In this study, we define housing policy in a broad sense, as actions by various levels of government administration in the social, economic and spatial dimensions which impact the housing situation. We understand residential segregation to exist when various social groups occupy separate housing within town/city space. The study focuses on two key aspects: the complexity of housing policy and the extent of residential segregation.

The Complexity of Housing Policy

We conducted comparative research into the housing systems in Warsaw, Berlin and Paris, in order to identify differences in the formulation of housing policy, both in terms of its objectives and instruments. As regards methodology, we used van der Heijden's "middle-way approach" (2013). Historical analysis showing divergent approaches to housing policy in the cities studied was coupled with an examination, informed by convergence theory, of contemporary processes occurring in cities, attempting to give appropriate weight to both global and local processes. The use of this approach allowed us to find a balance between generalization and specificity taking into account historical factors (such as a city's developmental path) and cultural context. The disadvantage of this method is its high degree of intuitiveness and the lack of a developed framework for operationalization.

For each city, we identify the periods which have had the greatest influence on the shape of its housing policy, highlight specific policy instruments used, and demonstrate the relationship between policy and patterns of segregation, which are particularly noticeable on a micro-scale. Historical events and past housing policy have significantly influenced today's situation on the housing market and shaped residential segregation patterns. Socio-economic and demographic factors have also been contributors, as have spatial conditions together with planning, legal and administration systems. Kleinman (1996) and Bengtsson (2008; 2012) came to similar conclusions also using

path-dependence theory. Additionally, they highlighted the role of an ideological factor, which becomes part of housing culture and institutional structure of housing market. System transformation is possible but it encounters resistance. It goes in accordance with our last conclusion, that is, although market forces are an important factor shaping housing policy pattern, a style of reaching poorly political objectives is also influential.

The policy instruments used in the cities studied were similar, although the scale of intervention varied between them and changed over time. In all the cities, we were able to trace an increase in the state's involvement in housing construction in the 1950s–1970s period, followed by a slow retreat from this in the 1980s and 1990s in Poland and the adoption of a liberal approach. Worth mentioning among the most important features of contemporary housing policy with an impact on segregation patterns are the following:

- 1. Reduced government intervention and concentration of activities on small groups vulnerable to social exclusion leads to these groups experiencing increased stigmatization followed by segregation (Warsaw), whereas the wide application of policy instruments to diverse income groups contributes to a more mosaic structure of segregation (Berlin, Paris);
- Reduced government intervention and increased private sector involvement results in housing construction targeted towards people with higher incomes (Berlin, Paris, Warsaw), and in some cases excessive regulatory freedom causes increased spatial chaos (Warsaw, Berlin) or uncontrolled gentrification (Berlin);
- 3. Financial constraints mean that new ways of implementing social housing policy are sought, in cooperation with private actors or in public-private partnership (Berlin, Paris);
- 4. Existing regulations and instruments used by local authorities are not being respected, and thus are not effective mechanisms for shaping housing policy (Berlin, Warsaw and partly Paris);
- 5. The effectiveness of housing policy is reduced by *ad hoc* policy making and a lack of coordination between measures relating to social, economic and spatial aspects (Warsaw, Berlin). However, a transition towards more long-term planning of activities is visible.

The greatest challenge facing housing policy today is posed by growing social inequalities. The primary phenomenon involved is the spontaneous deepening of differences between particular areas resulting from the process of the selective migration of residents. With each intensification of social problems in a given area, households able to do so leave the area, which further increases the concentration and "density" of the social problems there. This process leads to the emergence of areas with a clear downward trajectory, where without the intervention of the authorities it is impossible to overcome negative developmental tendencies.

