

A PROPOSAL FOR A NEW ADMINISTRATIVE-TERRITORIAL OUTLINE OF BUCHAREST-BASED IN-CITY DISCONTINUITIES

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Abstract

Urban development represents a permanent challenge for space organization in large cities. Space organization is to be achieved by observing the homogeneity and specificity of dwelling cores (urban quarters) as premises for urban structure functionality and viability. The administrative boundaries should overlap discontinuity areas in the city, which cause divergent population flows. The radial-concentric type morphostructure of Bucharest, Romania's capital-city, is based on the sectorial model of six administrative sectors, in this case. Each sector has both central and peripheral zones, with sharper inter-sectorial than intra-sectorial disparities. Massive industrialization and urbanization in the socialist period led to the development of the housing stock and the individualization of quarter centers as secondary polarization cores in the city. This situation calls for revisiting the current administrative boundaries in the light of city discontinuities and establishing some multi-core sectors by encompassing homogeneous quarters in terms of functionality, specificity, and social-urbanistic problems, so that administrative and local development policies could better match the concrete situations on the ground.

Keywords: urban morphostructure, administrative sectors, quarter centers, discontinuities, functionality, Bucharest.

1. Introduction. Targets

Urban expansion calls for an ever more complex management of city areas. Large cities used to expand by encompassing the periurban countryside: the polarized areas would gradually become integrated, the urban area steadily expanding (Nicolae, 2002). Efficient administration means efficient management, the city being divided in all types of competence restrictions (Navarro-Yáñez and Rodríguez-García, 2015).

As a component of administrative-territorial organization, the sectorial delimitation of the city implies individualizing autonomous urban territorial subunits, having their own budget and property, assigned exclusive competences, as well as competences shared with and delegated by the hierarchically higher administrative authority (Bertrand, 1974). A laborious process, indeed, because it implies individualizing homogeneous areas in agreement with the specificity of each urban fabric, so that intra-sectorial disparities be smaller than inter-sectorial ones. Therefore, the urban morphostructure is but a landmark of urban space management (Bastie and Dézert, 1980); it is a necessary, yet not a sufficient one, because management should be aimed at making the urban space functional, based on in-depth and detailed knowledge of the territory and of the continuous changes taking place therein (Hall, 1998).

That is why, the present study, focusing on Romania's capital-city, aims at offering concrete solutions on two aspects: (1) delimitation of the city sectors, and (2) correction of the city boundaries in accordance with the current particularities of the urban space (Kennedy, 2016).

2. Why this study?

The present sectorial pattern of Bucharest city is nearly forty years old¹ having been devised within the economic and social context of the 1970s, the time of oversized industrialization and construction of big residential quarters located at the city periphery (Erdeli *et al.*, 2000). These residential areas, consisting of collective blocks-of-flats, lay alongside some Bucharest entrance axes (Militari and Drumul Taberei – Ghencea in the west; Pantelimon and Titan in the east; Berceni – Progresul in the south; Colentina in the north-east, etc.), corresponding to the big industrial estates that formed the industry-dominated complex peripheral zone (Ianoş and Heller, 2006). However, following post-communist deindustrialization, this area became the most vulnerable urban category, subsequently turned into residential mini-quarters, or commercial and services areas. New spatial relations emerged, the old quarters (insufficiently well delimited) were partly dismantled. New discontinuity areas, corresponding to the disused industrial structures would crop up.

On the other hand, new demographic convergence cores, overlapping the residential and services areas, largely built after 2000, emerged. The question is how viable

¹ Established by Decree no. 284/1979, of the State Council of the Socialist Republic of Romania, published in the Official Bulletin no. 69/1979.

the current administrative boundaries (which should coincide with divergent areas of demographic flows) can prevent dividing some unitary residential zones. A first correction to inter-sectorial boundaries was already made in July 2011; it involved several urban areas (in the central zone was Unirii Square and the square facing the National Theatre; Ghencea Continuance, Giulești Stadium area, Crângași Road and Grant Bridge crossing).

In addition, one should recall the dysfunctions caused by the huge pressure put on the local administrative institutions, bearing in mind that the six administrative sectors, Bucharest is divided in, are actually 'cities in city' (Table 1), the demographic size of some of them exceeding even that of the second-ranking town in the national urban hierarchy².

Table 1: Bucharest current administrative sectors

Sector	Area (km ²)	Population	Density (pop./km ²)
I	67.55	246,646	3,651.31
II	30.23	374,647	12,393.22
III	32.77	473,498	14,449.13
IV	32.25	321,763	9,977.15
V	28.47	298,816	10,495.82
VI	36.90	390,774	10,590.08
Average	38.0283	351,024	9,230.59
Bucharest	228.17	2,106,144	

Source: Population of Romania by localities on January 1, 2016 (National Institute of Statistics, 2016)

3. Methodology

Romania's capital-city has 32 residential quarters (Ghinea, 1996) which, though not sufficiently clearly-delimited in space are well-individualized mentally nevertheless. Some of these quarters, very much developed between 1970 and 1980, go beyond sectorial boundaries.

After 1990, other peripheral residential structures were added, some of them extending over time, came to be of sector-size. They are situated on the grounds of certain Bucharest-limitrophe administrative-territorial units, being closely related to the city through their human flows. Hence, the urban-periurban administrative boundaries are simply a formality.

