

Urban dynamics
Applications on the city and the Romanian urban system
(Summary)

The city is a fascinating subject, a complex and very dynamic one despite its great stability. For geographers, contact with disciplines concerned with urban analysis is useful for determining more clearly the themes for scientific research and also for better understanding of the processes influencing urban structures. Hence the analogies made with similar processes from physics to clarify intra- and inter-urban relationships improve the chances for fruitful dialogue with partners interested in a faster validation of the fundamental and applicable researches.

The city has a limited spatial extent complementing the surrounding rural area through special morphological and demographic characteristics as well as economic, social and cultural roles and functions. The expansion of the urbanized areas through suburbanization, periurbanization and rural urbanization modify the barriers between rural and urban.

Giving an accurate definition to the city has always been a challenge for geographers, even before urban geography developed. The definition given by Fr. Ratzel in the nineteenth century saw the city is determined by three fundamental criteria: "a specific professional activity" (the definition being given in the pre-industrial period, with reference to commerce), "concentration of buildings" and a substantial population exceeding a threshold or "a minimum number of habitants". These criteria are still valid, proving the relevance of ideas expressed more than a hundred years ago. Another interesting definition, belonging to Simion Mehedinti, considers cities as "groups of buildings and people, determined by regional circumstances related to the flow of goods and people". But all the definitions given for the city until now have failed to gain a majority vote. As a place for production, trade, consumption, with structured spaces permeated by a complex set of central place activities, the city proves to be an extremely complex entity.

The city as an optimally-opened thermodynamic and information system. From the historical point of view, the city appeared due to some local circumstances and some regional factors, as a place of high concentration of human beings and economic activities generating a relatively complex organization comprising new elements of a material, social, cultural and behavioural nature. In a hypothetical uniform space with vertical and horizontal flows, the city may appear anomalous.

The concentration of population and activities determines on the one hand, a continuous deficit of weight and energy (negative anomaly) while the production of information creates an excess of this type (positive anomaly). The normal trend is for these anomalies to be diminished, the first one through weight and energy contributions and the second through the diffusion of information.

The city, through its complexity, has its own functioning system and generates flows and structures that are maintained within the urban limits in an individualistic way. Incontestably, the city is an open system, but not totally so because there are enough resources and mechanisms to allow a temporary period of functioning with fewer input flows. So, the idea of an optimal openness to its environs is considered useful as a way of maintaining individuality. The notion "optimal" is more appropriate, being clear enough to show that the city can exist and function, keeping a certain level of material and informational "autonomy".

In general the city is the user of some diversified input flows, some of them permanent, others temporary or occasional, having a structure dominated by weight and energy. Usually, input flows surpass output flows in absolute quantities, the biggest part of this difference being expressed in the expansion of the built-up areas (e.g. residential, industrial and transport) with social facilities that satisfy the biological needs of a large workforce and population. Obviously, most compensatory flows generated by the existence of a city permeate its area of influence. This one, through its potential held tries to diminish the break-up introduced by the city and to assure a certain dynamic equilibrium in the relationship between the development potential and consumption capacity of the city. The contemporary development of cities reveals – within the conditions of space contraction – a much reduced dependence by cities on their areas of influence compared with the new types of relationships induced by functional specialization and global interdependence. This means that the relations

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between the city and the environment extend to unbelievable limits and this became sensitive to what happens at continental and global level.

Urban dynamic models. The last three decades have offered a rich and attractive literature through models of urban dynamics introduced in the circuit of theoretical-methodological and applied information. Some of these models are simple while others are sophisticated, controversial and difficult to apply. Many of them are based on morphological theories that are widely applicable in urban dynamics. Among these models we can recognise: the catastrophic model, the Volterra-Lotka model, Forrester's model, the Master Equation model, the Leeds School model and the Brussels School model (or "Bruxelator"). However, the scope for applying the models is limited by the large number of variables used. For this, it is necessary to focus on the preoccupations: hence the need for a more appropriate methodology to assimilate all the information. The analysis of these marks of particular evolution can lead to obtaining new types and models of geographic evolution of "single" cities in a simple competition within the urban system. In this chapter can be distinguished three graphic-analytic models of urban dynamics applied for cities in Romania.

