POST-COMMUNIST SPATIAL RESTRUCTURING IN BACĂU MUNICIPALITY (ROMANIA)

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Abstract: In the last two decades the Romanian urban space faced major dimensional, structural and functional transformations. Our paper proposes the evaluation of urban dynamics in Bacău municipality analysing the overall territorial evolution and the changes of urban function by two opposite and complementary tendencies which fundamentally marked the habitation pattern. On the one hand we refer to the modification in urban form considering the extension of built-up area – often tentacular and without suitable regulations – by sprawl and by adding or captiously urbanising rural neighbour localities. On the other hand we have in mind the multiple phenomena linked to the restructuring and sometimes the dissolution suffered by the constructed area and which results into a heterogenous urban mosaic composed by adding or demolishing buildings or by changing the land use which is reflected in population and buildings densities and in the manifestation of urban flows. Finally, we intend to make a statement on the manner in which there has been or not a changing in the pattern of urban habitation in the post-communist period, taking into consideration the divergent effects of periurbanization, urban sprawl or the restructuring/dissolution of urban space of Bacau municipality.

Keywords: Bacău city, built-up area, functional areas, urban densities, urban housing, post-communist restructuring

I. INTRODUCTION

The urban structure reflects the relations established between the elements of the city seen as a system. As a consequence, the urban restructuring would imply the evolution of these relations that adjust to the new conditions in which the city evolves. This fact includes a permanent self-regulation that needs to be controlled and dominated by the decision makers in urban planning (Niţulescu, 2001). On the other side, urban development is not a smooth process towards a state of balance, but rather a passage from one imbalance to another (Friedman, 2006). Urban
Restructuring is a continuous changing process which varies in speed and character and which involves (re)ordering and integration actions of the functional elements of a city within a system. Depending on the manner in which these actions occur, we can identify periods of continuity for the existing trends, during which there are qualitative changes accumulated slowly and “revolutionary” periods, with alterations of the urban structural and functional paradigms. The cities within the former Socialist block knew such a period after 1989, when deep transformations fundamentally marked the urban habitation.

The current urbanistic changes are generated by the social-economic mutations adapted to the needs of the present period. The dictatorship of centralized planning and of the public sector was replaced with that of market economy and private property. Actually, privatization became the leitmotiv of the post-Socialist urban change (Bodnar, 2001). The former Communist cities turned, from high-density monocentric settlements, dominated by collective habitations and public common transportation systems, into complex expansive urban centres where individual means of transportation have become even more important within daily trips. In addition, we have seen more privatization for the dwellings, services, transportation, and public space. The centralist-rigid urban planning of the Communist regime was replaced with the reign of the “laissez faire” policy. The spatial transformations constituted necessary adjustments given that the Communist cities were not structured on the logic of free market and of the forces acting within it (Kessides, 2000 cited by Stanilov, 2007).

On the other side, the post-socialist city seems to have most of the characteristics related to the urban development of North-American cities, and not of Western Europe (Stanilov, 2007). If the West-European model implies controlled ratios of suburbanization, a valorised and dynamic centre, well-established public services, and a non-excessive (although visible) social stratification, the North-American model includes a high level of privatization for urban resources and activity decentralisation, as well as an important social segregation of urban areas.

In the last two decades, the Romanian urban space has gone through ample structural, functional, and dimensional transformations. The passage from an excessively centralized administrative-territorial policy and planning to market economy had multiple effects including on urban housing. If the Communist inhabitation was strictly related to an often forced and oversized industrialization, with no coverage in the local resources, in the current period there have been numerous diverse and multidirectional urban processes, sometimes chaotic and uncontrolled. The recoil of a big part of the activities related to the secondary sector and the emergence of tertiary activities, much more dispersed within the cities, redounds on the social-demographic behaviours and on the overall urban habitation. After 1990, the important increase in the habitual tertiary did not
manage to compensate the effects of the rapid deindustrialisation process, a fact that marked, for a long period, an urban involution process (Ianoș, 2004).

At the same time, the restrictive policies and the centralized planning – that sometimes did not take into account the local characteristics and resources, specific to Communism have been replaced with the incontrollable need to create oversized, dysfunctional, and incongruent urban bodies, which do not succeed as functional entities and as systems with an acceptable resilience capacity.

