Mobility as Justice

A metropolitan strategy for a socially and spatially equitable Bucharest
Colophon

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This thesis has been produced with the help of Dr. Roberto Rocco and Dr. Dorina Pojani

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Preface

When I conjure up the image of Bucharest the first thing that comes to mind is its metro. While Bucharest may be remembered as the city which holds one of the oddities of our modern world, the People’s Palace, it is also the only Romanian city that has a metro system. As a sort of an ironic twist of fate, while Communism did mostly harm than good, it did manage to leave behind one inheritance that benefits the city. Although structurally inefficient and barely covering a quarter of the city’s total urban land I would argue that it is precisely the metro that is keeping the city afloat.

Although I have been living and working in this city for the better part of my young adult life there are some areas unknown to me as my daily life in Bucharest often took place in or around the city center and almost always close to metro stations. And, whenever the metro was out of reach or out of time, I would take a taxi-cab instead. Riding the overcrowded buses was simply unconscionable as it took too much time to cut through traffic.

This sparked my interest in doing a research project on Bucharest and also generated some personal questions that hover above the whole work. Why was I so obsessed with the metro? Did the lack or abundance of mobility actually shape my life in this city? If I had freedom of movement why did I always choose the center? How much money did I actually spend on taxis? Why can’t the metro take you anywhere in the city?

These seem like somewhat banal questions however they hide one important observation. That, on the one hand I was indeed fortunate to be able to afford living next to metro stations and on the other that I had enough resources to freely move around the city.

What I am trying to say is that mobility generates capital and that lack of mobility or destinations are substitutes for inequality. And that the metro can be seen as a relevant example for the jumble of contrasts that make-up this city: of congestion and fast mobility (the roads and the metro), of small scale and big scale (the old city fabric and communist urban space), of rich and poor; an archipelago of inequality.
Introduction

Premise

The fall of the Iron Curtain ended Communism in Europe. What came soon after was a period of intense change and economic turmoil that culminated and crystalized in the newly dubbed “post-communist” capitals.

It is safe to say that Communism failed on many accounts, however, its two greatest failures are its cities and societies. Neither traditional nor full Communist the urban landscape was at a standstill when trying to form an identity that would give shape and direction to future change. Therefore, pulsating at the limit between these two forms of city the post-communist capitals now represented the cumulus cloud of post-communist change. If one desires to unravel the scars of post-communist change, the capital city is ground-zero.

As such, former communist capitals paved the way in which the new image of post-communism would look like in terms of their urban land, society and institutions as all of them were subjected to intense change during the transitional years (Sykora and Bouzarovski, 2011). However, this complete and sudden turnaround in ideology and the opening-up towards a market economy left governing bodies clueless as how to run their countries during this period. Simply put, there was no known model to use during this transition and often times governments played it by ear.

The global frenzy for profit both top-down and bottom-up meant that more finer issues such as attaining a certain societal health (or even literal health) were not on the to-do list. Given the fact that Communism tried to smooth out the kinks in the societal curve albeit often times by questionable means, with the coming of a new world, that of post-communism, this process was reverted and transformed into that of extreme social polarization.

More so, the lack of knowledge and experience with a democratic structure coupled with the immense changes and pressures that post-communist urbanities faced has had quite disruptive and unforeseeable effects on all aspects of their urban space and societies. In an attempt to boost the economy and attract investment the urban domain was at the mercy of private capital while post-communist citizens suddenly found themselves without the safety-net of former welfare socialism. Massive foreclosures, restructuring and the immediate threat of a neoliberal economy meant that individuals either had to adapt or perish, and, most importantly they had to do it by themselves.

As a result of this the new post-communist individual is split apart between a world of extreme wealth and social elitism and poverty.

Why mobility? Why inequality? Why Bucharest?

Mobility represents the ability to overcome distances in space while consequently, accessibility has a more enriched meaning, as it stands for the ability of people to accomplish a broad range of actions in space (Martens, 2012). These actions can range from the very banal but nonetheless important such as the case of reaching one’s workplace, or enjoying specific city amenities to more subtle implications such as the accessing of public goods.

It is therefore easy to imagine how higher levels of mobility and accessibility have the potential to generate greater life opportunities when regarding personal fulfilment and satisfaction with the provision or lack of mobility playing a crucial role in influencing inequality (Jiron, 2007).

One example for the spatial manifestation of inequality influenced by mobility is the manner in which the level of connectivity between households and specific amenities can have the potential of generating social segregation through residential segregation. Moreover, specific literature has identified a direct relationship between the geography of economy activity and unemployment rates with people living in areas of lower levels of accessibility to employment opportunities are more inclined to be unemployed (Gobillion, Selod and Zenou, 2007; Houston, 2005). Thus, the function of the transport network becomes important when connecting households to land-uses and influencing the level of unemployment (Houston, 2005).