The number of quarters is far too great to become lower-rank local territorial communities. However, they may associate (say, 3 or 4 quarters), and make up homogeneous sectors, including residential quarters of blocks-of-flats, villas, one-storey dwelling-houses, quarters with special social problems (Ferentari, Rahova, Giulești, etc.), largely dominated by industrial or services units. Therefore, discontinuity ar-

² Cluj-Napoca – 324,576 inhabitants (2011 Census).

eas in the built-up environment should be analyzed and individualized, because it is these very areas that determine the demographic and functional divergence cores and axes (Warf, 2015).

According to Harris and Ullman (1945), the urban quarters acquired an individual character along some communication thoroughfares, or in-between them, thus looking like multiple cores, diverging from the sectorial administrative-territorial organization (Hoyt, 1933), which follow the radial-concentric pattern of urban-morpho-structure (Bailly, 1973; Ianoş, 1987).

The heterogeneous size and character of the sectors, due to their configuration (including both central and peripheral quarters) and the diversity of problems confronting them, impose a general fragmented development framework. Demographic growth has made the present Bucharest sectors (averaging 350,000 inhabitants) rank among the biggest urban administrative structures (Table 2).

Table 2: Demographic pressure on the administration of some European capitals

Capital-city	Total population (millions)	Year of census/ estimate	Rank in EU	City-area (km ²)	City organization	Average area/ administrative unit (km ²)	Average population/ administrative unit (millions)
Bucharest	2.10	2016	6	228.17	6 sectors	38	0.35
Paris	2.24	2015	5	105.4	20 arondissements	5.27	0.11
London	8.67	2015	1	1,572	33 boroughs	47.6	0.26
Rome	2.87	2016	4	1,285	15 municipia	85.6	0.19
Berlin	3.67	2016	2	891.7	12 bezirke	74.3	0.30
Madrid	3.14	2015	3	604.3	21 distritos	28.8	0.15
Brussels	1.19	2016	16	161.38	19 communes	8.49	0.06
Warsaw	1.75	2016	10	517.24	18 districts (dzielnica)	28.73	0.10
Prague	1.26	2015	14	496	22 districts (správní obvody)	22.5	0.06
Athens	0.66	2011	33	38.96	5 districts	7.7	0.132

Source: Statistics on European Cities (Eurostat, 2011-2016)

Moreover, the current sectorial boundaries divide the central area, which is homogeneous, while the decline of some industrial peripheral zones accounts for the disappearance of some polarizing cores in the new residential areas. Besides, the shortage of services units at the periphery makes large flows of population travel to the city-center, hence having a negative impact on the urban transport system at rush hours in particular (Rey, 1998).

The complex study of mutations in the housing stock will be associated with the discontinuities occurring in the city, as a basis for tracing sectorial boundaries. In this way, a transition is made from the sector-type organization, that dates from

1929³, to the multi-core type, corresponding to the homogeneous urban areas. This pattern of the city-area administrative organization has successfully been implemented also in other European capitals (Paris, London, Brussels, Warsaw, Prague, Athens, Berlin, Madrid, etc.) (Figure 1), and it contributed to an increased efficiency of the local administration and reduced the demographic pressure on the administrative authorities (Table 2).

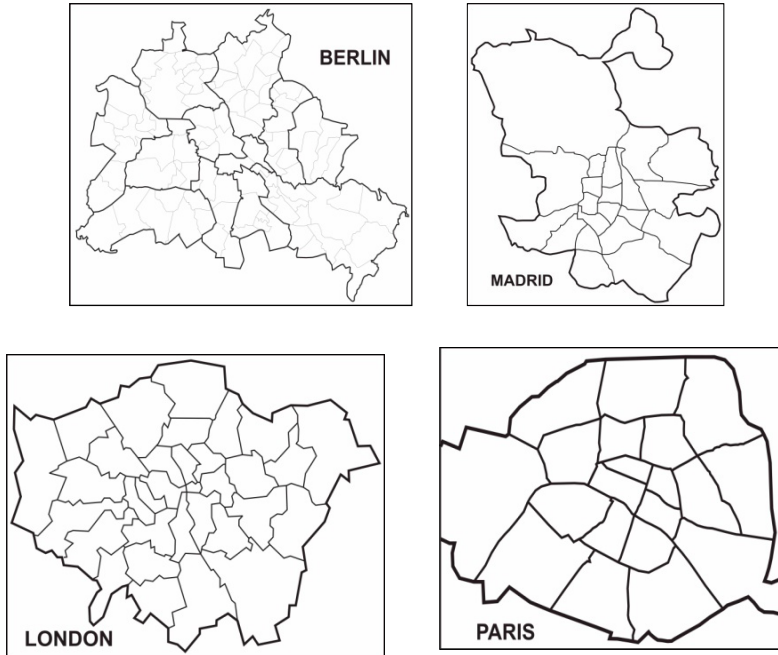


Figure 1: The multi-core pattern in the organization of four European capitals: Berlin, Madrid, London and Paris

Thus, the study methodology covers the following stages:

1. Discontinuity areas will be individualized in the built-up territory of the city based on demographic and economic-social data, as well as on satellite images and updated maps of in-city land-use areas.
2. A map of functional urban areas in terms of discontinuity will be elaborated, the respective areas being the groundwork for delimiting the proposed urban sectors.
3. The boundaries of the proposed urban sectors will be traced along the discontinuity areas which generate divergent population flows.