The deep meaning of the Post-Communist transformations translates into their impact upon the urban population (through the access to housing and jobs), and upon the rural one, that depends on the resources provided by the city. The social changes redound upon the way in which society appropriates the urban space and in which urban space becomes a reflection of the social integration or segregation level.

Therefore Bacău is a good case to study the urbanistic and social-economic effects of transition upon the urban entities.

II. OBJECTIVES AND METHODOLOGY

This paper constitutes a preliminary study within the assessment of the urban setting dynamics in the city of Bacău, which we intend to detail in the future studies. The purpose is to stress the general evolution-related characteristics in the last 20 years by analysing the relation between the concentration of urban population, the extension of constructions, and the internal functional alterations within the town’s limits.

In assessing the recent building dynamics within Bacău city from the perspective of the recent drawbacks in the urban structure, we start from the premise that there are at least two contrary, but also complementary trends. On one side, we analyse the uncontrolled extension of the construction surface, through a continual agglutination of new constructed areas within the city’s limits or even by annulling these limits and including localities in the vicinity. On the other side, there is a need to evaluate the urban restructurings related to increasing the building density by adding to or altering the functioning of certain buildings or areas within the city. The endeavour is significant because the way in which the urban space is organised has a strong impact upon distributing the local resources and upon the quality of life, as it is a key-element for the economic wealth of the cities (Stanilov, 2007).

In order to identify the determinant moments of the successive morphological changes concerning the urban and peri-urban habitat within the evolution of the urban territory belonging to the Bacău city, we have used the 1:5000 (1975), 1: 25000 (1961, 1983), and 1:50000 (1894) maps and topographic plans, as well as the available orthophotoplans (2003, 2008, 2011) provided by Google Earth.
Complementarily, when assessing the internal structure of the constructed areas, we started by examining the densities of the buildings and distribution of the city’s population. The analysis was performed at the level of territorial reference units (TRU), but also by using certain offcuts obtained by outlining a grid with the size of a 250 x 250 m cell to underline the structural characteristics of habitation in Bacău. The population density was approximated by taking into account the habitable surface within the residential areas, and – to the same extent – the type of housing facilities and the number of stories.

In relation to evaluating the urban density, we analysed the functioning of the urban sub-ensembles and their evolution within the last 15 years by studying the functional areas resulted from processing plans from the last two General Urban Plans (GUPs) and by confronting them with the orthophotoplans. Thus, we were able to assess the transformations of the urban habitation and the extension perspectives of the habitat, as well as the alteration of the spaces with other functions. In this sense, we have also consulted the list of building and demolition projects approved in the last 6 years, in Bacău municipality according to the list provided by Bacău City Hall.

The paper used as cartographic support a part of the GIS database and statistical information that was the basis for the elaboration of General Urban Plan Bacău (2011), with adjustments made after field mapping.

III. TERITORIAL EVOLUTION OF URBAN HABITATION IN BACĂU CITY

During the last 20 years, as many of the Romanian cities, Bacău has known a chaotic and discontinuous evolution, with uncoordinated destructurings and restructurings. Therefore, the recent transformations seem to go mainly towards losing the organic coherence specific to a functional city.

The shape of Bacău city is elongated, irregular, with ramifications along the main communication ways, created by extending city’s limits or by the agglutinating neighbour rural settlements. We underline that both the main arterial roads and the evolution per se of the city limits met the requirements of the determining morphological elements from the local perspective. They follow longitudinally the lower terraces of the Bistriţa River and they are parallel with its riverbed (Şandru, 1986). Subsequently, the circulation arteries that have become structuring axes created discontinuities in the urban space, especially if we refer to the railway crossing the city longitudinally.