One critical thing to point out is that this distribution of transport should not be focused on specific target-groups or transport systems and revenues but should take into account the overall distribution of accessibility over all social groups and it should therefore improvements in accessibility levels for some social groups may result in low levels of accessibility for others.

Curiously enough, this condition ties in perfectly with post-communist cities as land-use dispersion and social segregation are two main phenomena that are taking place (Sykora and Bouzarovski, 2011; Stanilov, 2007).

This is important within a post-communist context when examining the condition of its mobility systems. In general, post-communist cities improve mobility by often times relying solely on enhancing car accessibility. While it is a known fact that post-communist cities usually present an infrastructure gap when
comparing them to their more developed Western neighbors, investments in infrastructure should not be solely focused towards one specific model and social-group as a universal tool for solving the problems of mobility. The reality is that increased road additions creates more traffic and while possibly good in intention new mobility here has helped create even more congestion to the detriment of both car owners and users of public transportation (Stanilov, 2007).

The case of Bucharest

As one of the major East-European post-communist capitals, Bucharest does not evade this. On the opposite, it makes for an interesting and curious case when approaching this city via social and spatial inequality. Besides the general lack of literature concerning inequality in post-communist cities and most importantly in Bucharest, three things become important when addressing Bucharest.

The exquisite corpse

One critical issue that distinguishes Bucharest from most post-socialist cities through the manner in which it changes its urban space. Bucharest, more so than other cities, was the place for countless ideological manifestations. As such these left their trace on the city's urban fabric with each form of government implating its ideology of urban space onto the city while disregarding what was there in the first place. The result is not unlike the Surrealists' exquisite corpse exercise. However here the exercise does not stop at the limit of the creator's imagination but unfolds with dire consequences through upon its society.

Land-use and mobility disjoined

More importantly, when addressing urban space and mobility, it is worth mentioning that Bucharest does not have any tradition with the integration of land-use and transportation as a whole system of spatial planning. Therefore the city has become a paradise of transport inequalities.

The reality of unreality

Lastly it helps to point out the manner in which projects are being pursued in this city. Through the structural inconsistencies of its Masterplan, Bucharest is now a collection of ghost projects each replacing the other and with them the reality of the Plan. As such, the reality of the Plan is actual unreal and the Plan is not able to prescribe a coherent future for this city.

The ottoman period 1700 - 1859

Two main spatial elements inform this period of Bucharest. Firstly, dictated by the Ottoman rulers the city grew without a defensive perimeter wall. This condition resulted in a constellation of parishes that had a concentric polycentric structure.

Secondly, public space in the city resulted organically from the inherent logic of the street lattice. As such, these purely vernacular places or maidans replaced the conventional urban square as supporters for public life.

The seat of monarchy 1859 - 1918

The next phase in the spatial evolution of the city is represented by the 19th century boulevard as a tool for bringing urban coherence and monumentality to the city. The newly introduced boulevard, together with the public garden supplemented the maidan as the premiere places for public life in Bucharest.

Moreover, with the advent of industrialization the city added its first social neighborhoods and industrial compounds to its structure.

Interwar modernism 1918-1947

During this period Bucharest is fitted with the tram as public transportation. This allowed further residential dispersal into the urban territory where neighborhoods and industry were closely related.
Progressive Communism 1947-1974

With the idea of industrializing society Bucharest grew radially outwards with industry and socialist neighborhoods structured by public transportation. As such living and working were closely related and these socialist neighborhoods functioned as autonomous units from the city center. This logic will be completely reverted with the fall of Communism. During this period there was minimal destruction of the old city as the units were transplanted on open land.

The New Civic Center 1974-1989

Through the development of The New Civic Center and The People’s Palace in the early 1980’s a huge part of old city was replaced by what essentially is deemed big architecture. Where previously used to exist a homogenous, organic lattice of public places intimately servicing local communities was overtaken by the tabula-rasa urban frenzy of Communist comprehensive development which introduced a myriad of urban voids as event-places for the representation of power, immense collective housing walls and monumental boulevards which seemed to perform no function for city-wide urban mobility.

The post-communist city 1989 - present

As a stage for many ideological and spatial iterations Bucharest lives in an unstable equilibrium of its urban structure. With each phase of the city refuting its predecessor the spatial outcome nowadays can best described as a collection of different morphological typologies (of old city, of modernism, communism and what came after).

Chaotic and speculative, this period represents the final stage in this series of spatial denials.

Source: http://www.moma.org/
Overview

Over the course of the last 20 years Bucharest, alongside all European socialist capitals, has undergone a process of intense change with often times severe consequences for its society and urban space.

