The Spatial Dimension of Social Stratification in Germany—Are Social Class Differentials in Place of Residence Increasing?

Dirk Konietzka * and Yevgeniy Martynovych

Institute of Sociology, TU Braunschweig, 38106 Braunschweig, Germany; y.martynovych@tu-bs.de
* Correspondence: d.konietzka@tu-bs.de

Abstract: It is widely assumed that post-industrial societies are characterized not only by growing economic inequalities and social polarization but also by increasing spatial segregation. This paper does not address residential segregation (i.e., “intra-city” inequalities), but instead investigates how social classes are distributed over different settlement types and whether class differences in places of residence have increased between 1996 and 2018. Based on microcensus data and applying the ESeC class schema, we focus on the question of whether members of the “new middle class” are increasingly concentrated in post-industrial metropolises while members of the “old middle class” largely reside in peripheral towns and regions. The results do not support the assumption that spatial disparities between classes have systematically increased in Germany. However, opposing trends in the likelihood of residing in the most dynamic cluster of the German metropolises are observed for the youngest age group of the new middle class and the oldest age group of the old middle class.

Keywords: socio-spatial disparities; metropolises; rural communities; ESeC; microcensus

1. Introduction: Social and Spatial Disparities

It is generally agreed that, in recent decades, socioeconomic inequalities have increased in Western societies (European Commission 2010; OECD 2019). Key contributors to this process are skill-biased technological change and the sectoral shift away from industrial employment and toward the service and knowledge economy (Antonelli and Tubiana 2020; Diessner et al. 2022). A further characteristic of the post-industrial transformation is that many high-income jobs have been created in post-industrial metropolises and regional tech hubs, while former industrial and peripheral regions have lost their competitive potential and have fallen behind (Florida 2004; Moretti 2012). The rising regional inequalities associated with these processes induce “spiral effects” (Crouch 2019) that solidify long-lasting spatial divergences in socioeconomic development. In a similar vein, growing disparities between urban and rural areas fuel political conflicts and social polarization. It has, for example, been argued that the rise of right wing populism and political polarization reflects emerging conflicts between the winners and losers of a globalized and post-industrial economy (cf. Reckwitz [2019] 2021). The corresponding public debates have led to increased interest in the topic of spatial concentration and the division of social classes. A prominent example of this line of reasoning is British journalist David Goodhart’s (2017) juxtaposition of “somewheres” and “anywheres”, with the former being described as less educated and locally based and the latter being characterized as a mobile, highly educated, cosmopolitan elite. If this description is correct, many of the current socio-structural, cultural, and political conflicts can be linked to the disparities between large cities and small towns or rural areas.

In this paper, our aim is not to assess the differences between regions and districts but, rather, to examine the spatial disparities between socioeconomic groups. Whereas...
studies on regional and urban–rural inequalities typically focus on disparities between spatial entities (e.g., Immel and Peichl 2020; Fuest and Immel 2019), a social stratification perspective is more interested in the spatial segregation of social classes or strata. A prominent example of this approach is the study of residential segregation within municipalities and urban regions, which is a well-established field of research in urban sociology (e.g., Duncan and Duncan 1955; Friedrichs 1982; Haandrikman et al. 2023; Helbig and Jähnen 2018; Musterd et al. 2016; van Ham et al. 2021). Somewhat surprisingly, the questions of how socioeconomic groups are distributed across cities, regions, or districts at a societal level, and how these distribution patterns change over time, have attracted little attention among stratification researchers. While a large number of geographical and demographic studies have focused on topics such as internal migration, moving, and residential relocation over the life course (e.g., Sander 2014; Salvati et al. 2019; Booi et al. 2021), only a few empirical studies have dealt with the spatial dimensions of social stratification in Germany. A recent example is a study by Vigna (2023) on the regional distribution of social status groups in France and Germany.

Against this background, the aim of our study is to investigate to what extent members of different socioeconomic classes in Germany live in different places and, in particular, whether these disparities have grown over a time period of roughly two decades. Given that these issues have not been previously investigated in a systematic manner, the question of whether patterns of large-scale socio-spatial segregation really exist in Germany today remains open.

2. Spatial Inequalities from a Social Stratification Point of View

In Germany, as well as in other Western societies, social inequality has increased in recent decades. The growing inequality in household incomes, which is primarily driven by diverging dynamics in upper- and lower-income groups (Groh-Samberg 2019; Zucco and Özerdohan 2021) and the shrinking of segments of the middle class have been identified as indicators of a growing social divide in German society (Groh-Samberg et al. 2021). Moreover, it has been argued that spatial disparities in living conditions between “urban and rural” or prosperous and marginalized regions have been increasing. Against this background, social polarization has emerged as a “master narrative” of social change in the German public discourse (Mau 2022, p. 5).

It appears, however, that debates about growing socio-spatial disparities have caught stratification researchers more or less off guard. This strand of research usually focuses on the national level, based on the assumption that societal patterns of stratification are not systematically differentiated on a regional level or that regional disparities merely reflect subordinate patterns of variation. Hence, these forms of inequality have not been regarded as major contributors to a country’s stratification system. Instead, spatial and regional inequalities are mostly studied in economic and social geography, demography, and regional sciences (cf. Brixy et al. 2022; Braml and Felbermayr 2018; Bernard et al. 2022). Such analyses may, for example, measure disparities in regional development and urban–rural differences in living conditions, and they often rely on county-level indicators that capture demographic characteristics, parameters of the regional economy and infrastructure, housing market characteristics, etc. Disparities in regional development are seen as significant problems by policymakers, as they run counter to the policy goal of ensuring the equality of living conditions (“Gleichwertigkeit der Lebensverhältnisse”) (BMI 2022), which is a basic norm enshrined in the German constitution (Grundgesetz).