Since the first centuries of its existence, Bacău has known a syncopate evolution alternating periods of demographic boom and intervals of population deficit. Starting with the second half of the 19th century, it has also acquired a dominant industrial function, which has also led to a demographic increase by attracting the population within the proximal rural settlements. As regards the
urban morphology, in the 19th century, the street structure had an obvious quasi-compact mononuclear character, required by its urbigenous-commercial function. The town was structured by the two main roads Ulița Mare and Șoseaua Domnească, around which the whole urban edifice was organised. From this focal area, commercial roads started in a radial structure (Calea Mărășești – southward; Calea Moldovei – northward; Calea Moinești – north westward; or Bd. Unirii – eastward) (Șandru, 1986). Nevertheless, these are the same directions that constituted the subsequent foundation for the constructed area when the city extended. The city was individualised by two main morphological structures: a commercial, administrative and cultural centre, as well as a large periphery, disposed in concentric circles towards it. In this case, the ruralism induced by the agricultural function coexisted with the dynamism, but also with the insalubrities specific to the industrial function (Popa, 2010).

Until the beginning of the interwar period, the urban physiognomy of Bacău city reflected a destructured, chaotic landscape – specific to the cities that evolved spontaneously, without urban planning interventions – comprising a labyrinth road structure without a clear direction, with many closed streets, with peripheries dominated by precarious residential buildings. These houses were sometimes set near industrial units, with no access to public spaces or basic urban services, such as water, sewer system, or sanitation (ibid.). The fact is visible when analysing the spatial extension of the built up area from a compact and closed initial nucleus to chaotic tentacular extension at the beginning of the last century and to the relative homogenisation corresponding to the second part of 20th century.

The first attempts to promote systematization plans occurred after World War I, when the CFR district was built1 after outlining a rectangular road structure. Nonetheless, the urban landscape of the interwar Bacău was marked by “excessive horizontality” (Lupu, 1973), due to an imbalanced extension of the areas and to the inclusion of rural localities. The Communist period overlapped the most important urbanistic transformations of the Bacău city, regarding both the horizontal and the vertical development (Fig. 1).

Two distinct phenomena occurred: on one side, the increase of urban buildings’ density by more complete uses of the land within the city limits, on the other side, important urban restructurings (Șandru, 1986). The first such transformations occurred in 1959 through the development of the Liberty Park (today, the Cancicov Park), of the Railway Station Market, and of the South Market. They occurred concomitantly with extending the urbanization first north southward and then east westward, including in the major riverbed of Bistrița (where the flood risk did not disappear even after building the hydroelectric plant network and their corresponding reservoirs).

1 the plan had also included the edification of the Oituz quarter, but the idea was dropped
Fig. 1. The evolution of the built-up areas in Bacău city and the neighbour rural area

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Since 1965, the city limits extended furthermore north westward by creating the first industrial platform – Mărgineni (wrongly set, if we take into account the predominant direction of air masses) and northward (by creating the Miorița quarter on former Negel brook’s valley). They also extended south-eastward by individualizing the Cornișa – I and II – quarters. Nevertheless, the 1970s-1980s constitute the period with the most intense building rhythm for the city of Bacău, through its large southward extension after the creation of the second southern industrial platform. It was connected to the city through the Victor Babeș, Cremenea, and Republicii quarters, which accentuated the linear profile of the city on the north-south direction, following the main road (E85) and railway axes, as well as the natural corridor of Bistrița River.

In the case of the Bacău city, the recent evolution indicates a relatively accentuated decrease in population – generally due to the external emigration, but also to people moving to neighbour rural areas. On one side, there is the commutation; on the other, there is the exurbanization of certain industrial or service-related activities. The decrease in the population correlates with the increase in buildings’ density, as well as with tentacular extension of the building areas along the main road axes.

Beyond these more or less natural trends, the future extension areas established by the GUP (2011) are situated in the southern and south-western part of the city, being represented by an interstitial (marshy) agrarian area and by one situated in the influence area of the airport confronting important building restrictions. (Fig. 2)

In the last 20 years, the dynamic of the built-up areas was marked by distinct territorially identifiable features. If the socialist city had focused upon the urban (suburban) periphery, where new working quarters and industrial areas appeared, the recent transformations are visible especially in the peri-central and in the peri-urban area. The centrifugal tendencies of housing in Bacău are greatly limited by natural or infrastructural obstacles, but also by the proximity of rural settlements that does not allow further sprawl within Bacău administrative area.