The dynamics of urban functions. The demographic evolution of Romanian cities and the territorial differences reflect highly centralized territorial and sectoral development policies in the second half of the last century. In the evolution of urban economic activities there are three main steps: the industrial revolution, impacting on regional centres and newly-created specialized industrial cities (1950-1970); the industrialization of county centres and some other towns of medium size (1970-1980); the industrialization of small cities and rural places designated as future agro-industrial centres (1980-1989).

The dynamics of the industrial function. In the analysis industrial functions we can distinguish two steps: one that exaggerates this function, especially in the last years of the totalitarian regime, and another that reduces the industrial function in passing from the centralized economy to the market economy. In the evolution of the post-Decembrist industrial activities in the city we can distinguish a first period – around 1990 – through general turbulence; a second period showing a dramatic fall in industrial production and the rise of unemployment in post-socialist Romania. From During 1995-7 there was some revival of the industrial production, followed by profound economic changes (1997-2000) through restructuring and privatisation. After 2000 industry experienced further restructuring in parallel with a revitalization process linked with the privatization of the country's industrial giants.

Dynamic political-administrative functions. This is one of the most important themes in the development and evolution of cities; giving an impulse to all economic activities; particularly after the main administrative-territorial reforms of the 20th century. The loss of political-administrative functions by some towns had negative effects on urban dynamics e.g. when former county centres lost their functions through the reform of administrative areas in 1950. Under the circumstances of the transition to the market economy some changes in the political-administrative hierarchies may occur, through functions arising from the implementation of regional development policies seeking to diminish the territorial differences. The strategy may involve localizing some coordinating functions of regional development in urban centres that may become the headquarters of future administrative regions (arising from the transformation of the present regions through further development).

The dynamics of cultural and educational function. Despite its diffuse character, this function is one of the most striking elements generating relationships between town and country. In the structure of the urban centres the county centres are distinctive, usually with more than 6,5% of the occupied active population in the education and culture – and over 7,5% in the big university centres (Cluj-Napoca, Iasi, Timisoara) and some small centres with a traditionally strong cultural life, especially in Transilvania (Beius, Caransebes, Nasaud, Blaj). After 1990 advanced educational institutions of higher education – under state or private ownership – were formed or reformed in most county centres e.g. the universities in Targoviste, Alba Iulia, Targu Jiu and Arad. Although many leading teachers are commute from more established universities (Bucharest, Cluj-Napoca, Craiova, Timisoara) some of the new foundations may well become famous in specific educational and research fields.

After 1990, and especially after 1998, the system of mass learning became a reality and universities were able to receive all students who could pay the fees for their studies. In the year 2004-2005 the universities offered a larger number of places than could be filled by high-school graduates

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of 2003-2004; thus setting in motion a consolidation of the educational institutions and a decrease in the percentage of the private universities, after a period of growth when 20 new private universities gained accreditation.

The dynamics of the commercial function. This function is the main one in cities with tourist activities and curative therapies and also in large cities. So the highest percentage of the occupied active population in commerce (more than 12%) is specific to small cities from the mountains and Subcarpathians with a high tourist and curative potential (Vatra Dornei, Borsec, Covasna, Sinaia, Busteni, Calimanesti, Baile Herculane) and also places from the southern Black Sea coast (Constanta, Eforie, Mangalia, Techirghiol). The lowest percentages (under 6% of the active population) are registered in specialized industrial centres (Otelu Rosu, Cugir, Cismadie, Copsa Mica, Zarnesti, Moreni, Plopeni) and in centres with important agricultural activities (Vanju Mare, Ianca, Insuratei, Isaccea, Negresti, Beresti, Darabani).

The positive evolution of commercial functions is clear in big cities which have attracted modern commercial units, some specialised, generating a large area of influence extending beyond the city as a whole or of some parts of it e.g. the supermarket chains of Metro, Billa, Carrefour and Brico Store. Since these supermarkets appeared we have been assisting to an expansion from the initial areas of periphery to even those inside the city, conforming with later decisions of the municipalities. Under these circumstances, the small towns become dependent on the commercial chains of the large cities.