The extent of residential segregation

In our research, residential segregation was approached multidimensionally – we examined demographic, socio-economic and ethnic segregation (the last of these was only possible in Berlin and Paris) on three spatial scales: metropolitan areas divided into municipalities, cities divided into districts, and selected districts of Warsaw divided into census areas. After methodological systematization (distinguishing first, second and third generation measures as well as those relating to single, dual and multi-groups) and identification of methods limitation, we adopted Massey and Denton's multidimensional analysis of segregation (1988) and applied it to the latest census data (Warsaw 2002, Berlin 2012, Paris 2011). Research into residential segregation may be able to take advantage of insights from path dependence theory, i.e. the development of segregation can be seen as the result of a specific historical trajectory, due to which cities become trapped in their existing structures. In light of this, in our analysis of the process of residential segregation, we distinguished the following elements: the starting point for socio-spatial diversity which begins the series of events; the early stages of the process; and the cause-and-effect course of events in the process, with particular emphasis on the impact of housing policy. Among the contexts proposed by Maloutas and Fujita (2012) which may be used to investigate the phenomenon of residential segregation in its local specificity, the first two relate to housing policy: market access to housing (the economic sphere) and housing redistribution (the state sphere).

In Warsaw, regardless of the scale of the study, the same groups experience segregation most strongly, although in different order depending on the scale: households with five members or more, those without a primary education, those receiving social assistance, older people (over 60) and those with a vocational education. These are therefore the most vulnerable social groups whose segregation can lead to social exclusion. In Warsaw, however, segregation rates still remain at a relatively low level. The reasons for the segregation of vulnerable social groups are long-term neglect of housing policy (from the 19th century until today), especially in relation to social housing, and the current dominant role of the property development sector together with government programs catering for the needs of this type of housing construction, and thus for the middle and upper-middle classes. A qualitative study conducted at the micro-level in 2015 in selected, socially diverse districts of Warsaw (Ursynów, Włochy and Praga Północ) points to a future upward trend in residential micro-segregation due to the gating of middle class housing areas and gentrification through redevelopment.

In Berlin and its metropolitan area, residential segregation is also at a low level. The highest values for indicators of segregation are found among foreigners, followed by certain employment groups (highest among manual workers), those receiving social benefits and those with a higher education,

as well as the young (aged 18-30) and old (aged over 65). The highest levels of segregation therefore relate to socio-economic segregation (rich and poor), on which ethnic segregation is overlaid. A characteristic feature of Berlin is its quite large social mix, despite a historically conditioned divide between richer and poorer districts. There are no extensive homogenous enclaves of poverty and wealth, the exception being new developments located primarily in the suburbs (inhabited by middle class families with children). Oualitative research was conducted at the micro-level in 2014 and 2015 in selected socially diverse districts: Charlottenburg-Wilmersdorf (which has a favourable social profile), Mitte (mixed social profile), Marzahn-Hellersdorf (mixed social profile), Neukölln (unfavourable social profile). The two districts with a mixed profile were included as the processes taking place in those districts are diverse and flow out of the direction development taken while the city was still divided. Processes in western part have more common features with Paris and in eastern part with Warsaw. In Berlin, segregation can be seen on the scale of individual buildings. This is particularly visible in relation to foreigners (especially from Turkey) and can be explained by discrimination on the housing market as well as the important role played by social contacts in the choice of a place to live. The city is currently experiencing intensive growth and there is a significant influx of new migrants. The increase in demand for moderate rent housing means that the historical divide between richer and poorer districts is becoming less important. New residents are moving into areas previously considered unattractive, contributing to an acceleration in the process of gentrification. Less affluent residents are being pushed outside the city centre into transitional areas between the centre and the suburbs. These processes point to a likely increase in segregation.

In the metropolitan area of Paris, segregation most strongly affects people with higher education, managerial employees, professionals and manual workers, and, in Paris itself, families with four or more children, manual workers, non-graduates and artisans, traders and managers. Thus, the primary form of segregation is social, the groups most separated from others are diverse in composition, with higher social class being the most clearly visible factor. Segregation indices are at a higher level than in Warsaw and Berlin, and enclaves of wealth and poverty are clearly more extensive and homogeneous. A qualitative study was conducted at the micro-level in 2014 and 2015, in selected socially diverse districts of Paris - the 16th, 13th and 19th arrondissements, and in the towns of Sceaux, Massy and Sarcelles in the Île-de-France metropolitan area. It revealed the enduring nature of the historically rooted divide between the richer western arrondissements (les beaux quartiers), where residential proximity plays a key role in the reproduction of dominance of its residents – the Parisian aristocracy and "great bourgeoisie", and the poorer north-eastern districts. This has, however, been somewhat modified by several decades of gentrification, which is now advanced. Gentrification started in left-bank Paris

