregation at the block level, social class segregation did change significantly over time, albeit for the white-collar elite, young adults especially.

Landskrona experienced stable development in terms of mean number of family members and not much spatial variation over time. The number of family members was close to four for the whole city throughout the period. The mean age of family heads and their spatial variation increased over time, reflecting an influx of migrant workers and a diversification of the city’s occupational structure because of industrialization. In the same vein, the proportion of children in the city decreased from 1920 to 1940 but had increased again by 1960, which

suggests a demographic process of in-migration and migrant fertility driven by the inflow of young adults into the city in the 1930s who had children there over the coming decades.

For social class segregation, the period up to 1940 shows modest change, with most of the variation taking place from 1940 to 1960. The Isolation Index shows marked changes for higher white-collar workers and especially for younger families belonging to this social class. The changes indicate a higher concentration of this group in new locations on the outskirts of town, including the new residential areas of Borstahusen. This trend partially resembles the tipping model, although it is also related to newly built housing in the area. It is also particularly interesting to note that, in 1920, the higher white-collar population was evenly dispersed throughout the city, constituting an average of 10 percent in many blocks. However, over time this group became more clustered in space, and, by 1960, its members formed the majority of inhabitants in only a few blocks.

Our findings can partly be reconciled with all three theoretical frameworks previously discussed: the rise of the industrial city and the changes in its class structure also increased inequality between classes while at the same time segregation was restricted to higher white-collar workers, which is consistent with place stratification and residential choice frameworks.

Both frameworks highlight the desire of higher social classes to create distance from lower-class individuals, the former because of prejudice and discrimination, and the latter because of homophily. Taken together, the results suggest that constraint models of place stratification and spatial assimilation are likely more adequate because self-segregation was clearly restricted to higher white-collar families. We see no indication that other social classes realized own-group preferences at any time during the period of study. Although it is still possible that other groups had different preferences in terms of neighborhood social mix, they may have lacked the economic resources to realize them. Last, demographic composition alone cannot account for the observed variations in social class segregation.

Whereas the use of block-level data is an improvement compared to administrative units, which are commonly used in much of the related literature, we recognize that segregation patterns can often occur at even smaller scales (see, e.g., Logan et al. 2015). Further research would do well to consider the use of street-level or building-level measures in determining whether isolation patterns confirm the highly mixed social setting observed or whether they distinguish more fine-grained patterns of class segregation.

This chapter contributes to the literature by showing the emergent pattern of segregation during Landskrona's transition from a preindustrial setting and

compact layout with socially mixed neighborhoods to a more segregated urban center undergoing the suburbanization of the upper class. It is a history consistent not only with the US literature on white flight but also with contemporary studies indicating consistently higher levels of segregation for the upper class (see, e.g., Prêteceille 2016), albeit at significantly lower levels.

The levels of segregation in Landskrona may appear modest, but considering that (1) contemporary levels of socioeconomic segregation (see Fujita and Maloutas 2016 for several countries) show dissimilarity indices for occupations ranging from 0.15 to 0.4, (2) the Isolation Index is often smaller than the dissimilarity index for a similar social mix (Stearns and Logan 1986), and (3) smaller cities and metropolitan areas were often more compact and less segregated overall, an increase from 0.07 to 0.2 in the Isolation Index for higher white-collar workers represents a major shift in the neighborhood social mix in a relatively short period of time.

In conclusion, industrialization brought a change in residential patterns by social class in Landskrona that was not apparent in the early industrial phase. Limitations to external validity notwithstanding, these results suggest that contemporary patterns of segregation are related to changes in the spatial organization of the city, with greater separation between residential areas and areas of work and between the higher and lower strata of society—changes driven primarily by the former moving away from the social mix of the urban core.

## Notes

1. It should be noted that it is not always straightforward to interpret developments in socioeconomic segregation over time as these fluctuate with factors such as economic fluctuations, migration, and changes in economic inequality. For example, socioeconomic segregation usually varies with economic downturns because individuals with the fewest resources are often affected more than those with greater resources, which complicates efforts to interpret developments over time, especially if the follow-up period is short. Having access to a large number of yearly observations, as in our case where we could study developments covering half a century, reduces this problem to some extent.
2. “Ethnic enclaves” refer to neighborhoods or areas where a particular ethnic or racial group is highly concentrated. These enclaves often develop due to various factors such as shared culture, language, or social networks.
3. For an overview of the relationship between spatial patterns and income in Landskrona, see Chapter 10, which looks at the relationship between income levels and inequality from the city in 1939–1967.

4. Our formal definition of the Isolation Index (II) for a specific minority social group is:  $II = \sum_{i=1}^n \left[ \left( \frac{x_i}{X} \right) \left( \frac{x_i}{t_i} \right) \right]$ , where  $n$  denotes the number of neighborhoods (blocks in this chapter),  $x_i$  stands for the population size of a specific social class in given neighborhood  $i$ ,  $X$  is the sum of all individuals considered to belong to that social class in Landskrona, and  $t_i$  is the total population of a given neighborhood.
5. The index can be adjusted through a correlation ratio, which scales its value by the share of a specific social class in the total population ( $P$ ). This correlation ratio is also known in the literature as  $\eta^2$ :  $\eta^2 = \frac{(II - P)}{(1 - P)}$
6. Although farmers and those whose occupations are missing are also present in the HISCLASS categorization, we have excluded both these groups due to their extremely low numbers in Landskrona, and their numbers are therefore not given for many of the blocks.

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