Variations in population growth may be viewed as a fundamental indicator of uneven regional development in Germany over the past two decades. For example, since 2000, the population levels have increased in 12 of Germany’s 15 largest cities (Statistisches Bundesamt 2022), while rural areas have been experiencing demographic aging and, in some cases, population decline (Nobis et al. 2019). While Fuest and Immel (2019) found no evidence of a general increase in urban–rural economic disparities in Germany, they showed that inequalities between cities have increased. These findings underline the need for an
analytical grid that takes into account socio-spatial inequalities between different types of cities.

Two decades ago, Richard Florida (2004) developed the influential hypothesis that social inequalities in post-industrial society are inherently linked to spatial inequalities. He argued that different social classes tend to live in different places not just in response to diverging regional labor markets and job opportunities but also because members of the emerging classes of the knowledge economy (whom he called the “creative classes”) appreciate certain types of places. For members of these classes, creative cities and regions exert a pull effect not only due to the types of jobs they offer but also to their specific cultural assets. The creative classes are assumed to value the “quality of place” (Florida 2019, p. 630) or, in other words, “the unique set of characteristics that define a place and make it attractive” (ibid.). According to Florida, in the post-industrial economy, the creative classes have gained a critical mass, representing more than one-third of the U.S. workforce. They typically “work in high-skill jobs in science, technology, engineering, business, finance, management, law, healthcare, education, and arts, culture, entertainment, and media” (ibid., p. 627).

German sociologist Andreas Reckwitz ([2017] 2020, [2019] 2021) has recently developed a similar argument. In contrast to Florida, he is less focused on the topic of creative cities and how they compete with other cities and regions than on the patterns of social inequality and political cleavages in “late modern” societies. In socio-structural terms, Reckwitz describes these societies as consisting of three classes: a shrinking “old middle class”, a new and growing knowledge work-based “new middle class”, and a third class made up of routine service workers and a declining group of unskilled manual laborers (Reckwitz [2019] 2021, p. 45 f.). Similar to Florida, Reckwitz posits that members of the new middle class tend to live in metropolises or metropolitan areas (ibid., pp. 48, 65), while members of the old middle class and the “lower” class mainly live in small towns and rural areas (ibid., pp. 52, 65). However, he also sees workers who hold low-skilled jobs in the service economy as participants in the post-industrial urban economy (ibid., p. 65 f.).

According to Reckwitz, members of the new middle class have specific lifestyle preferences and values, and they are attracted by cultural features such as “uniqueness” and “singularities” (Reckwitz [2017] 2020), whereas members of the old middle class follow norms associated with social order and conformity. Similar to Florida, Reckwitz ([2019] 2021, p. 49) argues that members of the new middle class value “special” places, i.e., they prefer metropolises (and inner-city districts) not only because they provide proximity to jobs but also because they offer the appropriate infrastructure and opportunities to lead an urban lifestyle and to engage in a “culture of singularization” (Reckwitz [2017] 2020, p. 228 ff.). In turn, metropolises compete to attract the affluent new middle class, using their culture, architecture, and history as unique selling points (Reckwitz [2019] 2021, p. 65). As a result of these processes, places and spaces are increasingly becoming subject to a “spatial logic of valuation and devaluation” (ibid., p. 64), and the growing “spatial polarization” is seen as a core characteristic of the post-industrial social structure. Such disparities materialize “on the macro-level of regions as well as on the micro-level of neighborhoods” (ibid.).

To sum up, both Reckwitz and Florida argue that members of the new middle (or creative) class are likely to choose to live in an urban location for several reasons, including because cities offer them better opportunities for cultural participation and enhance their access to networks of like-minded people.

Previous research on the regional distribution of the creative class in Germany has underlined the assumption that, even though the proportion of the population who belong to the creative class is relatively high in some rural areas, members of the creative class generally prefer to live in urban regions and large metropolises, such as Berlin, Hamburg, Munich, Cologne, and Frankfurt (cf. Fritsch and Stützer 2007, p. 21). Similar patterns have also been observed for Denmark, England and Wales, Finland, the Netherlands, Norway, and Sweden, with members of the creative class being concentrated in regions such
as Copenhagen, London, Helsinki, Amsterdam, Haarlem, Utrecht, Oslo, and Stockholm (cf. Boschma and Fritsch 2009, p. 401). These studies also provide support for the claim that the share of a region’s population who belong to the creative class is influenced by the region’s cultural opportunity structures, as well as its openness and tolerance.

Without directly referring to the creative class issue, sociological lifestyle studies have also provided evidence on group-specific spatial preferences. It has, for example, been shown that career- and consumption-oriented groups with hedonistic orientations, those who have cosmopolitan and progressive views and outlooks on life, and those who enjoy engaging in cultural and intellectual activities are more likely live in metropolises, while groups who have traditional, family-oriented, and conservative views and attitudes are more likely to live in rural communities and small towns (cf. Otte and Baur 2008, p. 108; Schneider and Spellerberg 1999, p. 192 f.). However, studies conducted at the neighborhood level have shown that the effects of people’s lifestyle preferences on their residential choices are rather weak after their economic resources and family status are taken into account (Rössel and Hölscher 2012; Otte 2004). According to Otte (2004, p. 354 f.), economic conditions and living arrangements are the actual drivers of the residential decision-making process.

While the abovementioned studies have provided valuable evidence on the unequal spatial distribution of the creative class and other lifestyle groups, the questions of whether spatial disparities have become more pronounced over time and, in particular, of whether a process of polarization between the social classes has occurred remain open. In the following, we will address these questions and examine trends in spatial disparities between socioeconomic classes in Germany. For this purpose, we will adopt the distinction between the “new” and the “old” middle classes, as proposed by Reckwitz.

Hypotheses

Our basic assumption regarding post-industrial spatial disparities is that, in recent decades, members of the more privileged, new middle class have become increasingly likely to reside in clusters of attractive metropolises, while members of the less privileged classes (the so-called old middle class and the lower class) have become less likely to live in these settlement types and more likely to reside (and possibly to have been left behind) in small towns and rural areas (Reckwitz [2019] 2021, p. 65 f.) (hypothesis 1).