in the 1960s and is progressing in a north-east direction through the social conquest of lower class districts by the middle and upper classes (a process of diffusion in which the middle class has expanded to include the gentrifiers known as "les bourgeois-bohèmes" or "bobos"). Apart from this gentrification from below, the process is also being encouraged by the activities of the city of Paris, for example the Paris Rive gauche project, which is considered in some detail in our study. Rich neighbourhoods remain immune to transformation (ineffectual housing policy), socially diverse neighbourhoods are usually subject to elitization, more attractive areas of poorer districts experience gentrification (initially by way of increasing social diversity and then middle class dominance), and the poorest enclaves inhabited by immigrants from poor countries remain unchanged. The reasons for the segregation of different social groups include the historically elite role of Paris, its contemporary participation in the network of global cities and differentiated housing policy targeted at various social groups. This policy causes mosaic segregation structure. Although gentrification is very advanced, it is difficult to predict future trends in residential segregation in Paris given the city's systematized housing policy and planning initiatives directed towards socially vulnerable districts, extensively described in our study on the basis of micro-scale observation (e.g. the location of a Grand Paris Express district Atlantis in Massy and urban renewal in the Lochères housing estate in Sarcelles). Another factor is that the gating of residential areas is occurring across various categories of dwellings, including social housing.

In our micro-scale description of residential segregation in selected city districts, we pointed to the spatial isolation of some of these districts, i.e. both their internal and external (in relation to other districts) lack of integration. This isolation/integration is determined by such elements as: the planning (or not) of residential areas with care to ensure adequate public space, the presence of green areas where local artistic and social initiatives can be carried out, including those relating to local history and identity; ensuring (or not) transportation links to the district; the establishment of gated housing areas, which leads to fragmentation, the privatization of space, chaos, and conflicts between existing and new residents; fragmented spatial development plans resulting in chaotic construction and increasing difficulties for vehicular traffic and, consequently, the isolation of some districts; the presence of barriers in the form of, for example, transport lines or extensive wasteland. Thus, we can state that spatial isolation undoubtedly leads to increased residential segregation, although whether this effect is stronger in districts with a higher or lower social status remains unclear.

In summary, varied historical and institutional contexts have resulted in different socio-spatial structures, but growing elitization is a characteristic feature of neoliberal cities (the effect of changed housing policy since the 1990s and implementation of global urban strategy – see Smith 2007). Although the

socio-spatial processes that we identified are similar (revitalization, gentrification, the gating of residential space, permanent enclaves of poverty), their scale, form and mechanisms of formation and development differ between cities.

Practical recommendations for housing policy

Our research into residential segregation and the degree to which it exists in selected cities points to the important modifying role of housing policy both at central and local levels. In Poland, housing policy suffers from neglect and we therefore see the need to strengthen the policy tools available to local authorities, who will enable them to counteract the formation of isolated enclaves of poverty and wealth. This is crucial in the case of Warsaw as segregation is highest there for the most vulnerable social groups. Based on our analysis of German and French housing policy, we propose the following good practices to prevent future increase in residential segregation:

- 1. A systemic approach to housing policy with a wide range of complementary tools accompanied by flexible action preceded by evaluation of results previously achieved;
- 2. Enhancing the attractiveness of existing housing stock by modernizing fixtures and fittings; improving thermal insulation and the external state of buildings and their surroundings; introducing retail shops and service points on ground floors all achieved through the involvement of both public and private entities with appropriate funding;
- 3. Using post-industrial and ex-office buildings requalified as social housing through the mechanism of local authority purchase or financing from public or private entities for their change of use and repurposing;
- 4. Construction of new, diverse social housing, thanks to a complex system of loans various housing categories differentiated according to household income thresholds and rent levels: for the poorest and low-income households as well as middle class households unable to afford a mortgage. Thresholds adjusted, on the one hand, to the structure of community incomes at the level of municipalities and cities, and on the other, actual property and rental costs on local housing markets:
- 5. Withdrawal of the state from the direct co-financing of residential property purchases and local authorities to discontinue the sale of municipal housing both routes are too expensive in Polish conditions;
- 6. Private sector involvement in the construction of social housing through a variety of loans large property developments to have a required proportion (e.g. 20–30%) designated as social housing catering for various income categories;

