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THE SOCIO-SPATIAL STRUCTURE OF POST-SOCIALIST ŁÓDŹ, POLAND. RESULTS OF NATIONAL CENSUS 2002

ABSTRACT. Growing social and spatial segregation, stemming from the mounting social polarization, is not only limited to Western cities. Currently, it is widely acknowledged that the aforementioned processes have become a salient feature of post-socialist cities and regions. Unfortunately, available data portraying this phenomenon in the CEE states were primarily gathered in capital areas. Exposed to social and economic globalization from the early stages of political transformation, those urban settings constitute rapidly developing hubs of growth, significantly differing from 'second-tier' cities. This contribution seeks to examine if the processes shaping the social and urban fabric of global cities and post-socialist metropolises are comprehensible in the residential structure of Łódź. Deploying quantitative methods the paper presents a detailed spatial analysis of Łódź's socio-spatial differentiations. The synthetic typology and the resulting model of residential structure summarize the contribution.

KEY WORDS: social polarization, dual city, Łódź.

INTRODUCTION

As the process of globalization has deepened, so has urban scholars' attention to its socio-spatial effects – issues such as economic restructuring or transformation, and their influence on the residential structure of a city operating within a post-Fordist, neo-liberal, global capitalism. The purpose of this contribution is to trace the effects of the political transformation on the formation of the socio-spatial structure of Łódź.

Currently, a growing number of theoretical realizations (for recent reviews see Brenner, 2000, 2001; Yeung, 2005) stress the crucial role of space (or rather

time-space) as an active component affecting society. This is an important premise underlining the importance of place and its influence on socio-economic processes. It means that neither globalization nor transformation exert ubiquitous effects, therefore leaving local, spatial-temporal contexts to do the explaining. Local context – a product of dialectical, scalar relations (cf. Marston et al. 2005) – plays a significant role in the development of segregation processes.

Hence, examination of a spatial unit requires an extended time-frame, highlighting how former periods of development influence the current situation. These claims are of major importance in contemporary urban studies dominated by *paradigmatic* and *iconic* cities. According to Amin and Graham (1997), a substantial share of the current academic discourse on the development and evolution of internal structures of the city stems from references to *paradigmatic* cities namely: Los Angeles and Chicago. Moreover, due to the growing number of publications concerning exclusively their issues, there are certain cities that become icons (Castree, 2005). Thus, bearing in mind the idiosyncrasy of every urban setting, elucidation of its social segregation patterns requires a reflective conceptualization while referring to explanations provided by the studies from *paradigmatic (iconic)* cities. In other words, claims stemming from observations in *paradigmatic cities* should rather be treated as general guidelines indicating contingent explanatory factors and emerging spatial patterns.

Furthermore, the discourse on social and spatial segregation in urban geography of the time is strongly influenced by the *'dual city'* metaphor. This concept, popularized by Sassen (1991) and Mollenkopf and Castells (1991), describes present polarization tendencies of urban societies. In particular, it demonstrates the transformation of social strata from an egg-like to an hourglass shape. In the spatial realm, *'dual city'* refers to growing social disparities emerging in close proximity (Lisowski, 2000). Although, this model of the new order of urban societies was argued to adequately characterize *'global cities'*: New York, London, Tokyo (cf. Sassen, 1991, 1994), it has already been widely adopted to describe emerging patterns of socio-spatial divisions in urban settings occupying lower layers of the global urban hierarchy. Even though some arguments heralded by the *'dual city'* scholars were criticized in the European context (cf. Hamnett, 1994, 1998), the contemporary growing fragmentation of the urban social fabric, accompanied by increasing income disparities, is widely acknowledged (Fainstein and Harloe, 1992; Musterd and Ostendorf, 1998).

The aforementioned trends have already been registered in post-socialist cities (cf. Węcławowicz, 1997, 1998). Unfortunately, studies on CEE cities, predominantly theoretical realizations devoid of a concrete, empirical argumentation have almost exclusively been limited to regional *iconic* cities: the capitals of CEE states. Predominantly, the emerging patterns of socio-spatial polarization in Warsaw,

Prague, Berlin, Budapest, and Tallinn have been elaborated (cf. Węcławowicz, 1998; Sykora, 1999a, 1999b, 2005; Kovacs, 1998; Ruoppila and Kährik, 2003). Results of empirical analyses conducted in non-capital cities still remain scarce. Among the existing ones and portraying exclusively Polish milieux one might mention realizations by Kotus (2006), Węcławowicz (1992, 2001) and Zborowski (2005). Therefore, there still is a substantial, empirical gap to be filled in and concerning cities lying lower in global, national urban hierarchies.