Hypothesis 2 goes a step further by positing that the developments described above have specifically affected the most dynamic metropolises, while socio-spatial disparities have been less pronounced in metropolises that have grown less in the last decade(s). Furthermore, we assume that dynamic regional centers, many of them university towns (cf. Florida 2004, p. 191 f.; Reckwitz [2019] 2021, p. 48), may also offer members of the new middle class attractive places to work and live. We therefore expect to observe that such regional hubs have also become increasingly attractive to members of the new middle class but less accessible to members of the old middle class.

If we assume that the more recent cohorts are both beneficiaries of the post-industrial transformation and drivers of economic and cultural changes in metropolitan areas and “creative” cities, it also seems plausible to suggest that spatial distances have increased between younger members of the new middle class and older members of the old middle class in particular. Thus, hypothesis 3 assumes that spatial distances become especially large between these two subgroups during our observation period of 1996 to 2018.

Conceptually, we distinguish between spatial disparities and polarization. We define polarization as a process in which the proportion of the new middle class living in metropolises is increasing while the corresponding proportion of the old middle class is decreasing. Complementary to these dynamics, polarization may also be indicated by the decreasing share of the new middle class living in small towns and rural areas and the increasing share of the old middle class living in those settlement types. Against that, we define growing spatial disparities as a process in which the dynamics (or speeds) of a
common trend differ in the comparison groups, but there is no divergence of trends among these groups.

3. Data and Analytic Strategy

To test our hypotheses, we draw on the 1996 and 2018 editions of the German microcensus, which were provided as on-site files by the Forschungsdatenzentren (research data centers) of the German federal and state statistical offices. With a sample size of one percent of the population, the microcensus is, by far, the largest annual household survey in Germany. In contrast to the microcensus Scientific Use File (SUF) version, which only applies a rather crude spatial distinction of settlement types (large metropolises, medium-sized and large cities, small towns, and rural areas), the on-site files provide territorial units at the NUTS-3 level, which allow us to disaggregate cities and settlements in a much more fine-grained manner. Above all, these files enable us to identify individual metropolises and large cities, which are the focus of our research interest.

Our analytical sample contains respondents aged 25 to 64 living in private households (primary residence). The age cutoff was chosen because occupational characteristics and local labor markets are expected to play central roles in the residential location choices of the classes under consideration. We therefore excluded younger age groups, many of whom are still in education, as well as older groups, most of whom are no longer in the labor market. The two surveys yielded more than 589,000 total cases: 182,953 cases for the year 1996 and 406,302 cases for the year 2018 (see Table S1 in the Supplementary Materials).

To empirically address spatial divisions between social classes, appropriate analytical categories are needed. Most importantly, we have to define on which spatial level an increase in socio-spatial disparities is expected to occur. While there has been much talk about the “urban–rural divide” and social divisions between “the center and the periphery”, the center–periphery metaphor is fuzzy, as it may refer to either broader regions or divisions between the inner city and suburban places. While it may seem intuitively plausible to locate the new middle class in attractive gentrified metropolitan districts (and the old middle class in less attractive suburban areas), it is less obvious on which spatial scale divisions between cities and regions should be analyzed. In this paper, our basic goal is to identify metropolises and cities that are especially attractive as residential locations for the new middle class and that are characterized by increasing spatial disparities between classes. As Florida pointed out, a city’s population size is not a sufficient criterion to identify the places that are preferred by members of this class, since it is often the cultural features of a city that make it a unique and attractive place to live (Florida 2004).

It is generally agreed that the seven largest German metropolises in terms of population are also the country’s economic powerhouses or cultural centers. Above all, the housing prices in these cities show that they are considered the most desirable places to live in Germany (BBSR 2022, p. 13 f.). From a new middle class or creative city point of view, it thus seems safe to suggest that the seven metropolises represent especially attractive places of residence. However, beyond the metropolises, some regional centers may also score high on the economic and “quality of life” indicators. While the question of which criteria should be applied in the classification of settlements and cities is debatable, we have chosen to use population growth in the past two decades as a straightforward indicator of a city’s development and its cultural attractiveness. Although Häußermann and Siebel (2004, p. 688) pointed out that population growth and decline are embedded in broader processes of urban development, it may nonetheless be argued that demographic processes are core features that also reflect the quality of a city’s economic and built environment development (Müller 2003, p. 30).

On an operational level, we make use of information provided by the microcensus on NUTS-3 regions (and further information on the number of residents) to identify all major German cities. On that basis, we assign the seven largest German cities to the metropolis category. This group consists of Berlin, Hamburg, Munich, Cologne, Frankfurt, Stuttgart, and Düsseldorf. For more detailed analyses, we subdivide these cities into three
groups. Based on information on the population growth between 1996 and 2018, the fast-growing cities of Munich, Cologne, and Frankfurt are assigned to group 1 (13 to 20 percent growth), while Hamburg, Düsseldorf, and Stuttgart, which have experienced weaker population growth in the last 20 years (8 percent growth), are assigned to group 2. Finally, Berlin, which is, by far, the largest German city, is handled as a separate category (5 percent growth). Beyond these seven metropolises, the cities of Leipzig, Dortmund, Essen, Bremen, Dresden, Hanover, Nuremberg, and Duisburg each have around 500,000 inhabitants. In the following, we label them as major cities. They represent a diverse group that includes the West German former industrial cities of Essen, Dortmund, and Duisburg and the major East German cities of Dresden and Leipzig, as well as Hanover, the capital of Lower Saxony, and the Bavarian city of Nuremberg. A third category consists of 84 large cities with at least 100,000 inhabitants. As was argued above, the most dynamic large cities may also represent attractive work and life destinations for the new middle class. We thus divide this category into two subgroups according to population growth between 1996 and 2018. Of these cities, 17 had above-average growth rates (ranging from 10 to 32 percent): Potsdam, Ingolstadt, Münster, Regensburg, Mainz, Fürth, Heidelberg, Freiburg i. B., Darmstadt, Augsburg, Karlsruhe, Paderborn, Erlangen, Trier, Gütersloh, Oldenburg, and Jena. Finally, we distinguish three more categories: medium-sized towns (with between 20,000 and 100,000 inhabitants), small towns (with between 5000 and 20,000 inhabitants), and rural communities (which include all settlement types with fewer than 5000 inhabitants). To map the socioeconomic classes, we use the ESeC class concept (Müller et al. 2006; Rose et al. 2010), which is a European version of the Erikson–Goldthorpe–Portocarero (EGP) class schema (Erikson and Goldthorpe 1992). While Reckwitz’s class concept is somewhat ambiguous, as it refers to educational, occupational, and cultural factors (or social milieus), the three major classes identified by Reckwitz are firmly rooted in occupational categories (Reckwitz [2019] 2021, pp. 48, 52, 55). Therefore, the categories of the EseC class schema seem well suited to approximate the classes proposed by Reckwitz (as well as by Florida).3