The overall spatial condition is a progressive evolution from a previous monocentric structure which through the overall process of decentralization of future land-uses into a dispersed polycentric structure. This inherent condition coupled with others identified by the research is threatening the cohesion of the city and is ultimately generating processes of social and spatial segregation.

Spatial development

The spatial development of Bucharest falls in-line with every post-socialist European capital. The overall trend of development after the fall of the socialist regime was one of market speculation. This has created an uneven city.

The inner city underwent a process of transformation into office and commercial dominant functions while the old socialist neighbourhoods were infused with new small scale program such as retail and services. Office and retail development were strong drivers of growth and raised the overall value and attractiveness of areas. Inner city development raised the level of prestige of the area, infused it with new functions and vitality while also generating increasing congestion and residential displacement and gentrification.

At the same time, economic readjustment implied unforeseen foreclosures of many industrial estates and brownfield generation. Foreclosures meant that many were left without employment, those unlucky saw refuge in emergent ghettoes and poor neighbourhoods that now are deemed problem areas.

The new-found freedom and wealth generated a process of income segregation of a rising social class generated a process of decentralization where new suburbs started cropping out especially in the northern side of the city. New wealth started clustering in suburban citadels and inner-city enclaves while the poor got pushed into dilapidated slums and run-down socialist housing blocks.

Mobility and accessibility

The post-socialist years of Bucharest have witnessed a rising share in car ownership rates and a dramatic plunge of public transportation ridership. New residential started popping up in places with very poor infrastructure and were completely car reliant. The city was gradually overcome by the private car as the dominant means for transportation. Virtually all new development seemed and still seems to ignore public transit stations with the suburbs being out of reach of the public transport coverage. This creates the premise of spatial mismatch and transport inequality, essentially transforming the city into an unjust system.

The municipality tentatively addresses this issue through new but timid investments in infrastructure as ways to relieve car congestion while public transportation is virtually ignored.

Public administration and spatial planning

The development of the city was entirely left into the hands of private developers. The structure of the General Masterplan permits endless derogations therefore with the tide of continuous building the plan is obsolete. Bucharest has not had a tradition of strategic plans and visions.

Development is privately-driven and opaque without any community participation. Politics has a strong voice in the planning process while also being influenced by private developers and powerful lobby groups. This creates a vicious circle with projects being developed entirely profit-driven and for a private interest.

Main problems

The main problems of Bucharest are a result of the last 20 years of uncoordinated and speculative development. The lack of strategic planning tools together with the lack of integration between land-use planning and transport planning are major causes for the condition of Bucharest today. Without a clear and coherent spatial strategy more decentralization and dispersion will occur which exacerbates the already socially and spatially polarized urban structure. Given all of this, three main problems have been identified as drivers for the research process:

- No land-use planning and transport integration.
- Disparities between high-income amenity-rich areas versus low-income amenity-poor areas.
- Increasing income segregation and gentrification.
- Mobility inequality results in low accessibility to jobs and amenities for certain social groups.

Research question

The main question the hovers above the whole work revolves around the influence of urban space and mobility into the
proliferation of inequality. Therefore one question can be drawn out of this:

- How can the current logics of space and mobility in Bucharest be reassembled into alleviators for inequality?

In order to answer this question several issues had to be investigated, these concern the links between urban space and inequality, the processes that affect spatial development here and the current spatial visions under discussion.

**Secondary research questions**

- What are the spatial processes that influence inequality in Bucharest?
- How is the spatial planning and the public administration of Bucharest affecting its development?
- What are the strategies and visions for Bucharest?

**Aim & research products**

Taking all of this into consideration, the aim of this research is to expose several critical issues through which mobility, accessibility and the spatial development of Bucharest have influenced its processes of social and spatial inequality and to propose a spatial intervention that addresses these issues.

Given all of this the final products of the research are:

- An analysis on the geography of inequality in Bucharest
- A critique on the formal spatial planning here through a Vision and Strategy for Bucharest
- Discrete designs as proof of implementation for the Strategy.

**Relevance**

The drivers of this thesis are the direct result of a personal fascination with Bucharest and a deeper societal and academic relevance. Firstly, in my training as an architect and urbanist I have always sought for the chance to undertake a spatial strategy for my city, as a unifying thread that links my academic and professional stance regarding Bucharest.

Secondly, from a societal and academic standpoint, the post-socialist city in general and Bucharest in particular are one of the examples where on-going societal and spatial processes are continuously shaping their development.