In this way, just as it is customary in other European capital-cities, quarter centers, which act as convergence areas of demographic flows, will also constitute the cores of the future urban quarters, the result being a multi-core-based organization pattern.

³ Law for the organization of the communal administration of the City of Bucharest.

4. Results and discussions

4.1. Individualized city discontinuities

4.1.1. Demographic and functional discontinuities

The distribution of population density within the city depends on the layout and particularities of the residential areas, on the one hand, and on the distribution of dwelling-houses, on the other (Ianoş and Guran, 1995). One may distinguish four types of residential areas: the central city-area with mixed functions: residential and services, the old residential area, the great residential area, and the new residential areas.

The central city-area, which overlaps the old commercial center, extends towards the Parliament Palace and Victoria Square. This area concentrates specific activities of national interest that make Bucharest a capital-city.

Types of services, especially overspecialized banking, as well as cultural and political-administrative activities are elements that attract daily important flows of townspeople and of arrivals from other parts of the country. Activities which make a capital-city functional overlap those of local interest, which did, and still do, 'suffocate' the area with great densities of population and convergent migrations (Ianoş, 1996). The huge urban 'remodeling' made in the area of the Parliament Palace and Dâmbovița River during the 1980s, destroyed 20% of the city's architectural heritage, eventually proving to be a massive North-Korean-style⁴ artificial make-up of buildings, in sharp contrast with what was specific to the area.

Perpetual post-revolutionary austerity has led to the degradation of unfinished constructions and the failure of functionally managing the vast empty grounds left by massive demolitions. In this way, the largest zone of demographic discontinuity in the center of Bucharest, stretching up from Dâmbovița River and the empty grounds afferent to it, became a dismantled residential zone. The administrative and financial-banking structures, raised here, did not succeed in becoming polarizing cores capable to determine converging demographic flows (Mitrică *et al.*, 2017).

The old residential area is the second relatively concentric zone placed both in the central part of the city and at its periphery, dominated by a few storey-high buildings alternating with individual houses. The structures, dated before 1940, are in an advanced stage of decay, being most vulnerable to seismic risk⁵. The statistics elaborated after the big earthquake of March 4, 1977, show that the occupants of degraded buildings, with structures made of very poor materials, are highly vulnerable in case of seismic shocks, likewise are the people living in reinforced-concrete

4 Against the background of political changes that affected the Central and East-European countries in the 1980s, the communist political regime in Romania was isolated at regional level, opting for the North-Korean political and cultural model. This explains the North-Korean-type architectural implants in Bucharest's central zone.

5 General City Hall of Bucharest, General Direction for Development and Investments (undated).

buildings erected before 1940 and, to a certain extent, those dwelling in blocks-of-flats built before 1977, situated mostly in the inner residential area (Boutrais and Charvet, 1967).

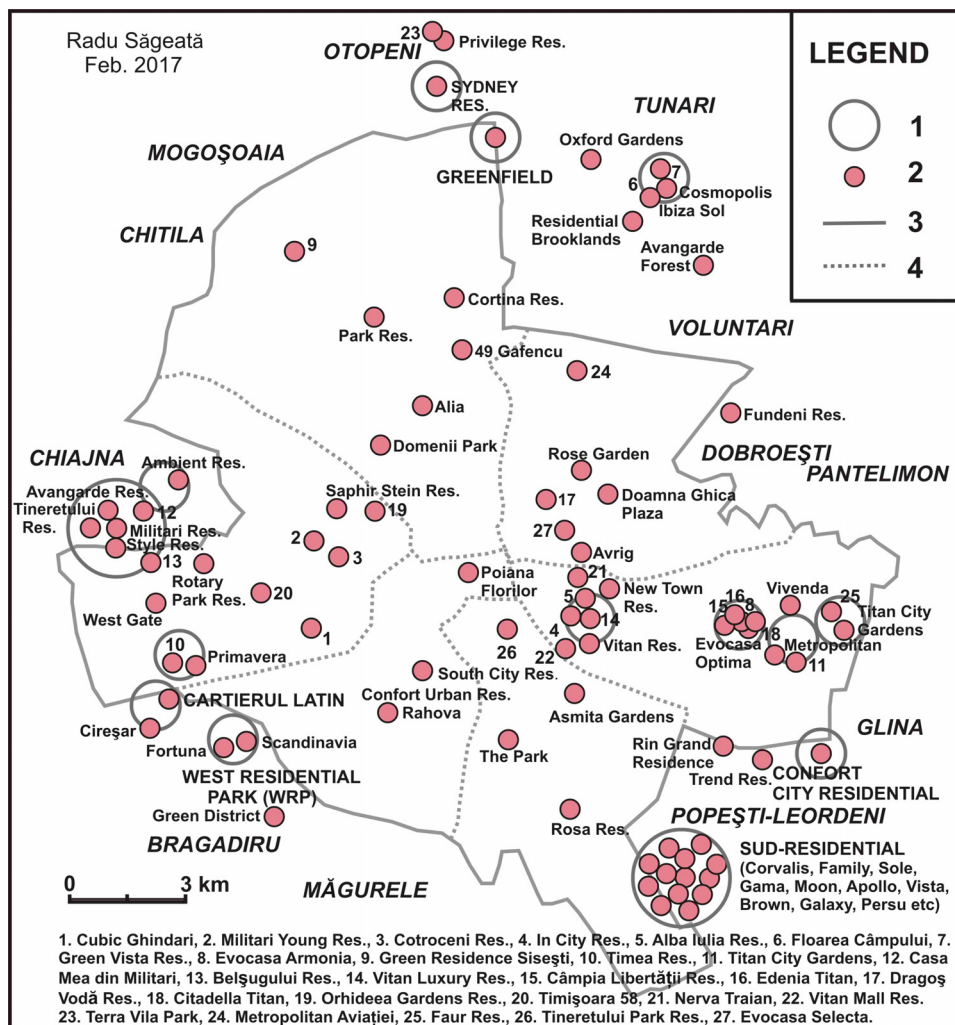
Bucharest's great residential area displays new quarters, built in socialist times, that have a relatively circular layout, the local convergence thoroughfares being the main entrance axes to the city. This area has generally over eight-storey-high buildings, housing approximately 60% of the city population (Gavriș, 2011). Nearly 50% of Bucharest's houses had been built before 1945, but only 13% of the city's inhabitants live in them; 30% of the buildings date to the 1946-1963 period, with 12% of the city-dwellers occupying them; 21%, those built between 1963-1992 host 74% of the city's population. It follows that this zone is particularly important, having maximum demographic concentration, hence the highest human pressure on the city (Ianoș, 2004).