The EseC schema includes nine classes based on occupation and employment status: large employers and higher grade professional, administrative, and managerial occupations (higher salariat or “upper service class”) (ESeC 1); lower grade professional, administrative, and managerial occupations and higher grade technician and supervisory occupations (lower salariat or “lower service class”) (ESeC 2); intermediate occupations (ESeC 3); small employers and self-employed (except agriculture) (ESeC 4); small employers and self-employed (in agriculture) (ESeC 5); lower supervisory and lower technician occupations (ESeC 6); lower (routine) clerical, service, and sales occupations (ESeC 7); lower technical occupations (ESeC 8); and lower manual occupations (ESeC 9) (Müller et al. 2006).

The upper and lower service class categories of the ESeC class schema are closely related to Reckwitz’s academic new middle class (Reckwitz [2019] 2021, p. 48 ff.),4 which is, again, largely the same as the creative class defined by Florida (2004, p. 68 f.). In the following, we allocate the members of the upper service class (ESeC 1), most of whom are higher educated and employed in the professions or the knowledge economy, to the new middle class. In a broader sense, members of the lower service class (ESeC 2) may also be assigned to the new middle class. However, we expect that the proposed trends in spatial disparities are more clearly expressed among the upper service class.

The old middle class mainly consists of individuals in medium-level, non-academic occupational positions, as well as the self-employed (ESeC 3–6, 8) (Reckwitz [2019] 2021, p. 52). To map possible disparate developments between members of the non-manual and the manual old middle classes, we divide them into two fractions: skilled manual workers and lower grade technicians and supervisors (ESeC 6, 8), on the one hand, and intermediate office, service, and trade occupations and the self-employed (ESeC 3, 4, 5) on the other. The lower (“precarious”) class consists of individuals in routine office, service, and trade occupations (ESeC 7) and members of the unskilled manual working class (ESeC 9). We consider these two classes separately given that, in metropolitan areas, routine service
jobs tend to expand (Reckwitz [2019] 2021, p. 65 f.), whereas unskilled manual jobs tend to gradually disappear during the course of deindustrialization. In sum, it seems feasible to merge the ESeC class schema with Reckwitz’s three-class taxonomy, which distinguishes between the new middle class, the old middle class, and the lower class.

For the survey year 1996, class assignment was based on the ISCO-88 (COM) 3-digit code and additional information on the occupational status (Rose et al. 2010; Müller et al. 2006, p. 115). Because of the lack of information on the managerial or supervisory functions of wage earners, as well as on the distinction between the small and the large self-employed groups, we only distinguish between three employment statuses: self-employed with and without employees and wage earners. For the 2018 edition, in light of the change from ISCO-88 (COM) to ISCO-08, we used the setups provided by GESIS for coding the ESeC class scheme. In addition, we adapted the class scheme to the German employment relationships (Wirth et al. 2009).

Since we assume that the spatial disparities increased in the younger age groups in particular, we distinguish between four age groups: 25 to 34, 35 to 44, 45 to 54, and 55 to 64. In addition, we take into account gender (male or female) and migration background (German or non-German). Accordingly, our analyses refer to respondents who were living in a private household (main residence) and were between 25 and 64 years old in the respective survey year. For the year 1996, we used the 0.45 percent subsample of the microcensus, which provides occupational information based on ISCO-88 (COM). Statistical analyses were performed using Stata 17 software. Table 1 presents the descriptive statistics.

<table>
<thead>
<tr>
<th>Table 1. Descriptive statistics.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
</tr>
<tr>
<td>Women</td>
</tr>
<tr>
<td>Men</td>
</tr>
<tr>
<td><strong>Migration background</strong></td>
</tr>
<tr>
<td>German</td>
</tr>
<tr>
<td>Non-German</td>
</tr>
<tr>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>25–34</td>
</tr>
<tr>
<td>35–44</td>
</tr>
<tr>
<td>45–54</td>
</tr>
<tr>
<td>54–64</td>
</tr>
<tr>
<td><strong>Social class</strong></td>
</tr>
<tr>
<td>Upper service (new middle class)</td>
</tr>
<tr>
<td>Lower service</td>
</tr>
<tr>
<td>Non-manual middle (old middle class)</td>
</tr>
<tr>
<td>Manual middle (old middle class)</td>
</tr>
<tr>
<td>Routine service</td>
</tr>
<tr>
<td>Unskilled manual</td>
</tr>
<tr>
<td>Not employed</td>
</tr>
<tr>
<td><strong>Settlement type</strong></td>
</tr>
<tr>
<td>Rural communities</td>
</tr>
<tr>
<td>Small towns</td>
</tr>
<tr>
<td>Medium-sized towns</td>
</tr>
<tr>
<td>Large cities</td>
</tr>
<tr>
<td>Dynamic large cities</td>
</tr>
<tr>
<td>Major cities</td>
</tr>
<tr>
<td>Metropolises</td>
</tr>
<tr>
<td>Observations</td>
</tr>
</tbody>
</table>
4. Results