Considering the fact that post-socialist cities are one of the examples where on-going societal and spatial processes are shaping the character of their urbanity while also becoming increasingly socially polarized (Ioan, 2006; Kiss, 2006; Nedovic-Budic and Tsenkova, 2006; Sailer-Fliege, 1999; Stanilov, 2007) and where issues regarding social and spatial segregation are reinforced by transport inequalities and car-based travel (Pojani, 2011; Pucher 1999) make post-socialist urban development a relevant case-study for this investigation.

**Methodology**

The methodology used for this investigation is divided into three main strands of logic: the problem field definition, the main body of research and the strategy.

Firstly for the problem field definition with regards to planning theory (i.e. mobility, inequality, the post-socialist city and the condition of Bucharest) the main method used was literature review. This has been compounded in the form of a theory paper required for the Theory course as part of the last semester at TU Delft. However, regarding the structure of the research, the theory paper was integrally embedded in the research.

Secondly the main body of research was tackled through a series of mapping methods, quantitative analysis, literature review and interviews. This investigation has generated three separate scenarios or development outcomes for the city. The actual strategy follows the logic of one of these scenarios.

Thirdly, for the strategy, two main methods were used. Firstly the overall strategy was embedded within the context of transport-oriented-development planning theory through the review of literature. Secondly, the strategy was executed through a series of research by drawing and writing with each method affirming or negating the other.

The methodology logic can be further followed in the form of a research model in the next pages.
Research process and methods ▼

Problem Definition

Methods
- Literature review
- Documentation

Mobility  Inequality

Bucharest

The Post Socialist City

Problem statement
- No land-use planning and transport integration.
- Uneven development.
- Increasing income segregation and gentrification.
- Mobility inequality results in low accessibility to jobs and amenities for certain social groups.

Main question
How can the current logics of space and mobility in Bucharest be reassembled into alleviators for inequality?
Research Question 1
What are the spatial processes that influence inequality in Bucharest?

Methods
Literature review
Mapping of spatial and socio-economic data
Documentation on mobility in Bucharest

Research Question 2
How is the spatial planning and the public administration of Bucharest affecting its development?

Methods
Literature review
Documentation
Interviews with local planners

Research Question 3
What are the strategies and visions for Bucharest?

Methods
Literature review
Documentation on strategy documents
Interviews with local planners
Figure 1 - Spatial structure of Bucharest (2012)

HOUSING
- Large Socialist residential neighborhoods
- Post 1990’s housing sprawl

INDUSTRY
- Existing industry
- Brownfields

OFFICE
- Existing office
- Planned office

RETAIL
- Existing box retail
- Existing shopping centres
- Under construction
- Planned shopping centres

Source: author’s drawing from GIS processing of OpenStreetMap data - downloaded on 07/03/2013
Post-communist Bucharest

The fall of the Iron Curtain ended socialism in Europe. As a result, the former socialist states underwent a process of change pertaining to their institutions, economy, society and urban structure (Sykora and Bouzarovski, 2011). Conversely, Bucharest followed the same trend of post-socialist change.

Albeit the political and institutional changes, the main argument is that the development of the post-socialist urban structure and its present condition of mobility and accessibility have generated a pattern of social and spatial segregation through transport and spatial inequality.

The spatial development of the post-socialist city is a two fold process between its old socialist inheritance and the subsequent post-socialist transformations. The outcome of this dialogue can be described as the fragmentation of the former socialist city into isolated pieces of urban space (Stanilov, 2007).

Firstly, in the early years of socialism, the structure of the city presented a compact form with an inner-core that expanded outward with housing and industry in the form of wedges along road and rail lines (Sailer–Fliege, 1999). Responding to the ideological goal of industrializing its society while also catering to future industrial growth, the industrial estates of the socialist city were often over dimensioned with the land in-between the wedges serving as space for future growth.

Regardless of the housing and industrial expansion, the inner-city core took up the important administrative institutions together with cultural, retail and also housing. Because of an insufficient surplus of amenities in the old residential neighbourhoods and also in the new socialist housing estates, the centre became a major destination within the urban structure of the post-socialist city (idem).

Secondly, the main characteristics of spatial development in the post-socialist city can be outlined as a two-fold process of decentralization and suburbanization of its residential, industrial, office and retail functions (Stanilov, 2007).

New urbanization happened at first through office development in the inner-city that subsequently decentralized towards the periphery into office clusters grouped around existing infrastructure. Commercial functions had a tendency to spread-out throughout the whole of the urban fabric in close proximity with households (idem).

Critical issues regarding the spatial development of the post-socialist city have been identified by several authors (Nedovic-Budic and Tsenkova 2006; Pucher, 2005; Sailer–Fliege, 1999; Sykora and Bouzarovski, 2011; Stanilov, 2007) with all of them concluding that the generated effects are:

- Increased automobile traffic in areas with poor service of public transportation.
- Low job accessibility for social groups without a private car.
- The dissolution of open space at the periphery and the increase in infrastructure and services costs to the fringe areas where new business was located.
- A general trend of socio-spatial segregation with a high correlation between income levels and residential location.