PROCESSES MOULDING THE RESIDENTIAL STRUCTURE OF A POST-SOCIALIST CITY

The aim of this paper is not to present a review of the post-socialist, urban literature (for reviews see: Andrusz et. al. 1996; Enyedi, 1998; Kovacs, 2000; Jażdżewska, 2000, 2001; Słodczyk, 2004), but to identify contributory factors in the creation of new socio-spatial disparities. It is widely acknowledged that the socio-economic transformation of post-socialist economies, resulting in the return of the land and housing market mechanisms paralleled by the withdrawal of the welfare-state principals, triggered the process of socio-spatial polarization. According to Węcławowicz (1998), the latter phenomenon – referring to the growing differences in standards of living, shopping habits, political preferences, etc. – comprises several formative processes such as: suburbanization, gentrification, segregation (social exclusion) and separation (social inclusion). All of them have been well known in Western cities since the mid-1960s but are new phenomena in the former socialist urban regions (Matlovič et. al. 2001).

Suburbanization, understood to mean the faster growth of population in an urban periphery than in an urban centre, gives rise to fundamental socio-spatial changes (Jakóbczyk-Gryszkiewicz, 2005). As a result of this process people of a higher socio-material status settle in the rural areas within an urban region. This in turn leads to growing social disparities between the autochthonous population and newcomers. Although suburbanization was already noticed in the early 1980s (Jakóbczyk-Gryszkiewicz, 1988), it has been substantially accelerated by the transformation process. The move of inhabitants from an urban-core to a periphery has been argued to be a salient feature of capital regions (cf. Kok, Kovács, 1999; Ruoppila, Kährik, 2003; Sýkora, 1999a; Tammaru, 2001). However, medium-sized post-socialist cities have recently witnessed this phenomenon too (Kotus, 2006; Ott, 2001; Zathey, 2003). Newcomers usually move to detached or semi-detached houses, and as a result there is a marked tendency for fenced and well protected establishments to become a prominent feature of the suburban landscape.

In contrast to the aforementioned process of suburbanization, gentrification primarily concerns urban centres and it may be defined as the restoration and

improvement of an area in order to make it suitable for people of a higher social status than those who lived there before (Lisowski, 1999). This global process, reinforced by the neo-liberal regulations and the international flows of people and capital, has also been actively supported by local self-governments (Atkinson and Bridge, 2005). Similarly, it has been argued suburbanization and gentrification characterize capital cities (Budapest, Moscow, Prague, Warsaw) (Kovács, 1998; Sýkora, 2005; Węcławowicz, 1998). However, according to Kotus (2006), Sailer-Fliege (1999), Zborowski (2005), central districts of medium-sized cities have become gradually gentrified too. Concerning the spatial extent of this phenomenon, it could be reasonably argued that, in the post-socialist context, it takes the form of oases of wealth in the midst of spaces of physical and social decay (cf. Sýkora, 2005). In other words, gentrification in post-socialist cities is spatially limited to a plot or a block, restoration of a whole district remains a song of tomorrow.

Yet, it has to borne in mind that the term 'gentrification' is not new. It was introduced by Ruth Glass in 1964 to describe adequately the process of succession to workers' flats by upper-middle class people in the inner-London districts (after Atkinson, 2005). However, during its 40 years in the international literature on urban issues the meaning of 'gentrification' has evolved. The evolution resulted in the addition of a new substance to the original core. In consequence, urban scholars who refer to the former rural areas located within the city limits or in the immediate neighbourhood and undergoing the process of restoration and a social change, use the concept rural gentrification (cf. Phillips, 2005). Therefore, in the face of contingent problems in distinguishing rural gentrification from suburbanization, their salient features need to be highlighted. Suffice it to quote Matlovič et. al. (2001) who argue *greenfield* residential development to be the fundamental feature of suburbanization, whereas *brownfield* activities denote rural gentrification. Finally, the presence of this process (rural gentrification) has already been reported in the post-socialist context (cf. Sýkora, 1999a; Marcińczak, 2005).