4.1. Descriptive Findings

In a first step, we compare the social class compositions of the different settlement types in 1996 and 2018. Table 2 shows that the shares of the new middle class (upper service class) more than doubled in the metropolises. At the lower end of the class hierarchy, the proportions of routine non-manual service occupations in the metropolitan category also increased strongly, whereas the shares of the non-manual old middle class and the unskilled manual occupations declined. These observations support our expectations regarding the changing economic structure of post-industrial cities. However, with respect to increasing socio-spatial disparities, it is essential to compare trends in the metropolises with those in other settlement types, particularly rural communities and small towns. As the table shows, no substantial differences can be observed. Instead, we find similar overall trends in basically all types of settlements. Across all categories, the shares of the upper (service) class at least doubled, and the shares of the routine service class increased significantly. Conversely, across all settlement types, the proportions of the unskilled manual and the non-manual old middle classes declined. In sum, we find largely similar changes in the class composition across all types of settlements. In the following, we switch our analytical perspective and investigate to what degree the residential locations of the social classes have changed.

Table 2. Social class compositions of settlement types in 1996 and 2018 (row percentages).

<table>
<thead>
<tr>
<th>Settlement Type</th>
<th>Upper Service</th>
<th>Lower Service</th>
<th>Non-Manual Middle</th>
<th>Manual Middle</th>
<th>Routine Service</th>
<th>Unskilled Manual</th>
<th>Not Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural communities</td>
<td>5.1</td>
<td>13.1</td>
<td>9.2</td>
<td>16.9</td>
<td>16.6</td>
<td>14.6</td>
<td>15.8</td>
</tr>
<tr>
<td>Small towns</td>
<td>6.9</td>
<td>14.5</td>
<td>10.6</td>
<td>16.8</td>
<td>17.2</td>
<td>13.9</td>
<td>13.5</td>
</tr>
<tr>
<td>Medium-sized towns</td>
<td>7.5</td>
<td>15.2</td>
<td>11.0</td>
<td>16.0</td>
<td>16.6</td>
<td>12.9</td>
<td>12.0</td>
</tr>
<tr>
<td>Large cities</td>
<td>8.2</td>
<td>17.0</td>
<td>10.9</td>
<td>15.4</td>
<td>15.8</td>
<td>11.9</td>
<td>11.4</td>
</tr>
<tr>
<td>Dynamic large cities</td>
<td>11.1</td>
<td>25.3</td>
<td>13.3</td>
<td>16.8</td>
<td>17.1</td>
<td>11.8</td>
<td>9.7</td>
</tr>
<tr>
<td>Major cities</td>
<td>8.5</td>
<td>19.0</td>
<td>11.1</td>
<td>15.9</td>
<td>15.7</td>
<td>11.9</td>
<td>10.7</td>
</tr>
<tr>
<td>Metropolises</td>
<td>10.8</td>
<td>24.9</td>
<td>12.5</td>
<td>17.3</td>
<td>19.9</td>
<td>13.8</td>
<td>8.3</td>
</tr>
</tbody>
</table>

Source: RDC of the Federal Statistical Office and Statistical Offices of the Federal States, DOI: 10.21242/12211.1996.00.01.1.1 and 10.21242/12211.2018.00.01.1.3, by our own calculations. Note: The upper service class represents the “new middle class”, while the non-manual middle class and the manual middle class represent the “old middle class”.

Table 3 displays the distribution of the classes over the various types of settlements in 1996 and 2018. For most classes, the places of residence did not change much. Consistent with the theoretical expectations, the proportions of the new middle class living in metropolises increased somewhat (16 to 18 percent). No changes were observed for the lower service class, and for both fractions of the old middle class, the likelihood of living in the metropolises declined slightly. A substantial decline in the proportions living in the metropolises could be observed only for the unskilled working class.
There is clearly no evidence of an emerging middle class (upper service class) and the manual middle class became slightly more likely to reside in small towns and medium-sized towns. Similarly, 70 percent of both fractions of the old middle class and 75 percent of the lower class were living in rural, small, or medium-sized towns. Among the new middle class, the overall probability of living in metropolises or major cities was 24 (23) percent, while the likelihood of residing in rural areas or small towns was 34 (35) percent. Thus, the assumption that the new middle class is a mostly urban class cannot be confirmed. Despite signs of the gradual emergence of class differentials in places of residence, there is clearly no evidence of an urban–rural divide between the social classes. Moreover, since only minor changes occurred over time, the results do not support the assumption that class-specific disparities generally increased over the analyzed period.

### 4.2. Multivariate Results

In the next step, we estimate class-specific probabilities of residing in the various types of cities based on a multinomial logistic regression model. As controls, we include gender, migration background, and age groups. The results are presented as predicted probabilities. To examine the changes in class-specific residential locations, we estimate interactions between ESeC classes and survey years. Following our theoretical focus, we compare the residential locations of the new middle class (upper service class) and the two fractions of the old middle class.

Figure 1 (see Table S2 for the full results) plots the predicted probabilities of living in various places of residence for the three classes under consideration. Across all classes, only a few changes can be observed. Between 1996 and 2018, members of all three classes became less likely to live in rural communities, with the decline particularly large among members of the manual old middle class. At the same time, the two fractions of the old middle class became slightly more likely to reside in small towns and medium-sized cities, while no change is observed for members of the new middle class. In effect, the differences in the likelihood of residing in this settlement type between the new middle class and the manual middle class represent the “old middle class”.