Dynamics of the urban systems. Cities are the most dynamic territorial systems, having a continuous force to structure the spaces surrounding them. Recent dynamics shows that the city is getting less close to its genetic space and closer to a higher level of dependence on other cities or spaces situated at a continental or global level. Responsible for this break-up between the city and its environment are the changes occurring to urban production.

The concentration of population, together with its traditional employments, is being modified complicated and sophisticated processes. The degree of dependence of some cities on others is increasing, encouraged by the processes space and time contraction arising from progress in transport and communications. Cities are seeing a reduction in their traditional role of providing goods and services, in exchange to assuming certain more complex roles, starting from the fact that these are real economic instruments, information processors, channels for the diffusion of innovations, privileged places for social interactions and spaces that create synergetic effects.

Urban system – concept and characteristics. The development of human society shows that cities cannot exist isolated from their environs: rather there are permanent interconnections. For three decades an integrated urban-urban concept – the urban system – has been developed. The main concepts and the methodology of analysis regarding the systems of habitats have developed through the reinterpretation of theories that appeared during the period of development of geographical thought focused on the spatial economy, producing remarkable ideas about central place, rank-size relations and the urban economic base. After the Second World War ideas emerged to discuss growth poles, growth centres and territorial production complexes. This progress followed from fundamental theoretical development relating to systems theory of systems, large system dynamics, morphological theories and the constructal theory.

Following the analysis of urban systems we can distinguish four main characteristics: hierarchical structure, centralization, specialization and primacy.

Differential urbanization. The history of urban development seems relatively simple until the middle of the twentieth century, focusing on urban concentration. Urban dynamics reflected levels spatial development. Global urbanisation processes are complex because of the different development levels of the nations of the world. At the same time, the interaction between different urban systems leads to the appearance of contradictory processes, reflected some quite acute distortions.

Urbanization achieved in certain phases in time can be individualised using indicators for direct measurement of the process or through indicators of net migration that can be used to establishing the duration of each phase.

The process of urbanization through time meant the development of certain typical phases of urbanization concerned with the concentration of goods and population in a single “point” and the resources of the regional space in which each urban centre developed. In the first phases of industrialization-urbanization we see some antagonistic development despite the functional

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complementarity generated through the centre-periphery model. The centre (including the hinterland) had the tendency towards hypertrophy through the convergence of investment flows while the periphery was denuded of its workforce. This phase is characterized by primate phase which were relatively detached.

There is another phase with two steps: an earlier one that allows the individualisation of the early state of hypertrophy and the second, intermediary primate city phase. The dynamics of the urbanization process involves more and more diversified centrifugal forces leading to the decentralization of important sectors of the primate city and the formation of new convergence centres on the periphery. Centripetal forces remain dominant but the advanced primate city has a more balanced evolution, far removed from the boom of the first phase

After much change in its inner structure the largest urban concentration reduce their territorial role as towns of intermediate and medium size increase their territorial influences and divert some of the flows previously oriented towards the primate city. This intermediate state develops to the point where the smaller cities become real competitors vis-à-vis the primate city, perhaps contributing new economic activities

or better working conditions. Finally the influence of the rival cities - and other rural activities – leads to a third phase which is concerned counter-urbanisation. During the whole evolution process urban systems become strongly integrated, providing a hierarchy of active centres.

The dynamics of the urbanisation can be measured using several indicators but the most important one seems to be net migration, reflecting the preferences of the population of a region for certain types of cities. Phased urbanisation highlighted by migration analysis is called differential urbanisation and analysis of the Romanian urban system shows that the model of differential urbanisation is confirmed even for centralised economies. The main conclusion is that after a period of urban concentration until 1970 there was a period of "indirect" polarisation on medium cities. The fall of the centralised regime meant that deconcentration did not fully extend to the small cities although there were signs of this during 1985-1989. The shock arising from the fall of the totalitarian regime brought a sudden change towards apparent concentration in the capital and other large cities. The fact that the shock was for a short period of time led to the appreciation of discontinuity by easing the interurban and urban-rural tensions exacerbated by the law prohibiting the immigration to Romania's largest cities.