The next sub-sections will explain the development of Bucharest through four of its main spatial elements (housing, industry, office and retail) and its mobility systems.

An archipelago of inequality

Research Question 1

What are the spatial processes that influence inequality in Bucharest?
**Housing**

The distribution of the population in the post-socialist city is characterized by three main processes (Stanilov, 2007):

- The shrinking of residential uses within the urban core.
- The suburbanization of housing.
- The restitution of land, the relaxation of land development controls and the establishment of an open land market.

Two elements make-up the spatial condition of housing, the old socialist housing estates and the new residential development.

The socialist housing estates can be characterized by the clustering of neighbourhood units, or mikrorayons, of roughly 5,000 to 15,000 residents and were planned to incorporate all the required uses to sustain daily life. However, in reality these units were poorly serviced by amenities, and mainly functioned as dormitory areas at the urban periphery (idem). Moreover, these units were closely linked with adjacent industry sites that performed as the main places for work for these estates.

However not all work-related trips happened in these units. Therefore, this high-density of socialist housing at the urban periphery coupled with the decentralization of land-uses has created the premise of long commuting trips to centres of employment that generate high transportation costs (Nedovic-Budic and Tsenkova, 2006).

It is critical to point out that generally post-socialist cities experience high levels of home-ownership (Stanilov, 2007) which entails a low level of housing mobility as it is more difficult to exchange residence. Therefore the level of accessibility of households to amenities becomes an important factor in influencing daily life in the post-socialist city.

After the fall of the old regime, new residential development happened through suburbanization on the urban fringe of private detached housing or through developer-driven housing construction both in the inner urban areas and in the periphery. Because of a new-found economic prosperity and the desire to escape from both the city and the socialist bad neighbourhoods the process of residential relocation has triggered a phenomenon of socio-spatial segregation (Stanilov, 2007).

The main characteristics and effects of new housing construction are (idem):

- Suburban incremental and dense evolution due to the condition of limited public financing into infrastructure extensions and the high price of land, lower personal income (as compared to the Western situation) and the slower rate of residential suburbanization;
- Socio-spatial segregation due to the fact that new residences are more expensive than dwellings in the city therefore specific income groups cluster together based on their means.

**Affecting inequality**

Therefore new residential construction generates gentrification of inner city neighbourhoods or transforms the urban fringe in single family upper-income developments (Nedovic-Budic and Tsenkova, 2006).
Figure 3 - Housing in Bucharest (2012)

HOUSING

- Socialist housing estates
- Post 1990's development
- Big residential enclaves
- Main clusters of detached housing

Source: author's drawing from GIS processing of OpenStreetMap data - downloaded on 07.03.2013
Figure 4 - Industry, housing and transportation

HOUSING
- Socialist housing estates

INDUSTRY
- Existing industry
- Brownfields
- Peripheral logistics

TRANSPORTATION
- Tram lines
- Train lines

Source: author’s drawing from GIS processing of OpenStreetMap data - downloaded on 07/03/2013
Industry

The main driver for socialist urbanization was through the industrial development of its cities (Stanilov, 2007).

However, this mass industrialization needed an adequate workforce. Therefore housing estates were developed in close proximity and directly linked to the industrial sites for efficient transportation. Notwithstanding this, the overall condition of industry was that of inefficiency and detrimental consumption of land through over dimensioning of the industrial areas for further industrial exploitation.

The subsequent restructuring of the post-socialist economy saw the transformation of vast areas of industrial sites into abandoned and pollutant fields in inner city areas as well as in the periphery (Nedovic-Budic and Tsenkova, 2006). As a result of extensive closures of industrial production, the post-socialist city experienced rising rates of unemployment, poverty and ethnic tensions in areas of the now abandoned industry (idem). Therefore the changing of the modes of production in the post-socialist city altered the distribution of income over its society and with it generating patterns of inequality.

Additionally, reusing the old industrial stock in the early years of transition was problematic due to several technical reasons. This created the premise of new industrial development decentralisation on boundaries of the compact urban areas.

The main factors for decentralization were (Stanilov, 2007):

> The difficulties for redevelopment the old industrial stock which ultimately drove new industry in open land areas;
> The shifting of the modes of mobility towards the car made outer urban areas more accessible to new industry.

Therefore spatial conditions and mobility further influenced industrial decentralization where areas of weak transport connections and poor accessibility present stagnant industrial development while at the same time, brownfield redevelopment has started in areas with good transport links and a favorable location (Kiss, 2007).