These quarters remain the principal labor pool for industry and services. The great density of population, the limited green areas, the shortage of car-parks and parks are some of the problems residents have to cope with (Ronnås, 1983). Frequent contacts with the Western World, free access to information and a relatively better living standard make people have increasingly more demands for greater urban comfort. All these elements put pressure on the quarters, a situation that should be taken into consideration by a future administrative reorganization of the urban space. The economic decline of the adjoining industrial zones has contributed to unemployment, which is compensated for by the integration of the jobless into the tertiary sector; the age-structure in these quarters, built initially for the young population arrived mostly from the countryside, makes them an available labor pool (Popescu, 2000).

New and prospective residential areas. Bucharest, the capital of one of the latest EU-member-states, could not ignore the current urban space development trends seen in the advanced countries of the world. The 1989 economic and social opening generated both financially-based segregation which, in turn, led to severe ethnical and social problems, e.g., unemployment, deficient housing and technical-urban infrastructure, much delinquency, etc. (van Ham and Tammaru, 2016; Florida and Mellander, 2016).

At the other end of the spectrum, the high-income population tended to migrate outside the city, forming the so-called 'gated communities', usually of well-to-do people who built themselves special-quality dwellings to get separated from the rest of the population. In the beginning, such quarters appeared in the north part of the city (Pipera, Primăverii, Tei, Băneasa and Snagov), where an adequate infrastructure had existed before 1989 (being the site of embassies and diplomatic missions and of affluent residential and services areas), and offering specialist services to the above-average-income clientele. This type of communities would later develop also in other residential zones of Bucharest (Figure 2).

Since the terrains out of city are cheaper, raising housing quarters in the Ilfov County (an administrative territory adjoining Bucharest City) proved profitable. Some representative quarters are Sud-Residential and Confort City (on the territory of Popești-Leordeni Town), Militari Residence, Tineretului Residence and Avangarde



1. New residential quarters (built after 1990); 2. New residential areas; 3. City boundaries; 4. Boundaries of the current administrative sectors

Figure 2: New residential areas in Bucharest

Residential (in Chiajna Commune), Latin Quarter (in Bragadiru Town), Privilege Residence and Terra Vila Park (in Otopeni Town).

Other new residential areas have developed on the grounds of some former industrial units fallen into disuse (Rotary Park Residence, Faur Residence, South Residential Complex, etc.), or in the proximity of some parks or forested zones – Greenfield, Residential Brooklands, Cosmopolis, etc. in the north of Bucharest; expanding the built-up area is made largely to the detriment of green areas, which are shrinking.

Another characteristic of the spatial pattern of the new residential zones is the fragmentation of the plots of land, a consequence of the way in which various dealers acquired them. A representative case is the South-Residential Complex, obtained by

the association of several investors who bought neighboring plots, built small residential complexes, which consisted of several plots. Another example is the Militari Residence Complex; while other housing investments have several locations spread among the blocks-of-flats.

Despite providing better comfort and more dwelling-space than what had been built before 1990, the new residential quarters have improper access conditions, basically narrow, partly unpaved roads, unfit for today's traffic needs. Modernizing them, which is the task of the local authorities, failed to be coordinated with urban development. In addition, car-parks areas are hardly sufficient, in many cases there are no public transport connections to the central zones, nor are there schooling and health facilities. Wherever they exist, they are owned by private investors and, more often than not, services are offered at prohibitive prices, available only to lodgers of the residential quarters.

4.1.2. Economic-social discontinuities

The industrial zones, both the functional ones but, moreover, those with closed or liquidated enterprises, form a discontinuity landscape in the city, whether in the center, or at the periphery. Reorganizing them, either by preserving their productive destinations, or by changing it, is essential to an efficient and sustainable administration of the city-area. At the same time, both productive and, moreover, dismantled zones represent diverging cores of demographic flows, potentially shaping administrative boundaries in the city. In view of it, two categories of industrial zones can be delimited.

(1) The in-city industrial zone, developed in the interwar period, had part of its high-precision industries (electrotechnics, fine mechanics and optics) built and extended in the communist period. Since terrains in this zone took high prices, the area was also greatly exposed to post-communist deindustrialization. The areas around industrial units, but also of dismantled units in the wake of the severe industrial decline after 1990, have become axes of discontinuity in the urban fabric, kind of landmarks for drawing the lines between potential administrative sectors.