Well known from Western cities and referring to the two opposite poles of socio-spatial polarization, segregation (social exclusion) and separation (social inclusion) have become pronounced features of post-socialist urban regions (Grotowska-Leder, 2001; Węcławowicz, 2001). In the operational sense, spatial segregation and separation exist when some areas show an over-representation and other areas an under-representation of members of a group (Kemepen and Özüekren, 1998). According to Musterd and Ostendorf (1998), segregation (social exclusion) may be defined as the involuntary, residential separation of groups within a broader population. Principles of segregation stem from one's socio-material status, mother tongue, race or religious beliefs. It is widely acknowledged that social exclusion is to some degree attributable to long-term

unemployment, a disadvantaged position on the housing market, difficulties in socio-cultural assimilation, and a diminishing involvement in public affairs. Hence, enclaves of poverty and ethnic ghettos constitute an invariable, spatial by-product of the discussed process. Furthermore, in the post-socialist context the phenomenon of segregation is paralleled by the downgrading of socio-material status. According to Matlovič et. al. (2001), the latter process implies the dwindling social status of a district without a population change. Although some scholars pointed to the high-rise housing estates as the future slums of the 21st century (cf. Szelényi, 1996), recent studies seem to question this opinion. One should not overlook the fact that, so far, only the blocks inhabited by an older population (pensioners) suffered from impoverishment (Węcławowicz, 1998), whereas similar areas with a younger population, active on the labour market, have maintained their status (cf. Ruoppila and Kährik, 2003).

In contrast to segregation (social exclusion), social inclusion implies voluntary separation of the wealthy social strata (the elite) from the rest of the inhabitants. As the by-product of this process, one might mention fortified neighbourhoods and urban citadels well known from the US context and currently flourishing in Europe, South America, and South-Eastern Asia: the private cities, (cf. Dear, 1990; Dear and Flusty, 1998; Kotus 2006). According to Castells (2002), well-protected residential establishments are typical for the new post-modern world order in which the elite, having nothing in common with inhabitants outside a fence, live in the space of global flows. Finally, it should be highlighted that segregation and separation might be labelled as the fundamental processes often resulting from the afore-mentioned phenomena of gentrification and suburbanization.

Describing the internal spatial structure of a post-socialist city, similarly to the socialist period, analogies with the classic models – especially the wedge like model and the concentric model – might be argued (cf. Bontje, 2004; Kovács, 1998; Ott, 2001; Ruoppila and Kährik, 2003; Sailer-Fliege, 1999; Sýkora, 1999a, 1999b; Zborowski, 2005). According to Liszewski (2001), one might distinguish the following zones: the centre, the inner-city, the outer-city, and the suburbs. The recent empirical analysis conducted in Łódź, relying on census data and covering the transformation period (years 1988 and 2002), revealed the macro-scale stability of the distinguished wedges and zones (cf. Marcińczak, 2006).

DATA AND METHODS

This contribution relys exclusively on the data provided by National Census 2002. For the purpose of a detailed spatial analysis the division of the city into 722 statistical units was deployed. Bearing in mind the total area of Łódź – approximately 300 square kilometres – the adopted spatial resolution provides one with a good

insight into the socio-spatial micro-scale of the city. In particular, variables referring to one's education level, occupation, age, and household structure, as well as those covering the issues of housing were chosen. Unfortunately, relying on census data creates a danger of obtaining a spurious result. In other words, censuses often fail to include all of the residents, thus providing incomplete information on population and housing. Therefore, results of the spatial analysis presented in the subsequent section should be treated rather as an approximation of the actual state of the socio-spatial differentiation of Łódź.

Harshly criticized in social geography, quantitative methods still have much to offer to urban scholars, however. It has to be borne in mind that deploying quantitative methods one rather receives a sophisticated description of an examined phenomenon rather than an explanation. Thus, investigating urban social-ecology results of spatial analysis constituting a two-dimensional synthetic picture of the residential mosaic might be perceived as the first step towards a more concrete research on individual habits, etc. To put it more simply, quantitative methods – i.e. those developed within the framework of factorial ecology (cf. Johnston, 1979) – still represent an essential tool capable of an adequate description of the complicated urban milieux and facilitating further research. Furthermore, techniques and methods based on multivariate statistics are still in use in urban social studies (cf. Pacione, 1997, Shearmur and Charron, 2004; Sit, 1999).

This study utilizes the well-known chain of classificatory algorithms (Fig. 1) that was introduced as early as in the 1970s. However, avoiding some of the flaws stemming from the employment of principal component analysis (PCA) to aggregated data from spatial units (cf. Johnston, 1984), the aforementioned technique was replaced with a more flexible tool: multidimensional scaling (MDS). This technique was developed as early as in the 1950s. However, due to the limited computational capacities of computers MDS usage was restricted until the end of the 20th century: old algorithms, in conjunction with the available hardware, were incapable of processing vast arrays of data. The beginning of the 21st century witnessed an introduction of new algorithms able to deal with thousands of objects – the PROXSCAL algorithm available in the SPSS package can illustrate this. The main rationale underpinning MDS is the presumption that every complicated system has a structure capable of portraying the system's properties in a simpler and regular arrangement (Nijkamp and Voogd, 1984). Moreover, MDS enables graphical, usually two- or three-dimensional, analysis of the distinguished structure. The mathematical principles of MDS have been described in a number of publications (cf. Coxon and Jones, 1980; Kruskal, 1964).