7. Development of the social rent market sector in public resources, but also social rent opportunities in a commercial asset, through the introduction of various forms of cooperation between the city authority and a private entity, and through the provisions governing the rent high;

- 8. Diversified social housing, integrated with urban space, available in all city districts not only the periphery but also central areas. The inclusion of social housing in buildings with privately owned units. The construction of housing estates for just one social group to be discouraged;
- 9. The social sector to be made more flexible through loans for those willing to move from local authority accommodation into the private sector; and the introduction of flexible rents, which would increase for households in council property whose income rises to levels significantly exceeding the income thresholds entitling them to public housing;
- 10. Comprehensive revitalization programs with a diverse range of functions, where the residential functions also contain social housing (a defined proportion) for various income categories, so that the social structure of the area is at least partially preserved;
- 11. Increasing the attractiveness of problem districts by introducing new, diversified residential areas (and not only in attractive places), investing in public spaces, making available buildings for community use and improving the quality of public services (especially schools, kindergartens), introducing new functions (e.g. repurposing wasteland as local gardens and parks), enabling participation by the local community and potential new residents;
- 12. Long-term planning of housing construction based on monitoring particular districts/census areas and identifying locations with a negative trajectory where intervention is needed (this should also apply to socially mixed neighbourhoods where negative trends emerge);
- 13. Increased community participation at every stage of projects undertaken, not restricted to an opinion-giving role only. Local residents should be encouraged to identify problems and propose solutions. Their trust and engagement should be enhanced by the introduction of local mediators between community residents and local authorities.

Housing policy should also be integrated with the spatial planning in order to shape the spatial cohesion of cities more effectively, as unfavourable spatial systems (fragmentation, isolation, illegibility of space) increase housing segregation.

Methodological remarks

Comparative studies into housing policy carried out to date have in the main either focused on Western Europe or Central and Eastern Europe. There is

a lack of research which compares these two different areas, and which takes account of historical factors, cultural context and contemporary global processes. We have tried to fill this gap, at least partially, although our analysis still needs to be supplemented by additional quantitative and qualitative elements. The choice of Paris, Berlin and Warsaw was not accidental. It allowed us to show the whole spectrum of approaches to housing policy. Considering Berlin as a bridge between West and East gives further insight into the differences between housing systems. The "middle-way approach" adopted in our study has the potential to greatly benefit future comparative research into housing policy by distinguishing specific and common policy aspects, and identifying local expressions of global processes.

Structural analysis of segregation in Poland over a range of social categories, supported by the use of three spatial scales, was absent in the literature prior to our multidimensional analysis presented here. In studying this complex phenomenon, we identified enclaves of wealth and poverty, and a rarely deployed clustering measure SP turned out to be particularly important in relation to the development of micro-segregation – it shows that there is significant socio-spatial fragmentation in Warsaw. In the future, this measure may serve, for example, to assess whether the process of gentrification really does create social differentiation, which is often presumed in the literature. but is not confirmed by the statistical data for the beginning of the twenty--first century and our study. Although the development of GIS methods makes a multidimensional analysis of segregation increasingly straightforward, in Poland especially it is necessary to supplement quantitative analysis with qualitative research (interviews with experts and field observation: inventory and photography) in order to capture contemporary socio-spatial changes and growing residential micro-segregation because there is a lack of up-to-date statistical data on a scale allowing for an examination of segregation. Qualitative research also enables the investigation of segregation on a micro-scale (housing estates and residential buildings for which statistical data is not collected), and spatial isolation which is an exacerbating factor in residential segregation.

Our research is also a contribution to the currently developing body of comparative study into segregation in various socio-economic and institutional contexts. Our analysis points to the particular role of housing policy and its specific instruments in shaping residential segregation. In light of this, we have outlined the housing policy tools which have the greatest impact on segregation and have proposed recommendations for improving Poland's neglected housing policy. It seems, however, that in this field the role of experts is less important than that of decision-makers and their preferences, along with choices made in the political realm.