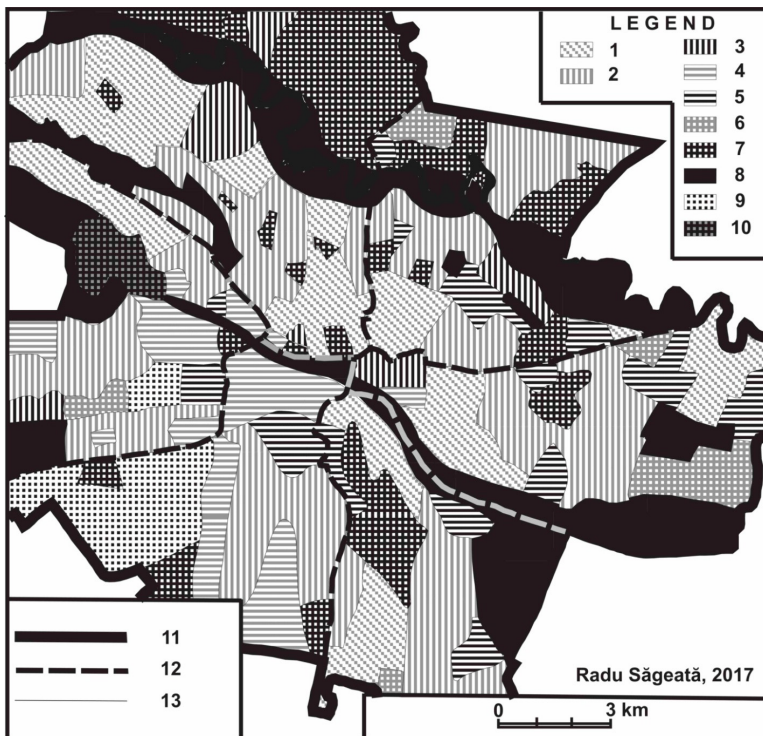
(2) The peripheral industrial zone is discontinuous. It consists of industrial units built and extended in the period of socialist over-industrialization. Unlike the in-city industrial zone 'suffocated' by residential and services structures, the industrial periphery has spaces in excess, since most economic agents either liquidated or restructured their business. Since agricultural terrains are also part of the landscape, this peripheral zone presents elements of discontinuity. Infrastructure and resources exceed the local labor potential, the residential neighborhood becoming a main workforce supplier (Cepoiu, 2009). The former industrial periphery, which stretches up to the city bounds, has registered a dynamic but chaotic evolution: residential places, units of the small industry, shops and warehouses.

4.1.3. Parks and entertainment areas

In terms of Bucharest's resident population and the built-up area, city-parks, moreover, those standing close to each other, appear to be true elements of discontinuity among the residential quarters.

Analyzing how compact green areas (parks and recreational forests) may represent urban structuring elements, one should proceed by localizing them inside the city, assess their size and characteristic features and also their possibility to expand on the respective territory. Apart from compact green areas, one must remember also the vegetation islands spread throughout the city, particularly if planted along, or in the midst, of some traffic lines, around institutions or sportsgrounds, etc. An important role in structuring some discontinuity areas, or of built-up dismantled axes, is played also by verdure spots found within traditional graveyards, or entertainment areas fallen in disuse, vacant grounds, etc.

In view of the above, elaborating a map of residential, industrial and special destination areas, as well as of connected elements of discontinuity, appears to be a necessary endeavor. This map (Figure 3) is a useful tool in analyzing the space config-



1. Old residential zone; 2. The great residential zone; 3. New and prospective residential zones; 4. Dismantled residential zones; 5. Industrial zones; 6. Dismantled industrial zones; 7. Parks and entertainment zones; 8. Elements of discontinuity; 9. Special destination zones; 10. Lakes; 11. City boundary; 12. Sector boundaries; 13. Functional area boundaries

Figure 3: Bucharest. Functional areas by discontinuity grade

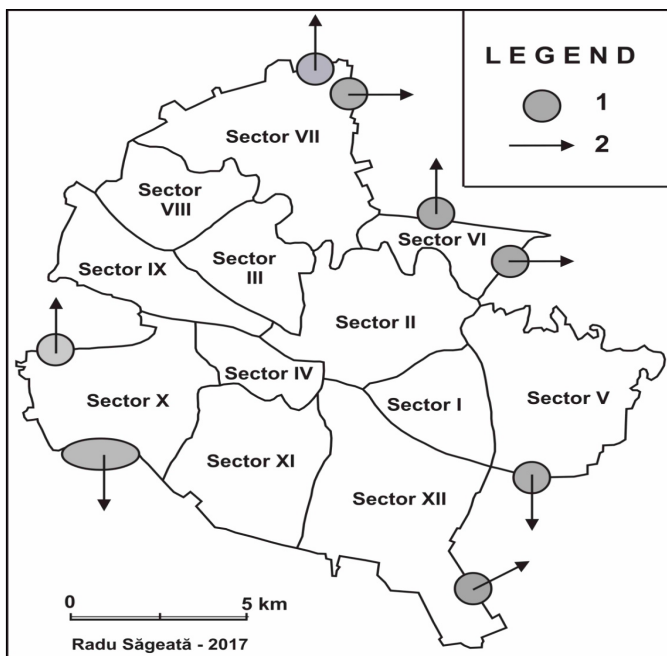
uration of the present inner structure of Bucharest city, and the way it has evolved during the past three decades.