Deployment of the above classificatory algorithms led to the construction of the synthetic socio-spatial typology of Łódź. In particular, owing to MDS,

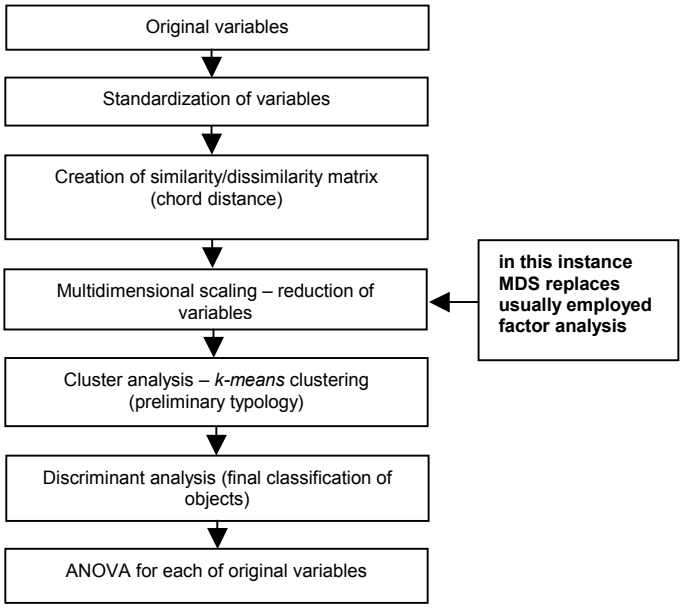

Fig. 1. Chain of the classification algorithms

Source: Author's elaboration.

37 previously collinear original variables were replaced with three orthogonal dimensions (meta-variables). This procedure, in turn, assures further classificatory procedures an unhampered course. Finally, eight separate groups were distinguished, and the adequacy of the division was tested by discriminant analysis and ANOVA (analysis of variance). Therefore, the final distribution of statistical units among the groups fulfilled the principle requirements of a proper classification: the internal variance of a group was minimal, whereas the between-group variance was maximal.

THE SOCIAL AREAS OF ŁÓDŹ

The combination of multivariate and univariate analyses employed offered a valuable insight into the socio-spatial characteristics of Łódź. In this research, the attention was focused on derivation of a general taxonomy of the city's social structure. The average value of every indicator in each of the final clusters is shown in Table 1, whereas the spatial manifestation of the eight groups is mapped in Figure 2. The defining characteristics of each of the socio-spatial clusters in the final classification were as follows:

Table 1. Mean values of variables in each group

Variable	Mean values								
	Group 1	*Group* 2	*Group* 3	*Group* 4	*Group* 5	*Group* 6	*Group* 7	*Group* 8	Łódź
Dwellings with running water as %	96.66	99.41	79.49	96.95	99.15	90.21	98.85	86.94	96.28
Dwellings with central heating as %	28.76	93.17	22.02	77.88	97.15	68.92	96.42	69.47	74.84
Dwellings with gas as %	69.10	94.35	17.23	74.94	96.14	64.97	94.78	42.59	79.80
Unemployment rate	32.41	21.99	35.22	20.68	17.93	21.73	.18.07	19.12	23.13
Population with higher education as %	7.79	13.90	5.38	19.47	19.11	16.37	17.11	14.62	14.08
Population with secondary education as %	32.31	40.12	29.00	40.02	43.67	38.01	44.39	35.23	38.77
Population with vocational education as %	22.74	15.34	24.40	14.70	14.66	15.89	15.95	17.42	17.28
Population with primary education as %	33.89	27.46	37.37	23.41	20.68	26.89	20.75	29.40	27.12
Occupation: directors, higher clerks as %	5.00	6.77	4.76	8.75	9.12	11.11	9.25	11.66	7.72
Occupation: Specialists as %	11.31	19.12	8.12	23.12	22.44	18.73	20.08	16.58	17.80
Occupation: Middle personnel as %	12.46	16.70	11.37	16.13	18.19	15.12	18.07	13.08	15.67
Occupation: Office workers as %	9.02	10.49	8.33	9.36	10.37	8.00	10.74	6.74	9.64
Occupation: Personal services workers, sellers as %	15.27	13.33	15.63	12.06	12.30	12.37	12.17	11.93	13.28
Occupation: Skilled workers as %	33.31	25.53	37.00	22.68	21.06	26.00	23.18	26.67	26.44
Occupation: Farmers as %	0.39	0.28	1.06	0.41	0.27	2.07	0.43	6.14	0.91
Occupation: Menial workers as %	12.16	7.18	13.14	6.43	5.72	6.20	5.77	6.39	7.94
Residents aged 0-14 as %	25.14	20.66	27.53	19.25	19.05	28.44	20.73	28.52	22.45
Residents aged 15-24 as %	15.86	10.87	16.11	12.92	10.72	14.32	11.11	15.02	12.65
Residents aged 25-44 as %	17.04	12.01	15.67	16.79	12.75	14.28	19.28	15.93	14.65
Residents aged 45-64 as %	26.58	26.86	26.79	29.44	31.80	26.66	31.25	26.61	28.29
Residents aged 65< as %	17.65	21.71	13.94	11.91	17.08	15.42	10.49	14.97	17.27
One-person households as %	39.33	41.01	39.50	33.83	32.93	32.53	24.26	24.99	35.38
Two-person households as %	24.32	31.83	23.64	26.30	31.34	26.61	26.11	24.15	28.23
Three-four person households as %	31.81	25.09	32.32	36.42	33.30	36.03	46.19	42.46	32.82
Five(and more)-person households as %	4.54	2.07	4.54	3.45	2.44	4.83	3.44	8.40	3.56
Dwellings constructed before 1944 as %	88.23	11.56	87.59	35.22	4.19	39.43	6.15	31.85	31.86
Dwellings constructed from 1945 to 1970 as %	8.35	78.16	7.98	7.07	4.60	34.95	2.01	25.26	30.04
Dwellings constructed from 1971 to 1978 as %	1.70	8.45	1.15	26.77	82.35	5.76	4.41	10.38	21.78

Dwellings constructed from 1979 to 1988 as %	0.85	1.18	1.87	12.74	4.24	6.09	69.11	12.95	10.16
Dwellings constructed from 1989 to 2002 as %	0.87	0.65	1.42	18.20	4.62	13.77	18.32	19.56	6.17
Private dwellings as %	16.47	3.06	39.36	14.32	2.48	51.87	3.09	80.79	16.23
Cooperative dwellings as %	1.14	29.82	0.33	30.29	64.38	4.66	68.04	1.78	30.11
Municipal dwellings as %	36.61	5.14	41.79	19.93	2.55	17.51	9.81	9.59	14.46
'Common'-ownership dwellings as %	45.78	61.98	18.52	35.46	30.59	25.96	19.05	7.84	39.20
Usable floor space in square meters per one inhabitant	19.48	19.45	17.32	21.50	20.01	27.23	20.05	30.17	20.83

Source: Author

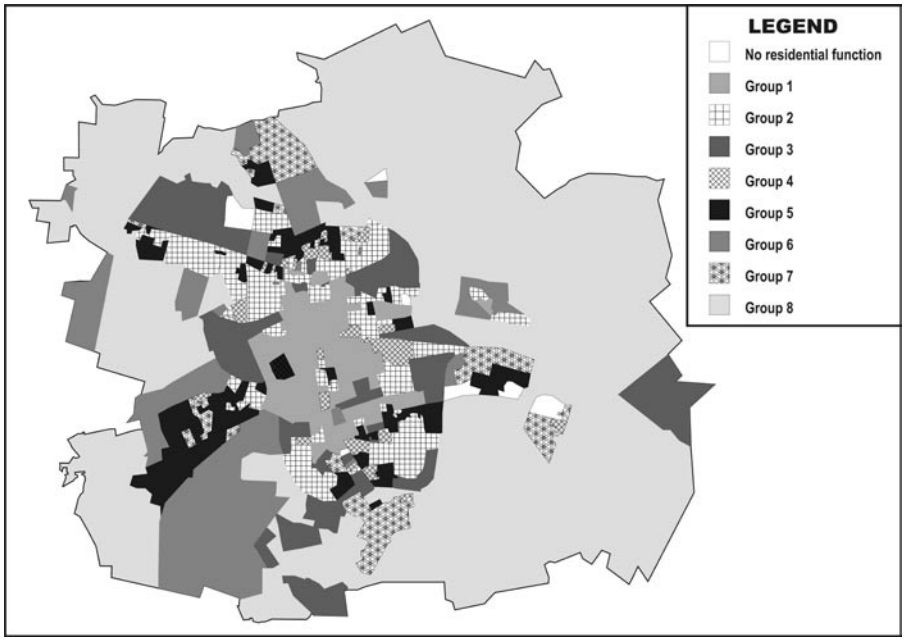

Fig. 2. Socio-spatial classification of the statistical units of Łódź

Source: Author

Group 1: Low-class households in the old city core

The statistical units in this group are concentrated in the inner-city – the old city core dating back to the 19th century. Housing is predominantly either state-owned (36.6%) or 'common' (45.8%). The latter type refers to the ownership of a flat located in a building that belongs to, for example, municipality. The level