We also find no clear trend in the likelihoods of living in rural, small, and medium-sized towns. Contrary to our expectations, the shares of the new middle class who were living in rural areas and small towns were almost the same in 2018 as in 1996 (12 and 23 percent, respectively). For the manual classes, the residential trends appear inconsistent (smaller proportions were living in rural areas, and larger proportions were living in medium-sized towns). It is also worth noting that, overall, in 2018, no more than 18 percent of the new middle class were living in metropolises, whereas 60 percent were living in rural, small, or medium-sized towns. Similarly, 70 percent of both fractions of the old middle class and 75 percent of the lower class were living in rural, small, or medium-sized towns. Among the new middle class, the overall probability of living in metropolises or major cities was 24 (23) percent, while the likelihood of residing in rural areas or small towns was 34 (35) percent. Thus, the assumption that the new middle class is a mostly metropolitan class cannot be confirmed. Despite signs of the gradual emergence of class differentials in places of residence, there is clearly no evidence of an urban–rural divide between the social classes. Moreover, since only minor changes occurred over time, the results do not support the assumption that class-specific disparities generally increased over the analyzed period.

### Table 3. Class-specific differences in places of residence in 1996 and 2018 (column percentages).

<table>
<thead>
<tr>
<th></th>
<th>Upper Service</th>
<th>Lower Service</th>
<th>Non-Manual Middle</th>
<th>Manual Middle</th>
<th>Routine Service</th>
<th>Unskilled Manual</th>
<th>Not Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural communities</td>
<td>12.3</td>
<td>11.5</td>
<td>15.4</td>
<td>15.0</td>
<td>17.7</td>
<td>16.0</td>
<td>23.1</td>
</tr>
<tr>
<td>Small towns</td>
<td>23.1</td>
<td>22.7</td>
<td>24.5</td>
<td>26.7</td>
<td>25.4</td>
<td>27.2</td>
<td>27.2</td>
</tr>
<tr>
<td>Medium-sized towns</td>
<td>24.5</td>
<td>24.8</td>
<td>25.2</td>
<td>26.5</td>
<td>24.2</td>
<td>26.4</td>
<td>23.9</td>
</tr>
<tr>
<td>Large cities</td>
<td>12.7</td>
<td>11.2</td>
<td>11.8</td>
<td>10.3</td>
<td>10.8</td>
<td>9.8</td>
<td>10.7</td>
</tr>
<tr>
<td>Dynamic large cities</td>
<td>4.7</td>
<td>5.3</td>
<td>4.0</td>
<td>3.6</td>
<td>3.3</td>
<td>3.1</td>
<td>2.5</td>
</tr>
<tr>
<td>Major cities</td>
<td>6.5</td>
<td>6.1</td>
<td>6.0</td>
<td>5.1</td>
<td>5.4</td>
<td>4.8</td>
<td>5.0</td>
</tr>
<tr>
<td>Metropolises</td>
<td>16.2</td>
<td>18.3</td>
<td>13.1</td>
<td>12.9</td>
<td>13.3</td>
<td>12.7</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Source: RDC of the Federal Statistical Office and Statistical Offices of the Federal States, DOI: 10.21242/12211.1996.00.1.1.1 and 10.21242/12211.2018.00.1.1.3, by our own calculations. Note: The upper service class represents the “new middle class”, while the non-manual middle class and the manual middle class represent the “old middle class”. 

We also find no clear trend in the likelihoods of living in rural, small, and medium-sized towns. Contrary to our expectations, the shares of the new middle class who were living in rural areas and small towns were almost the same in 2018 as in 1996 (12 and 23 percent, respectively). For the manual classes, the residential trends appear inconsistent (smaller proportions were living in rural areas, and larger proportions were living in medium-sized towns). It is also worth noting that, overall, in 2018, no more than 18 percent of the new middle class were living in metropolises, whereas 60 percent were living in rural, small, or medium-sized towns. Similarly, 70 percent of both fractions of the old middle class and 75 percent of the lower class were living in rural, small, or medium-sized towns. Among the new middle class, the overall probability of living in metropolises or major cities was 24 (23) percent, while the likelihood of residing in rural areas or small towns was 34 (35) percent. Thus, the assumption that the new middle class is a mostly metropolitan class cannot be confirmed. Despite signs of the gradual emergence of class differentials in places of residence, there is clearly no evidence of an urban–rural divide between the social classes. Moreover, since only minor changes occurred over time, the results do not support the assumption that class-specific disparities generally increased over the analyzed period.
old middle class widened somewhat over time. By contrast, there was a slight narrowing of class differences in the likelihood of residing in large cities and no notable changes for the dynamic large city subgroup (as defined by strong population growth rates). Note that we expected (hypothesis 2) to find that members of the new middle class were increasingly attracted to living in these cities. The same applies to the eight major cities in our sample. Finally, the probability of living in metropolises increased somewhat for the new middle class, decreased slightly for the non-manual old middle class, and was unaltered for the manual old middle class. Taken together, our main finding so far is that, while class-specific differences in the probability of residing in metropolises were slightly higher, these changes were marginal, and they certainly did not amount to evidence of a growing social polarization in places of residence.

Figure 1. Class-specific differences in the predicted probabilities of residing in rural communities, small towns, medium-sized towns, large cities, dynamic large cities, major cities, and metropolises.

In the following, we investigate in more detail changes in class-specific residential locations within the metropolitan category (Figure 2; see Table S3 for the full results). Further differentiation between the seven German metropolises reveals that the probability of living in Hamburg, Düsseldorf, Stuttgart, or Berlin basically remained unchanged for the new middle class, while minor changes can be observed for the old middle class. In contrast, the probability of living in the cities of Munich, Cologne, and Frankfurt increased for the new middle class but remained unchanged for the manual and the non-manual old middle classes. The results thus clarify that, between 1996 and 2018, members of the new middle class were indeed increasingly attracted to living in the latter cluster of cities, while there were no countervailing trends in the probability of living in those cities for the other classes. In other words, we found evidence for increasing disparities but not for polarization in places of residence in these three cities.