Noteworthy, there is a mosaic-like functional pattern, permanent spatial discontinuity emerging both from the great zonal functional variety and the presence of numerous elements of discontinuity, such as water networks, transport infrastructure, areas of other destination than urban. This so very complex pattern is the outcome of evolutions over the past few decades when, because of economic, legislative and administrative changes, many zones, which previously had a clear destination, fell into disuse, their functional reorganization being a long-lasting endeavor. This map could be used as a basis for tracing administrative boundaries conformable with the current state-of-the-art of Bucharest city.

4.2. A proposal for a possible administrative outline of Bucharest City.

Corrections to the city boundaries

Distinguishing a possible model to optimize Bucharest's administrative-territorial organization could be based on existing electoral circumscriptions, proceeding from the present discontinuity areas within the built-up perimeter largely found in the city. Having in view the above-mentioned criteria, our suggested delimitation might consist of 12 sectors laid out into two circular areas: an inner one, formed of four sectors and an outer one, including eight sectors.



1. New peripheral residential zones; 2. Built-up expansion areas requiring corrections to the city boundaries

Figure 4: Bucharest. Proposed administrative sectors

Possible delimitation of inner-city sectors (I-IV):

Sector I lies between Unirii Highway in the south (lining the Dâmbovița River), the Unirii, Decebal and Muncii boulevards axis in the north, that goes up to the vast discontinuity area in the east (Titan Park and the vacant land between it and the Dâmbovița River). This proposed sector corresponds to the central part of the present Sector III, having as main polarizing axis Mihai Bravu Highway. The relatively compact built-up inside sections of our proposed Sector I consists of the old, discontinuous, residential zone, alternating with new buildings, and of Bucharest's great residential area lying outside the bounds of this sector. Despite some peripheral local convergence cores, corresponding to the large crossing-points and connections with the subway network (Unirea Square, Timpuri Noi and Mihai Bravu), the eastern and southern boundaries of this sector and largely also its northern limit, correspond to some diverging axes of human flows.

Sector II is one of the largest, both in terms of surface-area and population numbers. It lies in the central-northern part of the city, between Unirii, Decebal and Muncii boulevards, the National Stadium, and Obor Station in the east; Regie-Orhideelor area, the North Station (Grivița Road – Buzești Street), Kiseleff Highway and Herăstrău Park in the west. The northern and southern boundaries would be Colentina and Dâmbovița rivers. Its homogeneous character is given by the axis and polarizing cores inside the sector: the central city-zone, Obor Market, Moșilor Road, Carol I and Pache Protopopescu Boulevards. The northern and eastern bounds are well-individualized by the lakes afferent to the Colentina River (which asks for a different type of area management – e.g., parks and entertainment zones) and by the railway (which maintains discontinuity in the built-up territory).

Sector III is situated in the Grivița-Domenii perimeter between the western boundary of the proposed Sector II and the North Railway Station – Urziceni Town railway. Its boundaries would be traced along the great railway axes converging to the North Station. These axes can largely dismantle the limitrophe built-up area. In addition, we would recall the park-like zones of discontinuity (in the north and east: Herăstrău Park and Lake, as well as Kiseleff Park). This sector overlaps significantly the old-city zone, dominated by interwar villa-type structures in alternation with blocks-of-flats.

Sector IV is the last of the sectors covering Bucharest's central quarters, between the Parliament Palace, Liberty Boulevard, 13 September Avenue, Panduri Road, Ion Mihalache Boulevard, up to the vast discontinuity zone of the Polytechnic University; the Dâmbovița River is the northern boundary. For all its covering the central part of the city, Sector IV is one of the smallest and scarcely populated zones, because it corresponds to some intensely remodeled built-up areas. The Dâmbovița River and the vacant grounds adjoining the Parliament Palace, as well as the university campuses, represent the main discontinuity axes used to trace its boundaries. Besides, there is the old residential area, dominated by villa-type structures.

The out-city sectors (V-XII), also numbered counterclockwise, would have their outer boundary corresponding to Bucharest municipality, basically overlapping the

large residential zone and the peripheral industrial zone, a dynamic area of new residential quarters and of supermarkets, actual commercial cores of potential development and space structuring.

Sector V is scheduled to extend at the eastern city end, between the Dâmbovița River, the eastern boundary of Sector I and the Colentina River lakes. It overlaps the eastern part of Titan – Balta Albă and Pantelimon quarters (with blocks-of-flats) raising east of Titan Park, and the in-city industrial zone as far as the big industrial zone of the former quarters: Faur, Republica and Granitul. The main space structuring elements are Titan Square and the converging axes: Pantelimon Highway, and several boulevards – Liviu Rebreanu, Baba Novac, Basarabia, Chișinău and Nicolae Grigorescu. Moreover, this is a homogeneous built-up area; if delimited in this way, this sector would overlap the great residential area. If the new Confort City Residential quarter were included, the city-area would extend southwards to the detriment of Popești-Leordeni Town.