of housing-cooperative ownership (1.1%) is among the lowest in the city. Space standards are rather low with the amount of floor space per occupant below the city's average. The standard of amenity provision, apart from heating (28.8%), is modest. The population mainly comprises low social strata. The unemployment rate (32.4)% is the second highest in the city. The occupational structure is dominated by the low-wage professions, mostly industrial workers (33.3%), personal services workers and sellers (15.3%), and menial workers (12.7%). The demographic profile exhibits a high proportion of one-person households (39.3%) and residents aged 65 or more (17.6%), with an above average share of children under 14 years (25.1%). These statistical units comprise a virtually contiguous block in the inner-city. Moreover, alluding to the processes reshaping social space of a post-socialist city, it is sufficient to quote the case from this group, illustrated in Figure 3. From the figure below we can conclude that gentrification has been limited to a plot or a series of plots, set in the midst of the decaying area. In other words, it seems reasonable to assume that the inner city is witnessing the process of 'pocket' or 'facade' gentrification rather than the fully-fledged phenomenon leading to social and physical revitalization of whole districts as takes place in Western Europe or North America.

Group 2: Middle-class households in old socialist housing (1945–70)

Housing consists mainly of blocks of flats raised at the beginning of the socialist period (1945–70). The amount of floor space per occupant (19.4%) is below the city average. Dwellings are usually well provided with basic amenities. Accommodation has been largely privatized and currently the 'common' ownership (62%) prevails. Demographically there is the highest incidence of persons over 65 years of age (22%) and one-person households (41%). The prevalence of an old population in old housing stock supports the claims indicating petrifaction of the social milieu of the socialist housing stock. Incidence of children under 14 years (20.6%) was rather low. The economically active population were engaged in professional activities such as professionals (19.1%) and technicians (17%); however, the proportion of industrial workers (25%) was also significant. The unemployment rate is below the city average. Spatially such units form two semicircular elements adjunct to the old city core, and a wedge in the north-eastern part of the outer city.

Group 3: Low-class households in amenity-deficient housing

The statistical units belonging to this group are characterized by old housing stock constructed before 1944 (87.6%), with a below average provision of amenities: more than 20% of dwellings are not connected to the mains water supply, 22% have access to heating. Space standards are low with the amount of

floor space per occupant the lowest in the city. Housing is mainly state owned (42%). This group's social fabric is predominantly represented by low social strata. The unemployment rate (35.2%) is the highest in the city. The occupation structure reflects the education structure and indicates mostly the blue-collar professions such as industrial workers (37%) and menial workers (13.1%). The demographic profile reveals the highest share of one-person households (39.5%). Generally, the socio-demographic profile represents a dependent low- to underclass population. Figure 2 indicates these neighbourhoods were concentrated in parts of the inner and outer city, functionally representing industrial areas from the mid-socialist period. In other words, they comprise an old, former suburban, housing stock juxtaposed with industrial plots.

Group 4: Middle-class households in mixed housing

The units in this group are characterized by a mixed housing stock constructed either before the Second World War, or in the late socialist period (1970–88). Referring to the latter type of housing, exclusively small complexes of high-rise apartments or blocks of flats were raised. Housing is predominantly owned by housing-cooperatives (30.3%) or is 'common' (35.5%). Accommodation is slightly above average in terms of floor space and mostly well provided with amenities. It has to be highlighted that living standards are better in blocks of flats than in tenement houses. The structure of education is characterized by a high incidence of university graduates (19.5% - the highest in Łódź). The occupational structure is mixed with the majority employed in the white-collar sector (57%). The age structure is well balanced and the unemployment rate is below the city average. These units exhibit point locations, primarily forming nuclei within the inner-city.