Figure 2. Class-specific differences in the predicted probabilities of residing in Munich, Cologne, and Frankfurt; Hamburg, Düsseldorf, and Stuttgart; and Berlin in 1996 and 2018—multinomial
logistic regression (predictive margins, 83% CI). Source: RDC of the Federal Statistical Office and Statistical Offices of the Federal States, DOI: 10.21242/12211.1996.00.00.1.1.1 and 10.21242/12211.2018.00.00.1.1.3, by our own calculations. Note: Controls for all variables are presented in Table 1.

Assuming that the spatial disparities were most pronounced among the younger cohorts, we will, in the next step, investigate age-specific trends over time. Specifically, we will examine whether disparities between the younger members of the new middle class and the older members of the old middle class increased over the observation period (hypothesis 3).

Figure 3 shows that the younger members of the new middle class were the least likely to be living in rural communities (see Table S4 for the full results). We also find an increase in disparities between this group and the older age groups in the probability of residing in small and medium-sized towns. We thus observe an exodus from rural communities and small towns among the younger members of the new middle class, even as members of the older age groups became more likely to live in these types of places, irrespective of their class affiliation. Furthermore, we find only minor differences between classes and age groups in the likelihood of living in large and major cities. While we generally observe that the younger members of the new middle class had the highest probability of living in these types of settlements, only a slight increase in socio-spatial disparities occurred over time. Finally, for the seven metropolises, a different picture emerges. We find substantial and increasing differences in the probability of living in the metropolises between the younger and the older fractions in the new middle class but also in the non-manual old middle class (and, to a lesser degree, in the manual old middle class). A similar trend emerges for the dynamic large cities, albeit at a lower overall level. As a result, the differences between the younger members of the new middle class and the older members of the manual middle class in the probability of residing in metropolises rose from 10 percent in 1996 to 18 percent in 2018.

In sum, the age-specific analyses add to the previous picture (cf. Figure 1) by pointing to within- and between-class differences. We find considerable disparities between younger and older members of the new middle class in the likelihood of residing in rural areas/small towns and in metropolises. By contrast, the patterns and trends observed for older members of the new middle class do not systematically differ from those for older members of the other classes. Instead, across all three classes, members of the older age group became more likely to live in rural areas and small towns and less likely to reside in metropolises. As a result, age-specific differences in places of residence rose over time.

The differences in places of residence were largest between younger members of the new middle class and older members of the old middle class. These subgroups moved in different directions, specifically with regard to their likelihood of living in small or medium-sized towns and metropolises, which indicates that opposing trends in residential patterns were taking place. At the same time, the class differences were much smaller and the trends were less clear in the younger age group, as indicated by the rising probability of residing in metropolises for both the new middle class and the non-manual old middle class.

Finally, we again take a closer look at metropolises (Figure 4; see Table S5 for the full results). What stands out is that the increase in the probability of residing in metropolises observed for younger members of the new middle class (cf. Figure 3) was most pronounced in the cluster of Munich, Cologne, and Frankfurt. At the same time, the decline in the probability of residing in metropolises among older members of the new middle class appears to be a Berlin-specific phenomenon. Although there are exceptions, the trends for the old middle class are largely similar in all three metropolitan categories. In sum, the figure suggests that socio-spatial polarization is a rather specific phenomenon that refers to opposing trends in residential location choices between younger members of the new middle class and older members of the old middle class. This polarization is most clearly visible for Munich, Cologne, and Frankfurt, where the group-specific
differences in the probability of residing in these cities rose from 4 percent (1996) to 8 percent (2018).

**Figure 3.** Class-specific differences in the predicted probabilities of residing in rural communities, small towns, medium-sized towns, large cities, dynamic large cities, major cities, and metropolises in 1996 and 2018 by age group—multinomial logistic regression (predictive margins, 83% CI). Source: RDC of the Federal Statistical Office and Statistical Offices of the Federal States, DOI: 10.21242/12211.1996.00.01.1.1 and 10.21242/12211.2018.00.01.1.3, by our own calculations. Note: Controls for all variables are presented in Table 1.
Figure 4. Class-specific differences in the predicted probabilities of residing in Munich, Cologne, and Frankfurt; Hamburg, Düsseldorf, and Stuttgart; and Berlin in 1996 and 2018 by age group—multinomial logistic regression (predictive margins, 83% CI). Source: RDC of the Federal Statistical Office and Statistical Offices of the Federal States, DOI: 10.21242/12211.1996.00.00.1.1.1 and 10.21242/12211.2018.00.00.1.1.3, by our own calculations. Note: Controls for all variables are presented in Table 1.

5. Conclusions
In this paper, we investigated changes in large-scale socio-spatial disparities in Germany between 1996 and 2018. Referring to the claims made by Reckwitz ([2019] 2021), and to similar arguments made by Florida (2004), we examined how, in a post-industrial society such as Germany, social classes are distributed over different settlement types and, in particular, whether class differences in places of residence have increased over time. Based on German microcensus data, we applied the ESeC class schema and a differentiated classification of settlement types to specifically trace the residential locations of the new and the old middle classes.

We investigated whether members of the new middle class became increasingly concentrated in metropolises while members of the old middle class became more likely to reside in small towns and rural regions (hypothesis 1). We also examined to what degree these patterns differed between German metropolises (hypothesis 2). Finally, given that the young cohorts are the drivers of economic and cultural changes, we investigated whether spatial distances increased between younger members of the new middle class and older members of the old middle class (hypothesis 3).

Our results showed that, between 1996 and 2018, the two fractions of the old middle class became slightly more likely to reside in small towns and medium-sized cities, while the probability of living in these settlement types remained unchanged for members of the new middle class. We also found that all three classes became less likely to live in rural communities and large cities. At the same time, the probability of living in the seven metropolises increased slightly for the new middle class, while it decreased somewhat for the non-manual old middle class. No changes could be observed for members of the manual old middle class. A more detailed investigation showed that members of the new middle class in particular were more likely to be living in the most dynamic group of metropolises (Munich, Cologne, and Frankfurt).