Taking into consideration the fact that the actual disorganization process will probably continue for a few more years because of industrial restructuring in urban centres and land restitution in rural areas, we can appreciate that another cycle of urbanisation is imminent. Restarting economic development through services will assure a plus for the development that is a priority for the capital and other big cities. Increasing the level of poverty through the social polarisation of the society will emphasise the flows of migrants to big cities, offering the only possibility of revitalising the economy in the next 5-10 years. A new cycle of differential urbanisation will soon convert any conjectural increase in migration towards rural habitats into a rapid decrease.

In dynamic urban systems a tension arises between complex processes of integration or fragmentation that subsume many simpler processes and become more complicated through time. Each has its own specific elements that increase or diminish the likelihood of effects such as the aggregation or desegregation of the urban systems. These effects are very interesting for academic study, leading to new concepts and research methodologies relevant to development projects at different levels.

Order among fluctuations and the integration of perturbations. The dynamics of the urban systems result from a huge process of integration among individual urban centres, whose profiles are strictly determined by the historic rapport established for every city between the potential of development, its capacity of exploit this potential and the complex processes of urban interaction. As a definition, every city is functioning far from a state of equilibrium, oscillating around an ideal trajectory of evolution according to its internal changes and its quantitative and qualitative mutations. Urban dynamics and systems reflect a succession of periods of stability and instability: there are no periods of absolute stability but fluctuations with different amplitudes. The dynamic relations established between the various components and the interactions with the environment determine the changing place held by a particular city in the national or international regional hierarchy of the urban systems.

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Despite the stability of **Rank – Size** relations, we have to mention that the dynamic is under the influence of some sudden changes determined by a change in the social system and administrative intervention in the interactions between cities. These changes generate great turbulence close to chaos when a certain order has been established over a long period of time, disrupting a linear process with deviations from the normal trajectory. These mutations, determined by qualitative and quantitative changes, are known as fluctuations that contribute cumulatively to order and relative stability. This tendency towards disorder in the academic sense can be illustrated through the Romanian urban system following the collapse of the totalitarian regime. Disorder occurred nationally but each city reflected in an individual way the breakdown of the economic, social and cultural systems. Of course this was not the first shock to be experienced; for there was radical restructuring during the period of extensive industrialization. But the new fluctuation meant the beginning of political and socio-economical decentralization, ending some demographic restrictions and starting a de-industrialization process for the urban system and each individual city.

The alternation of the periods of order and turbulence has been a characteristic of the Romanian urban system. Order is dominant in the short term but over the longer term there is no absolute stability in the dynamics of a city. The situation is similar for urban systems that integrate the individual behaviours of all the component cities. So when we talk about order we mean a relatively quiet evolution that may be evident in the functional pattern of the urban system.

Instability, at the urban system level, is determined by the dynamic relationships between cities which upset the local, regional and national hierarchies, producing - at least for a period - a disorder similar to the turbulence and even chaos. According to cooperating, subordination or indifference relationships, a city can migrate through the hierarchy and increase or decrease its centrality functions. In the dynamics of the Romanian urban system after 1945 there were several periods of stability, transition to instability and of instability (disorder). In addition to influences arising through unequal economic development, great turbulences arose from political-administrative decisions involving the creation of new cities.

The unequal economic development of the cities and their relationships with the rural habitat reflect socio-political distortions generated by the application of policies specific to the centralised state, such as the nationalisation of industry and excessive centralisation, overestimating the role of the secondary sector to the detriment of the tertiary sector (restricted to the minimum consistent with economic development) and spatial planning. After 1989 the processes were reversed and gave rise to industrial restructuring, agricultural reform and tertiary growth in the urban economy, creating an excess of work force in the urban areas.