The compact and tern working quarters from where flows arrived every day towards the important industrial areas of the city are vestiges of a revolute habitation structure. They have already begun to be completed with new dwellings, sometimes for just one family, which fill the empty and even the green spaces, contributing to a higher building density and to a hybrid and non-functional urban landscape. The more generous spaces within the city have sometimes been taken over by residential complexes, set even near the main riverbed of Bistrița. Other spaces for habitation were built on the spots freed by recently demolished ruins, but the building density increased mainly intentionally, because of administrative decisions that did not take into account the elementary rules of urbanism.
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At the same time, the period 1990-2011 is characterized by an obvious urban expansion in the sense that certain intra-urban areas became denser and some of the energies of the urban body were transferred towards the nearby rural—at least in terms of population and economic activities. This process is similar to percolation (Diappi, 2004), an infiltration of the urban population into the rural, and not concentrated flows. Especially along the main road axes, but also in the
interstitial spaces between them, both individual houses and residential complexes were built – investments attracted by the low price of the land and by the sanogenic benefits of the peri-urban.

Similar to other Romanian cities, Bacău did not know a suburbanization phase, but it faced an intensive periurbanisation instead. In the case of Bacău, the extension of the city limits was restricted by the presence of rural localities nearby, agglutinated *de facto*, but which keep their administrative autonomy (Letea Veche, Nicolae Bălcescu, Măgura, Baraţi, Mărgineni, Hemeiuşi, and Bogdan-Vodă). This junction created an urban-rural continuum and some hybrid forms of peri-urban habitation. We can even talk about the insidious urbanization of these localities – the destination of a part of the urban population, who bought houses or land where they built main or secondary residencies. Some of these settlements became famous for these elitist residential spaces (Luncani). The modernisation of these dormitory-localities occurred because the newcomers attracted certain investments, including with governmental or European funds, especially concerning the public utilities (water, sewer system, gas, and road modernisation).

Nevertheless, all these rural localities pass beyond the status of dormitory-localities as they become peri-urban communes. Gradually, the process of peri-urbanisation becomes obvious not only by the expansive construction of residential buildings, but also through urban outflow and the exurbanization of certain productive activities. They consist in services (car washes, shops and public alimentation places, bars and clubs, sometimes with lodging capacities) or even in certain industrial activities. Some of the last are small-sized (e.g., Farbe, a paint company in Măgura), while others have significant production capacities (the meat processing units in peri-urban localities such as Mărgineni or Nicolae Bălcescu).

**IV. DENSITY, URBAN STRUCTURE AND FUNCTIONALITY IN BACAU CITY**

An obvious characteristic within stressing the urban spatial evolution is the orientation on the circulation axes within the city limits (Al. Ungureanu, 1980), which often leads to the dissipation of the energies related to the urban development against the internal cohesion. In the last 20 years, there has been higher density in case of certain areas, but insufficient to eliminate the structural and functional discontinuity areas within the city limits.

If we add that the city ring road is still an distant project, that the E85 road has become the main intraurban and interurban axis to the same extent, and that the convergence point of the communication ways is still downtown, where there is a lot of pollution and agglomeration, mainly in the rush hours, we obtain a paradoxical situation. Reviewing Lupu’s observation (1973) one can still asses that Bacău has too extended city limits for its population, but, at the same time, there are also numerous overcrowded areas.
Although the density is above the average Romanian values (around 50 inhabitants/ha), the under-population impression is due to the mixture of very dense areas and of quarters or areas with non-residential functions and very low densities, which create disharmonic hiatuses. This leads to significant differences between the mean density and the densities of residential areas (Ungureanu, 1980).

Higher values of the population density are not specific to the central area because, during the Communist regime, the purpose was to get closer the residential and the productive (industrial) areas. During the 1970’s and 1980’s, this led to the creation of working-class districts that revaluated the unused peripheral land or the sectors with less dense rural dwellings (Cremenea, B-dul Republicii).

Fig. 3. The population and buildings density and distribution in Bacău municipality
Even though the building and population densities are relatively high (50 inhabitants/ha and about 680 constructed sqm/ha), there are still numerous peripheral, as well as peri-central areas with scarce buildings. Nowadays, these low-occupied territories within the city’s limits, with reduced densities, create discontinuities and a disharmonic urban mosaic, but they have an important development potential if new buildings reevaluate them properly.