It is safe to speculate that, in the future, brownfields will start to be redeveloped from the inner city which is more accessible and then spread out towards the periphery (Stanilov, 2007). As an example, in Budapest industrial redevelopment started with areas closest to the city centre, which had high accessibility, towards more remote areas (Kiss, 2007).

Potential for new development

As an inference, brownfields present a great potential for redevelopment and job creation, and that certain brownfield presenting limited infrastructure connections could be treated as experiments for different modes of travel and transport connections.
Office and retail

The general bulk of investment during the first years of transition was into office development usually focused on capital cities (Stanilov, 2007). The pattern of development for offices started initially as concentrations in the inner city areas and subsequently decentralising in suburban office clusters.

High accessibility and prestige made inner city areas instant targets for new office development. However, consistent office concentration and rising car ownership rates generated a pattern of reduced accessibility of the urban cores.

As a consequence of congestion and surging land-prices new office started clustering on existing infrastructure and in less dense but prestigious areas at the urban periphery (Sailer-Fliege, 1999).

In Bucharest this phenomenon is represented by the Baneasa area in the northern part of the city where the office market has developed into the high-income new residential areas (Stanilov, 2007). However this area is almost entirely car-reliant with a limited number of public transportation links and poor modal shifts (Mionel, 2012).

Moreover, as a result of office clustering, more inner-city firms are relocating to these living-and-working paradises (idem). Consequently, the new office development had a considerable influence on the urban morphology of the post-socialist city. It has been responsible for the expansion of the city centre, the creation of a dispersed poly-nuclear type urban structure and the spreading of inner-city functions into the suburbs (Sykora in Stanilov, 2007). Nonetheless it is also responsible for the taking-up of green land through new development where office parks are developing at the edges of the compact city exploiting cheap land prices and the present road connections (idem).

In Bucharest, a process of office development through infrastructure speculation is taking place where new offices are spreading towards future infrastructure connections such as the A3 corridor.

Correspondently, retail took a similar route of development. The first manifestation of retail development in the post-socialist city was during the period of transition when small-scale retail outlets started growing from inner-city areas towards the socialist neighborhoods (Stanilov, 2007).

Moreover, it is critical to point out that one main factor for retail location was accessibility. Therefore larger retail stores began positioning themselves around an initial cluster of kiosks or in former socialist retail centres (idem).

Secondly, retail further developed through expansions of big-box schemes, as a consequence of the economic recovery and foreign investment.

However, these big retail stores are being located in poorly integrated locations on the fringe or outside previous built-up areas (Sailer-Fliege, 1999).

Therefore, the spatial conditions for the proliferation of the shopping centre are (Stanilov, 2007):

- Accessibility through location on important thoroughfares.
- Location in sparsely populated areas and acting as a driver for the growth of residential development.

Affecting inequality

Office development in the post-socialist city has a tendency to cluster to office complexes while at the same time hooking-up to existing and also projected infrastructure links. Therefore its pattern of distribution is not directly linked to the proximity or accessibility of households. That condition has the potential to generate low job accessibility. Nonetheless in certain cases, the clustering of high-income residences can drive office and retail development in close proximity to these areas.
Figure 5 - Office and retail

OFFICE

- Existing office
- Planned office

RETAIL

- Existing box-retail
- Existing shopping centres
- Under construction
- Planned shopping centres
- Future A3 - motorway
- High-income agglomerations

Source: author’s drawing from GIS processing of OpenStreetMap data - downloaded on 07.03.2013
The current road system of Bucharest is based on a radial structure of major thoroughfares that cross the city center. Given that in Bucharest there is a car for almost every inhabitant with the current prognosis showing that the number of cars will go even higher, traffic in the city center on those major radials has become very congested and polluted. This condition affects the overall mobility of Bucharest both the car driver and public transport rider. More so, new land uses seem to be concentrated on these major roads.

Some residential areas are disconnected from the public transport system. There is a low correlation between metro connections and developed areas. More so, the metro only covers about XXX of total urbanized land. The tram system covers XXX of urbanized land with dense neighbourhoods not being connected by tram. The metro and tram systems are poorly correlated with X % of the tram structure overlapping with the metro system creating roughly X % of redundancies.

Main conclusion: there is a mismatch between mobility needs and mobility distribution with areas being more connected while others more disconnected.
Two phenomena carve out the condition of the transportation system in the post-socialist city: the rise of automobile ownership and the decline of public transport use (Pucher, 2005).

The rise in car ownership was seen as result of the desire for success and independence of the citizen of the post-socialist city, the higher income levels of certain social groups and the ease with which one could acquire an automobile (Pucher, 2005). In Bucharest, the number of cars in 2011 was estimated at 1.3 million with an addition of 400 to 500,000 commuter cars from neighbouring areas (Nae and Turnock, 2011).