Age-specific analyses additionally showed that the younger members of the new middle class became a more metropolitan class, while the older members of both the new middle class and the old middle class were less likely to reside in metropolises and were more likely to live in rural areas, small towns, and medium-sized cities. For the younger members of the old middle class, the results were mixed, as they were more likely to live both in small and medium-sized towns and in metropolises.

Subdividing the metropolitan areas revealed opposing trends between the younger members of the new middle class and the older members of the old middle class that were most clearly visible in the cluster of Munich, Cologne, and Frankfurt. Nevertheless, such polarizing dynamics did not appear to be primarily class-driven, since the younger members of the old middle class also became more likely to reside in these metropolises.

Taken together, it appears that the differences in the probability of residing in the metropolises increased somewhat between the younger and the older age groups, at least partly independent of class membership. This finding suggests that the trends in the social polarization of residential patterns were a much more age (or cohort)-specific phenomenon than a class-specific phenomenon. Moreover, the empirical patterns we observed pointed to rather modest changes over time, which contrasts sharply with bold theses about a fundamental spatial restructuring of post-industrial societies (Reckwitz [2019] 2021). It is possible that such accounts improperly generalize social trends that exist in certain parts of metropolitan areas (cf. Kumkar and Schimank 2021).

In order to map socioeconomic classes, we applied the ESeC class scheme. This raises the question of whether a more refined class concept (cf. Oesch 2006) would yield substantially different results. Similarly, it cannot be ruled out that also distinguishing between the creative class and a “super creative core” (as proposed by Florida 2004, p. 68 f.) may provide additional insights. Our subdivision of the metropolises according to population growth could also be criticized. It is possible that a classification that takes into account the cultural, historical, or institutional characteristics of cities that make them particularly attractive destinations for members of the new middle class would lead to different or complementary results. Thus, whether alternative classifications would
substantially extend our state of knowledge remains an open question. In a similar way, whether trends differ substantially between small towns in peripheral regions and in metropolitan hinterlands has yet to be investigated. However, given that, from a theoretical point of view, the new middle or creative classes are perceived as basically urban classes who are specifically attracted by urban environments and lifestyles (Reckwitz [2017] 2020, p. 228 ff.; [2019] 2021, p. 48; Florida 2004, p. 285 ff.), we would not expect to find substantially differing results for metropolitan hinterland areas. Finally, in recent years, and reinforced by the COVID-19 pandemic, German metropolises have recorded a population decline (cf. Rink et al. 2022). Younger people and households with children are those most likely to plan to move away from metropolitan areas (cf. Dolls and Mehles 2021). It is an interesting question to discuss which extent these processes may also differ by social class.

**Supplementary Materials:** The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/socsci12060326/s1: Table S1. Sample selection (case numbers). Table S2: Class-specific differences in the predicted probabilities of living in different places of residence in 1996 and 2018. Table S3: Class-specific differences in the predicted probabilities of living in Munich, Cologne, and Frankfurt; Hamburg, Düsseldorf, and Stuttgart; or Berlin in 1996 and 2018. Table S4. Class-specific differences in the predicted probabilities of living in different places of residence in 1996 and 2018 by age group. Table S5. Class-specific differences in the predicted probabilities of living in Munich, Cologne, and Frankfurt; Hamburg, Düsseldorf, and Stuttgart; or Berlin in 1996 and 2018 by age group.

**Author Contributions:** This paper is a joint collaboration. Both authors worked closely together throughout the whole process. All decisions were made jointly. The program codes were written by Y.M. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no funding.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** The analyses were based on microcensus data for the years 1996 (DOI: 10.21242/12211.1996.00.00.1.1.1) and 2018 (DOI: 10.21242/12211.2018.00.00.1.1.3). The German microcensus is an annual official statistical survey that uses a representative sample of one percent of the German population and households. On-site files of the dataset were provided by the Research Data Centers (Forschungsdatenzentren) of the German Federal and State Statistical Offices. The data were accessed via Landesamt für Statistik Niedersachsen in Hanover. The codes for replication (Stata do-Files) are available at: https://doi.org/10.7802/2569.

**Conflicts of Interest:** The authors declare no conflicts of interest.

**Notes**

1. For the analyses of spatial polarization in Germany in metropolises, medium-sized/large cities and small towns/rural areas based on the Mikrozensus SUF, see Konietzka and Martynovych (2022).
2. Not all of the major cities had more than 500,000 inhabitants during the whole observation period. Dresden, Leipzig, and Nuremberg exceeded the 500,000 inhabitants mark in 2006, 2005, and 2015. Duisburg, on the other hand, fell below the 500,000 inhabitants mark in 2007.
3. Florida (2004, p. 68 f.) also distinguished between a super creative core and the broader groups of creative professionals. In principle, it is possible to further differentiate the upper service class; this was, however, not the focus of this paper.
4. Both Reckwitz and Florida estimated that the new/creative class covers one-third of the occupational distribution (Reckwitz [2019] 2021, p. 67; Florida 2004, p. 74). In Germany, the upper and the lower service classes of the ESeC scheme comprise 33 percent of the prime age workforce (Konietzka and Martynovych 2022, p. 181).
5. Diverging from the original ESeC concept (Müller et al. 2006, p. 115), we consider those who are not employed and those who are seeking work as a separate class. Class assignment according to the last job is not possible due to the lack of information on the size of the last employer in 2018.
7. Robustness checks showed that there are no relevant differences in the relationship between class membership and residential location for the ISCO-88 (COM) and ISCO-08 classifications.
8. Migrants are defined those respondents who do not have German citizenship (persons with dual citizenship are classified as German). Since it is only possible to determine migration backgrounds from the 2005 microcensus onward, citizenship is the only characteristic that can be used to identify persons of foreign origin in both years.
Following Austin and Hux (2002, p. 195), we plot, for all estimates, 83% confidence intervals, which allows us to assess “whether or not two means are significantly different from one another at the α = 0.05 level”.

References


Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.