The recent evolution, including the preliminary results of the last census, indicates, for the city of Bacău, a relatively accentuated decrease in the population. In the case of the Bacău city, the recent evolution indicates a relatively accentuated decrease in the population from 205029 inhabitants (1992) to a maximum of 210469 in 1999 and to only 177087 in 2009 (and an even lower value today). The fact is generally due to the external emigration, but also to people moving to the rural areas in the vicinity.

On the other side, one can identify densification phenomena especially in the central area, but also in other urban sectors of the public services, but mainly of the private ones – this sector was undersized during the Communist period and excessively multiplied nowadays.

Fig. 4. Land uses and functional zones in Bacău City
(Source: General Urban Plans 1999 and 2011, modified)
The decline of the industrial areas occurred after the shutting down of some economic activities, by abandoning them or turning them into service areas (commercial, expositional spaces, and offices). New service and innovation-development areas have appeared. It is the case of the western area near the main entry from Onesti-Brasov road previewed in the GUP as an extension area of the city. Nevertheless, for this area there are drastic limitations determined by the fact that they are included in the influence area of the airport. An obvious transformation of “classic” industrial areas into service and small industry areas is characteristic for the south area of the city.

There has been an increase in the weighing of the residential space, accompanied by proximity services in areas with a low valorisation in the past (from this perspective), but with higher (Șerbănești, Gherăiești) or lower (Izvoare district, including in the near vicinity of the southern industrial area) degree of favourability for habitation.

Even though, apparently, the green areas were extended, in fact the unused as well as unproductive lands were improperly included in it. Meanwhile many of the formerly populated recreational areas such as the green area near the stadium or the relaxation area of Gherăiești were abandoned.

Secondary transformations consist in the reduction of agricultural areas and a slight increase in the areas destined to road transportation

V. RESTRUCTURING AND DE-STRUCTURING OF THE BUILT-UP URBAN ENVIRONMENT

Presently the housing demand is limited both by the economic and social crisis, and by the natural or induced decrease in the population, as the real estate prices have lowered considerably. There has been a statistically registered increase in the built surface per inhabitant, from 10.19 square metres in 2000 to 11.30 square metres in the following year and to 13.16 square metres / inhabitant in 2006. It is due more to emigration and to the decrease in the number of inhabitants, than to building new dwellings. At the same time, there has been an increase in the habitable surface per house, from 32.75 square metres in 1993 to 35.68 square metres in 2007.

House building in public sector has been syncope, with two maximums, one in the years following the regime shift, after finishing certain buildings began during the Communist period. The other one took place after 2000, having a peak in 2005, when a series of National Locative Agency’s (NLA) buildings became available.

2 but with important transformations, such as recent building the Oituz underground passage, which under-crosses the railway reducing a major urban discontinuity
Building private houses by the population or by real estate developers has been much more constant after 1995, with minimum points in 2004-2005.

Despite the entire heterogeneity of the intra-urban processes, the transformations related to the spatial distribution housing resources in Bacău can be placed into three distinct categories:

- losing a part of the resident population within the central area by transforming the habitable buildings into service facilities;
- the densification of the working quarters through an even denser land use by the restructuring of unused areas, green spaces, and playgrounds for children and their replacement by houses or by services buildings;
- the suburban and peri-urban assault of collective dwellings built by private developers and by individual inhabitants with higher life standard. Thus, the social-spatial stratification has become much more obvious then during the Communist period. The NLA buildings have generally followed the same pattern.

Bacău municipality is part of the general model stating that “suburbanization has become one of the most visible characteristics of the spatial restructuring process and of resetting the urban characteristics of the post-socialist city” (Stanilov, 2007). Meanwhile, the vertical profile of the city has accentuated its variations, also present during the Communist period (Lupu, 1973) through buildings that did not respect the allowed number of stories, stated by the official planning acts. As shown by numerous examples, the junction between buildings belonging to different periods is anaesthetic, discordant, and disharmonic.