Sector VI current territorial organization corresponds to the outer part of Sector II, between the discontinuity axis of the Colentina River lakes and the city's north-eastern boundary. The built-up area is dominated by the great residential quarters with blocks-of-flats and entertainment areas (largely dismantled). Since the built-up area has been extended along E85 and DN200 highways by the construction of new residential and commercial zones (Dragonul Roșu), the administrative boundary between Bucharest and Voluntari Town should be adjusted.

Sector VII covers the northern part of the city, north of the Colentina River, and corresponds to Floreasca, Aurel Vlaicu and Băneasa quarters. It has a great development potential due to the newly-built high-comfort villa-type residential quarters and the one-family dwelling-houses, meeting European standards in point of endowments and lower population density in the built-up area. What accounts for having selected these locations is the area's great natural potential, the recent most residential quarters and those scheduled to be built lie among large entertainment zones, such as Băneasa Forest and the forest fringes of the Colentina lake region. Bucharest-city could expand by encompassing Greenfield and Sydney Residence areas.

Sector VIII covers Pajura, Dămăroaia, Bucureștii Noi and Străulești quarters; it is scheduled to lie between the Ploiești City – Urziceni Town railway and Bucharest's northern boundary. Polarizing flows are Bucureștii Noi Boulevard and Chitila Highway, the sector's boundaries corresponding to severely dismantled areas that cause diverging flows. Most of this sector overlaps the old residential area, the new one being dominated by Soviet-type workers' dwellings in Bucureștii Noi quarter. Here, the Colentina River, an element of discontinuity, acts like a residential zone segregation barrier.

Sector IX in our proposed model is elongated in shape and extends between the north-east railway line to Bucharest (with the North Station as end point) and the Dâmbovița River. It encompasses Crângași, Giulești, Giulești-Sârbi and Chitila quarters, with Giulești Road as structuring axis. The residential zone consists of blocks-

of-flats in its central part and of one-storey houses at the periphery. This particularly dynamic residential area stretches out between Giulești Road and the Ciurel Lake, with lots of villa-type-one-family-dwellings and a prospective fast-traffic road axis close to the Dâmbovița River.

Sector X extends in the west part of the city, south of the Ciurel Lake. It is scheduled to cover most of the Militari, Drumul Taberei and Ghencea quarters. Its eastern boundary consists of a discontinuity axis formed of the Botanical Gardens and the Polytechnic University campus, continued southwards with military units and the Apaca – Militari industrial zone, farther on standing Ghencea Cemetery and Ghencea Football Stadium. Functionally speaking, it overlaps the great blocks-of-flats residential area (Militari, Drumul Taberei and Ghencea), as well as the industrial zone (Turbomecanica, Cesarom, Urbis, etc.) of Preciziei and Iuliu Maniu boulevards. The western railway axis, which ends up in Cotroceni Commodities Station, shows numerous dismantled (Miorița milk factory) industrial and warehouse locations, replaced by residential and commercial areas. Urban remodeling and modification of the functional character of some areas recommend the extension of Bucharest city both northwards (towards Chiajna Commune) and southwards (towards Bragadiru Town).

Sector XI, including Rahova and Ferentari quarters, lies between the eastern boundary of Sector X, the southern boundary of Sector IV and George Coșbuc Square; the discontinuity zone is formed of Park Carol I, Tineretului Park, and Giurgiului Road in the east. Structuring axes are: George Coșbuc Boulevard – Rahova Road, Alexandria Highway, Sălaj Highway and Ferentari Road. Homogeneity is not so much the outcome of a Gypsy population, than of distinct social problems, e.g. great poverty, precarious technical-urbanistic endowments, much delinquency, and high dwelling density.

Sector XII lies in the south-east and occupies one of the largest surface-areas, including most of Berceni quarter east of Sector XI; it overlaps much the great residential zones, continuous with Progresul industrial area at its outer boundary. The western boundary is traced by Giurgiului Road and its limitrophe discontinuity areas i.e. Park Carol I and Tineretului Park as well as Bellu, Șerban Vodă, Jewish and Evangelical cemeteries, and Dâmbovița River forms the northern boundary. With the building of the great south residential zone, the administrative line between Bucharest and Popești-Leordeni Town should be readjusted.

The delimitations suggested in this paper could facilitate the elaboration and implementation of unitary urban development policies in accordance with the specific problems of each city zone.

4.3. A SWOT analysis of the proposed model

The analysis of the territorial structures proposed herein allows for a synthetic approach, it distinguishing both elements of favorability and restriction, the functionally homogeneous areas that should be consolidated and the critical points that need to be attenuated. The methodological approach, best suited and usually most often

resorted to is SWOT analysis, it decomposes the whole into its constituent elements, separating the items into positive and negative, affording the elaboration of future evolution scenarios.

Our relational approach has selected and analyzed only the main elements deemed relevant for the purpose.