Group 5: Middle-class households in new socialist housing (1970–88)

The units in this cluster are characterized by a housing stock predominantly constructed in the late socialist period (1970–88), and taking the form of large-scale high-rise residential estates. Some of them provide accommodation for 100,000 people. Much of the housing is provided by housing cooperatives (64.4%). Space standards, in terms of floor space per occupant, are slightly below the city average, whereas provision of facilities including heating, mains water supply and natural gas all above average. The demographic profile exhibits a high proportion of residents aged 45–65 years (31.8% – the highest in the city). The education structure of the population reveals an above than average proportion of university graduates (19.1%) and those who completed a secondary school (39.2%). The level of unemployment is the lowest in the city (17.9%). The economically active population were mainly engaged in white-collar activities with a significant proportion employed as professionals (22.4%) or technicians and middle-personnel

(18.2%). Spatially such units are to be found within the outer-city, and they form wedges stretching along the city's main communication corridors.

Group 6: Upper- and middle-class households in private one-family, detached and terraced housing

The statistical units classified to this group contained an above average proportion of one-family housing constructed either before 1944, or from the early to the mid socialist period (until 1970). Housing is predominantly owner-occupied (51.9%). Space standards are above the city average, while amenities in terms of heating and natural gas provision is below the city average. Demographically, there is a higher than average proportion of children (28.4%), whereas the proportion of residents aged 65 years or more is correspondingly lower than average (15.4%). The household structure is characterized by a preponderance of 'two-generation' families (three-four persons) (36%). The economically active population comprises a high proportion of managers (11.1%), professionals (18.8%), and an above average proportion in agriculture (2.1%). These areas were located primarily in the outer-city and the peripheral zone.

Group 7: Middle- and upper-class households in late socialist and post-socialist housing

The units in this group were characterized by a predominance of newly raised (after 1979) apartment blocks (87.4%). Like in group 5, the majority of the housing is provided by housing cooperatives (68%). Space standards and amenity provision are above the average values for housing in group 5. The major distinction between this group and the units in group 5 centred on the demographic profile. Family structure reflected a young demographic profile with the highest proportion in the city of 'full' families (46.2%) and with the lowest level of one-person households (24.3%). The unemployment rate was the lowest in the city. White-collar professions (almost 60%) mainly typified the occupational structure. Figure 2 indicates these units were located in the outer-city, where they formed wedges often adjacent to group 5.

Group 8: Socially mixed peripheral zone

One-family housing – mostly old farmhouses and newly constructed villas – predominantly characterize this group. Space standards were the highest in the city, whereas amenities, especially heating and natural gas, were deficient. Accommodation is primarily owner-occupied (80.8%) with an insignificant proportion (9.6%) of state housing. The occupation structure exhibits a particularly intriguing pattern. On the one hand, the highest proportion in the city of managers (11.7%) was noted in this group, on the other hand, these units

were characterized by the highest incidence of agricultural households (6.4%). The share of large families (more than five persons) (8.4%) was the highest in the