Another consequence of economic restructuring and the loss of jobs in the industrial sector is the dramatic drop in public transportation shares. Therefore, industrial estates that were once heavily serviced by public transport underwent foreclosure thus transforming the old public transport lines into redundant elements (idem).

Moreover the current trend of the post-socialist transportation policy is enforcing heavy investments in road infrastructure through road expansions and road widening. However these investments cannot keep up with the pace of motorization thus creating road congestion that blocks surface public transportation (idem). The result is a stratified distribution of transport and overall transport inequality.

In support of this, Pojani has identified two forms of transport inequality in Tirana, Albania where (Pojani, 2011):
- Inner city women, the elderly, the poor and the disabled and children are forced to rely on the public transportation system thus making them more vulnerable to car traffic;
- The stratification of income is dividing the society into those with a car and those without a phenomenon that is enforcing social segregation.

What is more, urbanization patterns are reinforcing the issue of transport inequality where suburban spatially isolated residents are forced to rely on inefficient public transportation making accessing their jobs and also amenities in the inner-city areas extremely difficult (idem).

In Bucharest, the outer urban areas present poor levels of public transportation coverage. Therefore, the lack of mobility choices and the spatial isolation of suburbia:
- Fosters inequalities between the centre and the suburbs;
Figure 8 - City profile in terms of spatial elements

- Existing box-retail
- Existing shopping centres
- Under construction
- Planned shopping centres

Source: author’s drawing from GIS processing of OpenStreetMap data - downloaded on 07.03.2013 and municipality reports
First conclusions

On a macro level it seems that Bucharest is split in two parts regarding the quality and level of its land-uses. Although the population is evenly distributed between North and South there seems to be an attrition of amenities in the more disparaged South. Thus the South is unequal to the North.

One banal conclusion is that in order to alleviate inequality one must focus on the South. However, this first reality is deconstructed and to a certain extent infirmed by decomposing the city at a neighbourhood level and examining:

► Firstly the socio-economic distribution of Bucharest in correlation with the distribution of land-uses and mobility.

► The neighborhood condition of Bucharest in terms of real-estate value, the level of development of each neighbourhood and their connectivity with regards to overall mobility.

To this the metro system is then correlated and certain inferences are drawn. The result of this first research section, corresponding to research question number one, is a development triage map that assigns areas in need of mobility or land-use or both based on high, moderate and low priority.
The correlation between the socio-economic geography and spatial structure

Notwithstanding the particularities inherent to each post-socialist city, this section identifies the social and spatial segregation patterns of the post-socialist city through a direct reference to Bucharest.

Post-socialism brought for the former socialist states considerable advantages such as social freedom, greater residential mobility, the possibility of greater financial earnings and better social status, the opening up of the countries to foreign investment and so on (Mionel, 2012). On the other hand it also brought a greater tendency for social and spatial segregation.

Segregation in Bucharest is a direct condition of income segregation through a three-fold process of (idem):

- Auto-segregation of high and middle-income groups in suburban residential developments or in neighbourhood enclaves in the inner-city.
- Segregation of the poor in specific socialist housing neighbourhoods.
- Segregation through real-estate development.

Firstly, the auto-segregation of the urban elites happened in Bucharest generally out of the desire to escape the busy city and lead a quite and comfortable life. This new ideal for a better life happened either in the suburbs or in the upper-class neighbourhoods of the inner city. It therefore generated a condition of enclaves both of suburbia and of inner city areas. Moreover these areas of concentration of the upper elites are usually accessible and present all the important city amenities. Adding to this is the fact that this critical mass of high quality residential stock, amenities and upper-classes of citizens is driving real-estate development with more and more amenities appearing in proximity.

Secondly, this started a process of gentrification of the poor. Through the push factors of income segregation, the poor population had little means to afford the rents or property in these areas and therefore were forced to relocate in other areas of the city better suited to their income level. More often than not, they relocated in socialist dormitory estates in the southern parts that presented little or no amenities.

Thirdly, real-estate development is furthering gentrification. An example for this is the Vitan neighbourhood in Bucharest. The construction of the new shopping mall in the late 1990’s generated a surge of land and rent prices while also adding enhanced visibility for the area. Therefore more gentrification happened with poorer individuals that could not afford the rising living costs being pushed back to cheaper but amenity starved areas such as old socialist neighbourhoods. At the same time, in the now gentrified quarters a cluster of upper-class retail and residential development took place.

In Bucharest, the shopping mall is a driver for growth generating higher land prices, rents and value of building stock. However it also generates social displacement.