Thus the evolution of the urban system in Romania in the last decades has seen the alternation of periods of stability and instability, even if on the whole there is a relatively constant hierarchy and configuration at different levels. Thus the new national urban system is the result of a chain of fluctuations affecting the inner evolutions of each city – and the perturbations from the environment in which it develops – and the categories of cities as a whole.

Hierarchical break-ups in the urban systems. The dynamics of urban systems are not linear and experience a lot of distortions and sometimes break-ups at the functional and hierarchical structure levels. The amplification or curtailment factors may have a predictable evolution but their effects that cannot be accurately predicted because of numerous variables that affect the relationships between cities. For example, the specialisation option, arising from some decisions by a local community, can affect the local and regional hierarchy and fragment hierarchy-subordination relationships. Some political decisions, such as administrative-territorial reorganisation or the reform of administrative regions can influence the hierarchical and functional structure of a regional system and even a national system.

Hierarchical break-ups due to some major economic, social and/or political changes. Obviously, due to the great stability of the national urban system, these break-ups are evident only for a certain number of cities that evolve in the same direction and at similar speeds: a number that can be considered a critical mass in the evolution of an urban system. Factors that acted individually or in synergy produce a differentiated evolution for cities, which reflected the hierarchical break-ups at the national urban system level. The break-ups are a sudden change of the tangent comprising the Rank Size hierarchy in an urban system. Because these break-ups can be emphasised only through the

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contribution of several cities from a hierarchical segment, the explanation arises from a certain policy promoted at the level of that state.

The comparative analysis of the Rank Size distributions for 1966, 1992 and 2001 emphasise a positive dynamic in the median sector of the hierarchy in 1992, with slow tendencies of diminution in the last year studied. If we take into consideration that these distributions are characterised by a great stability in time, we can appreciate that the change that took place in this hierarchical sector of the Romanian urban system was relatively sudden, exaggerated and complex. Identified through anomalies or atypical segments, the break-ups at the level of the Romanian urban system are represented by the hypertrophy of the capital, underdevelopment of the higher sector of the urban hierarchy, over-development of the median sector and underdevelopment of the hierarchical basis.

Differences in the regional urban systems. Differences in the dynamics of the cities belonging to macro space are generally determined on the one hand by the concrete conditions of location and development in each case, and on the other by the regional context for each central place development of different ranks, on the other hand. With its own capacity and development potential of development, a city can evolve, stagnate or regress with direct effects on its geographic space or a part of it. A simple vision would take into account only the performances of an individual city with respect to the surrounding space, forgetting that a large city is a hub for relationships among the habitats of a larger space.

The hypothesis of regional urban dynamics may use historical regions as a framework for analysis but another possibility is the development region that has a future potential despite the lack of spatial identity. In both cases the region acts as a generator of forces able to increase or curtail the concentration of material or informational flows conducive to the development of a single city or a network. The city is the engine of development but it also benefits from regional development impulses. This permits the conclusion that the variation of ranks has a different intensity from one region to another, usually affecting the median and lower sectors. Evolution during the decade 1992-2002 was not influenced by the differentiated development of cities but by crises in some cities prominent in the regional hierarchical scale - arising from industrial specialisation that did take into account the local resources - that lost out in regional inter-urban competition.

Metropolitan area – an urban subsystem? Usually, a city, no matter what its size, imposes itself on the surrounding area through its powerful influence with respect to its shortage of workers, raw materials and agro-alimentary products. These requirements are characteristically taken from the hinterland in exchange for services of a higher order than those available at the local level. This area of influence is the precursor of the metropolitan “hyper city “ area when the urban centre surpasses a certain demographic level and functional complexity.

Metropolitan area. Spatial continuity and functional relations help to define the space around a metropolis and despite references to a ‘region’ or ‘zone’ the term ‘area’ is most appropriate because this term always supposes the existence of a determinant element of structuring which has a certain spatial continuity: the structuring force of the metropolis as the centre of convergence/divergence flows, with a gradient in the extent of the power which increases towards the centre of the metropolis.