New market mechanisms oriented the attention of the investors, entrepreneurs or developers towards the underused sites within the city, thus
leading to the appearance of veritable postmodernist juxtapositions of shops, luxury houses and precarious patrimony dwellings or monuments, together with abandoned industrial structures (Fig. 6).

Fig. 6. a. Recent house improperly built near Bacovia’s memorial house; b. Inappropriate housing facility built in collective residential quarter (Foto: Al. Bănică)

The actual or proposed demolition of old industrial complexes (for eg. some of the facilities and buildings belonging to Letea Paper Factory, one of the poultry farms, some exponents of the old local textile industry, such as ASCO or POBAC) creates new available lands. They could serve mainly to develop tertiary activities and, to a lesser extent, to residential complexes.

The service importance grew mainly in relation to the flourishing of commercial function of different areas. As a consequence, after the year 2000, the hypermarkets appeared and multiplied both at the peripheries and in the pericentral areas overlapping some former industrial facilities. Their installation was highly rapid: Metro (2001), Selgross (2006), Billa (2006), Real (2008), Kaufland (2008) and Carrefour (2009) sometimes in direct connection to new residential projects.

If the socialist city had focused upon the urban (suburban) periphery, where new working quarters and industrial areas appeared, the recent transformations of the post-Communist space are visible in the same areas, but also in the peri-central sectors, where they overlap a pre-Communist fund better conserved than in other parts of the city.

The analysis of the recent and future construction and demolition areas (Fig. 7) provides a suggestive image of the areas favouring the renewal of the urban space in Bacău city. From this perspective, the most significant urban restructurings occur at the periphery, and to a lesser extent in the peri-central area.

The tendencies can be easily assessed as the recent trends continue to manifest: the north and north-east expansion following the main communication axes together with the conversion of some pericentral and peripheral areas (such as CFR district) into denser residential neighbourhoods.
Fig. 7. The main recent demolition and construction areas in Bacău city
(Data source: GUP Bacău, 2011)

V. CONCLUSIONS

Delimiting the main lines of the recent restructurings faced by the urban habitat is a first essential step in understanding the dynamics of the urban landscape’s functions. Obviously, the issue needs detailing through a minute analysis of the evolution for certain specific indices characterizing the urban shape and the internal discontinuities within the city, as well as of the relation between the social-economic indicators and the transformations of the urban morphology.

The city of Bacău is a typical example of old urban entity with a commercial and manufacturing function transformed by the Communist regime according to a precise pattern imposed by the necessities of industrialization at all cost, but that has not always been compatible with a high quality habitation. In the case of Bacău city the urban sprawl is greatly limited by the natural or infrastructural obstacles, but also by the proximity of neighbour rural settlements. Therefore the transformations consist in slow, but obvious densification process of the peripheral areas, but also in structural and functional transformation mechanisms acting upon the villages nearby, which receive a part of the urban population as residents.

Practically, after reaching the maximum degree of territorial extension, the urban display goes beyond the administrative limits through the urbanization of the
nearby rural – whose population increases, where services and small productive activities have greatly developed.

As regards the city limits themselves, one may state that the former monolithic structure of the socialist city was undermined by numerous small and incoherent initiatives. Therefore, it was “broken” into a multitude of fragments that evolved differently, depending on the interests of the various political, economic, and social actors. Nevertheless, the matrix of the Communist working-class city has not disappeared and it has left a visible mark downtown, as well as regards ensuring the access to technical infrastructure, urban utilities and services in compact habitation quarters.

On the other side, as in the case of most post-Communist cities, the stronger tertiarisation accompanies deindustrialization and its expression is the inflationist expansion of commercial facilities, the atomisation and diffusion of productive activities, but also the suburban and peri-urban expansion of the residential areas.

To sum up, we underline the conservation of the axial character in urban development, which favours the north and north-eastern areas for houses and the south area for services and productive activities. The deficiencies of the Communist period are still present, expressing in extended under-urbanised areas. The paradoxical presence of the “extensively” used or completely unused areas, together with the convergent overcrowded spaces – to which we may add the shortcomings of the urban infrastructure – all these create a structure incompatible with the concept of sustainable urban development.

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*** General Urban Plan Bacău (2011)