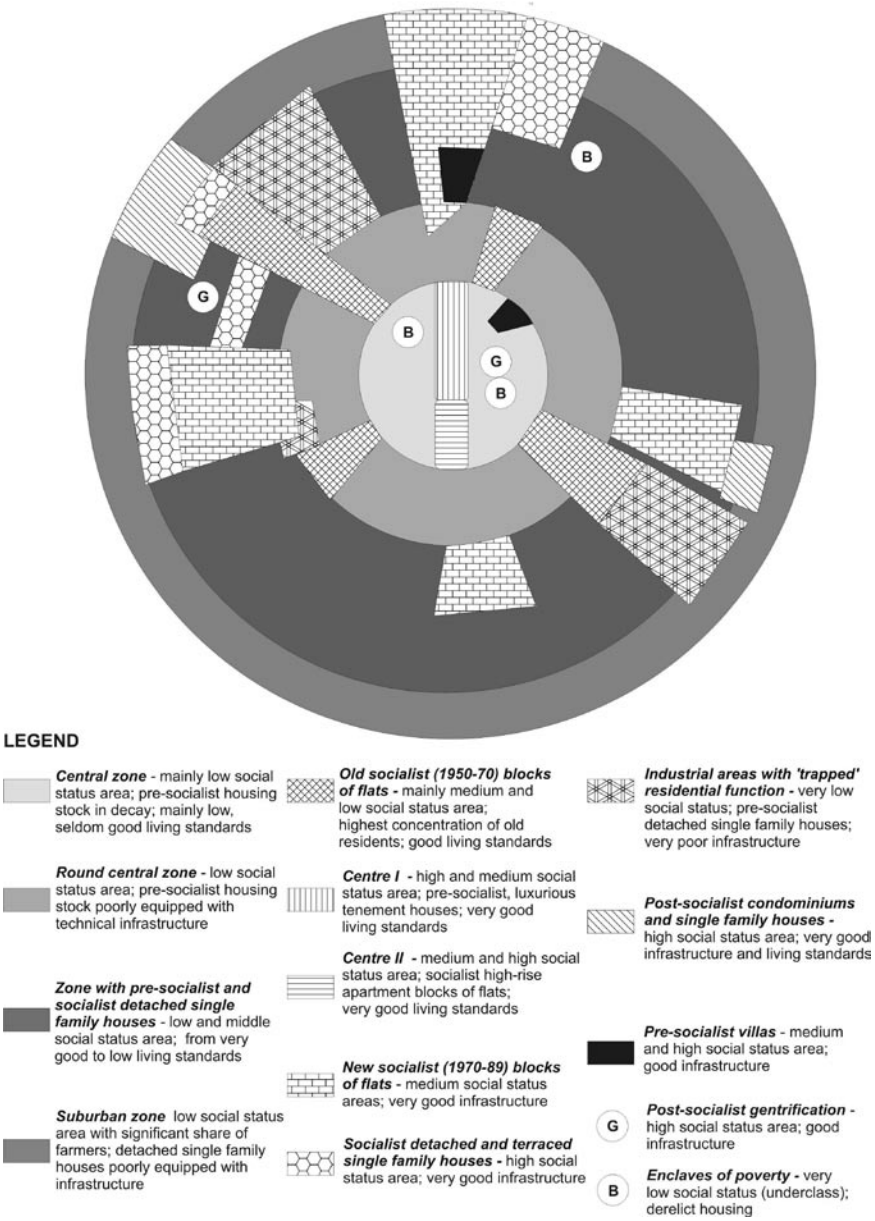

Fig. 3. Model of the socio-spatial structure of post-socialist Łódź

Source: Author's elaboration.

city. Generally, this group witnessed similar social polarization trends to those reported in the city centre. Spatially these units are to be found in the peripheral zone that was merged with Łódź in 1988.

As has been mapped in Figure 2, despite maintaining a legible mosaic pattern, the socio-spatial structure of contemporary Łódź reflects the macro order of social differentiations. In other words, although statistical units belonging to particular groups are often juxtaposed, on a general level it is possible to employ the elements of 'classical' models (especially wedges and zones) to adequately describe the main features of the city's residential structure. The model spatial layout of Łódź's social areas is presented in Figure 3. Overall, on the basis of the above figure it is possible to conclude that the further from the city centre the higher the social status of inhabitants.

CONCLUSIONS

The socio-spatial structure of Łódź reflects the dualistic development of the Polish economy of the post-war era. During the socialist period the inner-city remained devoid of any concrete actions aimed at restoration and regeneration of the pre-war housing stock. Resources were primarily utilized to develop large scale high-rise housing estates and industrial sites located in the outer city. Hence, more than 50 years of socialism meant a steady social and physical decline of central areas. The higher and medium social classes were gradually moving to newly constructed blocks of flats and single family houses located outside the old city core.

During the post-socialist stage Łódź, like other European post-socialist cities, has witnessed a radical change in the arrangement of its social fabric (Marcińczak, 2006). Put crudely, the most evident signs of the emerging separation and segregation have been noticed in the city centre, the central zone and the round central zone. On the one hand, the central parts of the inner-city have been subjected to the initial stages of gentrification, leading in turn to growing separation of the wealthy social strata. This particular process, so far, has been predominantly limited either to the fronts of luxurious tenement houses located along the main street (façade gentrification), or to whole city plots (pocket gentrification). Therefore, the reported scale of this process is not directly comparable to what is known from Western cities. Parallel to selective regeneration, vast amounts of the pre-war housing stock have been deteriorating and eventually become underclass ghettos. Both segregation and separation have taken place in close proximity leading to growing fragmentation of the urban fabric.

Outer and peripheral areas of Łódź experienced social change too. In those locations the following processes have been noticed: regress of social status, rural

gentrification and suburbanization. The first process characterizes old socialist blocks of flats inhabited by a substantial proportion of pensioners who are often labelled the 'losers' of the transformation. The 'new' socialist housing stock, by contrast, maintained its social status. Former pre-war farm houses were often subjected to rural gentrification: they were either reconstructed, or demolished and replaced with single family houses. Those peripheral areas of Łódź that are characterized by a well developed communication infrastructure have witnessed the growing process of suburbanization.

Confronting the results from post-socialist Łódź with results of studies carried out in Western cities and CEE capitals it is hard to escape the obvious conclusion: the urban fabric of a second-tier city is shaped (and reshaped) by the same processes. However, the resulting socio-spatial outcome differs and its scale depends on the level of economic prosperity and emerging global-local connections. To put it bluntly, the more a city is able to attract global flows of people and capital, the more fragmented and polarized it become.

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