Metropolis in Romania, a reality? The process of urbanisation in Romania has a long history but its rhythm of development has been quite slow, indicating doubt about the capacity to generate typical metropolitan forms, for policies driven by the state meant that urban consumption was assured without taking into account its own resource space for of sustenance. We can see a paradox because the capital city, Bucharest, does not attract an “urban constellation” like Brasov, Ploiesti or Sibiu that managed to generate local urban subsystems connected with the “mother city”. Bucharest fulfils the criterion of a large number of inhabitants that is a precondition for the development of territorial relations and efficient structuring of its supporting space, but it does not generate a web of relations typical for a metropolitan area. Through its incapacity to create a well-structured urban subsystem, Bucharest demonstrates the reverse of the situation evident in the case of the provincial cities mentioned which have developed complex territorial functional relations involving clear urban subsystems.

Bucharest and its metropolitan space. Bucharest must benefit from a support-space or “breathing space” which has been created during historical evolution. But it seems to be space with a chaotic structure and a human capital affected by the ageing phenomenon and a lack of education. Under these circumstances, the cooperation between the city and its metropolitan area must be further

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stimulated for the benefit of both. A more developed metropolitan area would help Bucharest to increase its competitive power at a European level, emerging as a veritable capital for the southeast of Europe.

Metropolitan space should be shaped by a succession of typical urbanisation processes such as suburbanisation and periurbanization. The dynamics of metropolitan space cannot be influenced only by the direct structuring force of the capital but require a specific relay mechanism to shape these forces. We can conclude that the metropolitan area of Bucharest is atypical in several respects:

- a) population increase through migration over long distances and not through movement of the local population;
- b) intense depopulation of the periurban area through rural-urban migration, emphasised by the extensive development of the capital's industry;
- c) a predominantly agricultural character for the metropolitan area's economy.
- d) a sudden deindustrialisation process experienced by the industry of Bucharest but a slow development of tertiary processes;
- e) excessive administrative fragmentation at the level of each county and development region;
- f) a living standards for family life among the lowest in the country, despite proximity to the capital.

Organising metropolitan space means that the chaotic cooperation between the metropolis and its hinterland should be replaced by a flexible system of relations able to realise more effectively the advantages that should arise from a city of two million inhabitants. To succeed in elaborating and implementing policies of cooperation and partnership a special framework is needed: an independent Council of Metropolitan Cooperation with decision-making powers, complemented by an executive body – an Agency for Metropolitan Development - responsible for the coordination of development programmes.

Intra-urban dynamics. Reflecting a specific historic evolution characterised by a succession of adjusting phases, the internal structure of each city points to a particular way of organising urban space. Intra-urban dynamics take into account the territorial effects of the mobility within this space and the literature identifies three distinct types of evolution: the Californian scenario – the city is practically marginalized by the expansion and development of the suburban and rural-urban zones; the Rennin scenario – the urban organism comprises a dense network of smaller urban centres; and a Parisian scenario – the urban concentrations are very important and mobility is extremely limited due to the urban congestion.

The evolution of the Romanian society during the last half-century produced several distortions in the inner structure of cities, arising from the centralising policy of the totalitarian regime. Starting from the idea that the city means industry and apartment blocks, the state's interventions on the urban structures were often radical and incoherent. Sometimes from the high value structures it arrived functionally to unappropriate and very vulnerable ones. The most resistance to major changes in the cities registered in some historic provinces: Transylvania, Banat, Bucovina.

In general, the main structure of a city has four subsystems: a support subsystem, essential for other two extremely dynamic subsystems (population and economic activities) and a subsystem facilitating the mass, energy and information flows inside of city.

At the first sight, the presentation of some self organising elements may seem nonsense, because the city is an antientropic territorial system. The voluntary interference is so strong that it limits any attempt to prove that it is not about a process of organisation dictated by the locals, but a process that takes time and it self-organises permanently. The reality is that, if we feel that on short term the city is organised according to the citizens' wishes, on medium, long and very long terms we can see a real self-organising processes. These processes are based on the imperfection of the decisions that at a certain moment affect the economic, social and cultural life.