Strengths:

1. The administrative pattern suggested in this paper is based on the functionality of the territorial structures in terms of current material and human flows.
2. The territorial sectors outlined herein are more homogeneous than the present ones, with residential quarters of blocks-of-flats, villas, and one-storey dwelling-houses, as well as many quarters with active or dismantled industries (zones with specific social problems, etc.).
3. Unlike shown in this outline, the present administrative intra-sector homogeneity is greater than the inter-sector one.
4. Having more numerous smaller-size sectors will put lower pressure on the local public administrative institutions, which could become more efficient.
5. The proposed inter-sector boundaries correspond to some areas of urban discontinuities (watercourses, parks, cemeteries, railways, vacant terrains, dismantled industrial units, military units, agricultural areas, etc.) which, being poorly populated, cause diverging population flows.
6. Bringing together the quarters supposed to form the proposed sectors is based on criteria of contiguity and similitude among them. In this way, the dysfunctions and problems specific to each sector can be more readily distinguished, facilitating the elaboration of development policies and strategies.
7. The regionalization proposed in this paper is based on the functional relations established within the urban ecosystem, so that implementing it sanctions the situation on the ground without inducing disturbances.
8. Some artificial boundaries, which correspond to major traffic thoroughfares, converging zones of human and material flows could be corrected.
9. The proposed intra-urban pattern stimulates and enhances the role of some secondary polarizing centers (the centers of quarters, agglomerated food markets, big commercial thoroughfares, etc.), capable to take over some functions of the central zone and redistribute them in the territory, thereby reducing the center-periphery migration, which has detrimental effects on the city transport at rush hours, in particular.
10. The proposed outline lays the premises for the harmonious development of all urban categories (not on equalitarian principles, but rather on the potential and specificity of each of them), by implementing specific development policies adequate to particular conditions.

Weaknesses:

1. A greater number of sectors might increase the administrative structures, hence more bureaucracy. In our view, the solution would be to have a more efficient

and flexible administration, essentially by reducing the demographic size of existing sectors.

2. The distinct size and potential of the proposed sectors might create difficulties between the central budget of Bucharest city and the local budgets of sector mayoralties.
3. Remodeling the urban fabric, by investing into the peripheral areas of the proposed sectors, might create new convergence areas, making it necessary to reconsider inter-sector boundaries.
4. Inevitably, intra-sector areas of divergent human flows would emerge, inducing, in time, new tendencies to fragmentation.

Opportunities:

1. The transition from the sector pattern to one based on quarter cores will align Bucharest's internal organization to that of most European capitals. Similar studies made for Paris, London, Madrid, Brussels, Rome, Berlin, Warsaw, Prague and for the big US or China cities, prove the benefits of the multiple-core (polynuclear) pattern in organizing a city-area (Gradín *et al.*, 2015; Graute, 2016).
2. Having more sectors, simultaneously with increasing their administrative efficiency, creates the premises for decentralizing administrative services in Bucharest.

Threats:

1. Increasing the number of urban administrative structures requires either building new administrative centers, or changing the destination of some structures, hence additional budget costs, which they can hardly afford at present.
2. Increasing the administrative structure without rendering it efficient, and clearly setting the attributes of each public civil servant might engender overlapping or neglect competences, with detrimental effects for the population.

4.4. Implications for the legislative and public administration systems

Implementing the proposed organization pattern means having a law modifying Decree no. 284/1979 of the State Council of the Socialist Republic of Romania.

This territorial organization pattern could be used also in the case of other first-rank regional metropolises with over 300,000 inhabitants (Cluj-Napoca and Timișoara), or close to this demographic threshold (Iași and Constanța), the outcome being 2-3 sectors with a population of 100,000-150,000 each⁶. However, this pattern is not applicable to metropolitan zones because, as stipulated by Law no. 351/2001, these zones are formed by association, each administrative unit preserving its own administration.

Implementing the proposed model does not involve changing the Constitution or the policies of decentralizing public services (Strategy for Strengthening the Public Administration, 2014-2020). What it does involve (as revealed by SWOT analysis) is mainly the risk of having a larger administrative body (because prospectively, in-

⁶ The proposed Bucharest sectors average some 160,000 inhabitants each.

stead of six there would be 12 sectors), hence higher budget costs. However, such a risk could be avoided by making the public administrative sector more efficient and by better delimiting the competences of public clerks. Sector homogeneity suggests greater coherence in implementing urban development policies by the sector mayoralties, which is finally expected to make them more efficient and have public costs diminished.

5. Conclusions

The analysis made and the conclusions reached in matters of political-administrative decisions on the evolution and structure of Bucharest city have touched upon the characteristic features and the complexity of this issue.

Bucharest's potential and hypertrophic grade, compared to other elements of the urban system, asked for a distinct approach to the city structure and its physiognomy, to the relationships between the city core and its periurban and metropolitan area. The present administrative outline takes over the sectorial model implemented since 1926, that is, six administrative sectors of a similar configuration, but more heterogeneous internally (all including parts of the central zone and peripheral quarters, residential quarters, industrial zones, special social-problem zones, or discontinuity areas of the built-up perimeter). In view of the above, the author offers an alternative solution for the administrative organization of the city's urban space by outlining the city infrastructure homogeneous areas, and shaping the potential direction and dynamics of material and human flows.

Unlike the present state-of-the-art, our proposed outline is based on areas of homogeneous urban fabric underlain by the multiple core pattern (Harris and Ullman, 1945) and the concentric zone pattern (Burgess, 1925). The sectors singled out in this way start from quarter cores, which might relocate the human flows. In this way, the specific problems facing each quarter would require a far more coherent approach.

Our analysis on the impact of potential administrative decisions at the micro-system level of the urban infrastructure follows two time-directions: (1) the period of political co-ordination, with highlight on the particularities of socialist urbanization and of Bucharest's intra-urban structures, and (2) the post-communist period, when political decisions were aimed at rebalancing the territorial systems by economic and social factors (industrial and demographic decline, changes of direction in intra-urban migration, re-sizing urban-rural relations inside and outside Bucharest's boundaries).

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