For better understanding the processes of self-organisation by cities, a few words are needed about the fact that the city is a system which functions in a way that is far from a state of equilibrium, with regulating mechanisms, in relation to its environment. Understanding these mechanisms should make us think about the individualisation of the role that these have in urban self-organisation: elementary nanostructures, on whose basis was founded the capacity of correcting in time the evolutions that do not correspond to the urban community's will. We could define the urban as a functionally indivisible entity that can be represented by the house/flat, enterprise/department, or

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street/segment of street etc., having the capacity of direct spatial structuring, through its functions at micro, mezzo and macro level. The urban nanostructures, additively or functionally aggregated, form microstructures followed by a process of hierarchical inclusion to the level of the city.

The city is an entity constantly being structuring according to the processes urbanisation, suburbanisation, periurbanization and gentrification. Exchanges between the city and its environment minimise the process of entropic development, leading the city to resist the tendency whereby the inner structures disorganise into primary elements. Becoming more and more complex, there are permanent spontaneous changes in certain segments of the existence of that city. Functioning far from a state of equilibrium, the city configures its components and inner structures to minimise the energy used and maintain approximately the same status. Existing in an environment where noise is permanent, the city records its intensity in a chain of perturbations. The structuring effect of the noise depends on the distance between the localisation of the city, the point of equilibrium and the point between its closeness to the crisis points which are, in fact, multidirectional or divergence points. Being in this point, the city has the opportunity to choose one way or several ways.

The recent evolution of the city proves that the answer to its environment is extremely complex and it usually has a spatial materialisation. Otherwise, in a synthetic manner, in the recent dynamics of the sustaining city-space interaction we may distinguish a succession of phenomena, having a direct impact on the process of internal structuring and also on the structuring relations with the environment in which it develops: urbanisation, suburbanisation, periurbanization and gentrification. The first and the last deal directly with the complicated internal structure of the city. In both cases there is a certain quality of urban life, together with social segregation in the first case and the culture in the second.

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Intra-urban functional break-ups. When we discuss such break-ups we can we may consider two viewpoints: a spatial one, meaning the appearance physical and/or functional contrasts between different intra-urban areas; and a dynamic one, considering the movements made on the way to a normal evolution of the city. Functional break-up involves a sudden problem that arises in the relations between the main structural components of the city through the appearance of a new component or the modification of the initial relations through the increase or the decrease in their intensity. A major functional break-up is usually accompanied by a physical break-up. We can distinguish three phases in the evolution of a functional break-up: appearance, intensification and integration within the city. As regards the level of intensity there are break-ups at the macro and micro structural levels. The case study of intra-urban functional break-ups in Romanian cities suggests four classes of cities: those with fundamental break-ups (totally changing their structure and initial functions), major break-ups, important functional break-ups and insignificant break-ups.

Great urban habitats. In the structures of some Romanian cities, these major districts are incontestable realities, representing real “urban tumours” arising from a certain type of policy application leading to the birth of the concept of “great habitat”, used in the western literature and especially in France (HLM). It relates to an important and compactly-built surface with over 2 500 dwellings, concentrated in multi-familial buildings, such as apartment blocks of flats built and rented out by the state. The great urban habitats tend to occupy three main types of spaces: areas cleared by massive demolition, peripheral areas of built-up urban space (often closely related to the first) and land situated further away where new cities are built. Out of Romania’s 266 cities only 76 contain great habitats as structuring elements of the landscape. Their geographic localisation is relatively uniform, being related to large and medium-large cities that are county centres and other cities industrialised after 1970.

For researchers of urban areas the management of these large habitats is a great problem at a time when recent trends do not support them. The high percentage of unemployment (over 30% in some Moldavian or mining cities) and the individualistic behaviour of the residents, combined with their low incomes make amelioration problematic. However, these great habitats will remain for a long time as physical structures, without the financial support needed to re-house the population. Moreover, after a period of declining value, the market price of these apartments is beginning to rise given the upward trend in incomes and the over-heating of the property market. New residential districts will play an important role, including some which have appeared more or less legally, later being recognised as being part of the intra urban.

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Urban economic decline, a reality? Following the trends towards industrialization and neglect of the tertiary sector dominant before 1990, de-industrialisation, tertiary influence and rural influence are the current realities in the Romanian city. Ruralization of the city is a reality hard to accept but arises from the growth of agricultural work and the prominence of a rural lifestyle in the medium and small cities. The urban economy is in decline but restructuring can provide a new quality of the urban environment.

The image of the city and urban dynamics. The dynamics of a city are more complex than they seems at first sight, comprising many elements that enrich urban analysis. The urban image is an important reality at the city level, the products of the subjective filters of individuals that circulate as information. The construction of an urban image is complex based on flows between two poles: the diverse city and individual persons with their own powers of perception, interpretation and participation. Between these poles there are flows and feed-backs which produce a mental construction: an image of the city.

The complexity of the image of a particular city arises from participation by four types of actors: *persons who live in the city* and perceive it in a certain manner, taking into account that they are part of it; *persons who live outside the city* who have no direct contact but create a territorial image using the information drawn from different sources; *persons who have lived temporarily in the city* and gained a certain experience from which they may compare that city with others; and *people who know the city* only from mass media sources.

All these four categories of actors create their own mental constructions that are quite unique. If the differences were not so big, we could arrive close to a 'correct' perception of the city, but in fact we find many images that do not correspond with the concrete characteristics of the space. The effects of these images can be extremely varied, contributing feelings of appreciation, repulsion or indifference feelings. Correspondingly, we can speak about repulsive, attractive or indifferent cities. Translating the aspects of the urban image into the inside spaces, we will see its importance in delimiting certain sub-spaces. It is in the big cities where the districts are strongly individualised. We may distinguish repulsive, neutral (indifferent) or attractive districts. The urban image is an essential base for the urban structuring of residential areas.

The possibility of knowing directly the districts, the experiences, the general pattern, the local community's interest in aesthetical elements contribute to the creation of attitudes, reactions and different behaviours among the citizens. In this sense, we can talk about the appearance of some reactions of rejecting certain urban areas, known as urban topophobia. At the same time, the existence of passive attitudes towards some places or areas can lead to topos indifference. In almost every city there are "aristocratic" high status areas with attractive elements and distinctive patterns of behaviour among the citizens. The high price of land and buildings restrict access to these districts. Such specific spatial elements contribute some sort of urban friendship urban topophilia.

Any urban space, city or district, has certain strong and weak points. In the context of long term urban growth, theory should be developed for all the prominent elements of each component sub-space and bestow an optimal value for them. At the same time, each of these sub-spaces constitutes through their characteristics real challenges for the realisation of an efficient managing process. The identification of these two categories of elements and the implementation of programmes to diminish urban segregation could be an important option at the level of urban policies. To identify the strong and weak points, the territorial image can be extremely useful. Its value over the statistical data lies in the fact that it represents the result of some collective perceptions, including experiences and feelings, dynamics and structures that the economists and analysts sometimes forget.

The urban images can also be harmful when focused on the strong and weak points. In the first case, when the strong points are exaggerated, we enhance the territorial reality and exaggerate it in the future development perspective. Promotion may stimulate the population to invest in that area, but soon they will be dissatisfied with the sacrifices they have made. On the other hand, emphasising the weak points can lead to an altered urban image, undervaluing the real development potential of the urban space. In this case, we deal with a repulsive artificial space that will have a higher level of poverty, dissatisfaction and underdevelopment.

We could say that two types of images may be created: one that is idealistic and another that constrains: both with negative effects on the process of realisation European space cohesion. Opposite to these images is the constructive one that is objective, with a stimulating role in getting

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closer to the mosaic of urban sub-spaces, with their patterns of complementary development for urban functional areas. In this way a harmonisation of urban spaces can be approached: constructing a viable territorial organism with development perspectives.

This book tries to enhance priority for the analysis of urban phenomenon in Romania, starting with the reality that cities impose themselves as the main macro-actors in structuring geographic space. Focus on the academic approach to urban dynamics and on case studies is necessary for researchers in this field to keep pace with the real epistemological revolution in the scientific world and also with the growing necessity to identify the characteristics of increasingly distinct urban and rural communities.

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