Social and spatial distribution

- The most socially dislarged areas are not exclusively in the South. However the South has the highest concentration of problem areas.
- There is a correlation between metro coverage and socially and spatially segregated areas.
- Office and retail avoid problem areas and generally cluster in the more amenity rich high-income areas.
- Income is not the driving factor for retail location, nor is population density.
- All the ghettos are in amenity poor areas with poor metro coverage.
- The north and south have the same population numbers and density but different spatial characteristics with the north gathering all the important amenities in the city.
- Population density is usually evenly spread over the whole of the city. However the south presents the densest areas.

![Price for a two room apartment in Vitan](Source: www.coldwell-banker.ro/romana/centru_media/stiri.html)
Figure 9 - Land value, office and retail development

Source: author’s drawing from GIS processing of OpenStreetMap data - downloaded on 07/03/2013 and (Mionel, 2012)
Figure 10 - Rent prices and main spatial elements

- Highest income areas
- High income areas
- Office development
- Planned office development
- Existing box-retail
- Existing shopping centres
- Under construction
- Planned shopping centres
- Amenities
- Existing metro lines
- Slums
- Ghettoes

Source: author's drawing from (Mionel, 2012)
Figure 11 - Poverty distribution and main spatial elements

Source: author’s drawing from (Mionel, 2012)
Figure 12 - High income distribution and main spatial elements

Source: author’s drawing from (Mionel, 2012)
Figure 13 - Unemployment distribution and main spatial elements

- Highest income areas
- High income areas
- Office development
- Planned office development
- Existing box retail
- Existing shopping centres
- Under construction
- Planned shopping centres
- Amenities
- Existing metro lines
- Slums
- Ghettoes
- Chinese enclaves

Source: author’s drawing from (Mionel, 2012)
Figure 14 - Low-skilled labour distribution and main spatial elements

Source: author’s drawing from (Mionel, 2012)
Figure 15 - Upper education distribution and main spatial elements

- Highest income areas
- High income areas
- Office development
- Planned office development
- Existing box-retail
- Existing shopping centres
- Under construction
- Planned shopping centres
- Amenities
- Existing metro lines
- Slums

Source: author’s drawing from INSSE
Figure 16 - Population density distribution and main spatial elements

- Highest income areas
- High income areas
- Office development
- Planned office development
- Existing box-retail
- Existing shopping centres
- Under construction
- Planned shopping centres
- Amenities
- Existing metro lines
- Slums

Source: author's drawing from (Mionel, 2012)
Figure 17 - Segregation public perception

Highest income areas
High income areas
Office development
Planned office development
Existing box-retail
Existing shopping centres
Under construction
Planned shopping centres
Amenities
Existing metro lines
Slums
Ghettoes
Conclusions

If one were to crystalize the issue of social and spatial justice in Bucharest it would manifest in the way the city presents itself through its north and south sections with regards to both the urban space and urban mobility dichotomy and their influence in the geography of the city’s socio-economic structure.

However, although parts of the general research confirmed the author’s personal intuition regarding the social and spatial make-up of the two halves of the city what is most interesting is that the disparities do not begin and end at a macro level.

Curiously enough, the northern part also presented areas of poor accessibility and burgeoning ethnic enclaves characteristic of a struggling social status. Therefore one would speculate that potential mobility alone, meaning spatial proximity to certain land-uses, does not suffice in bringing forth social mobility and alleviating injustice.

Nevertheless, there is no doubt that an east-to-west macro divide exists, while also, within it operating smaller divides at the neighborhood level. Taking this into consideration, a three-pronged phenomena affects the overall social and spatial justice in Bucharest.

Firstly, in terms of urban space, the north is clearly the dominant side making-up for all the city’s important spatial developments. It is here where the bulk of administrative buildings, major universities, cultural facilities, public parks and office clusters are located. Overall, the north presents an urban environment of higher quality and prestige than the south.

Secondly, the urban mobility of the northern half has marginally better accessibility with regards to the important city amenities and location of jobs. Although the overall road system presents an almost even radial structure of thoroughfares the inner and outer ring roads have a better infrastructure in the north. Conversely the metro system is better developed in the north with the M1 metro ring servicing exclusively the northern part of the city while only the M2 line extends to the south. The north also holds the city’s two airports, Henri Coanda Airport and Aurel Vlaicu Airport and Bucharest’s single passenger terminal rail station, North Station.

Lastly, in terms of socio-economic structure the north is clearly the leading half of the city. It is here where the better educated, wealthier population reside, while the poor are being pushed back into disconnected neighborhoods of sub-standard real-estate in the south. Although in some northern neighborhoods there exists the formation of Chinese enclaves, the south concentrates all the city’s ghettos and slums. Furthermore, the discrepancies in economic activity between the north and the south also exacerbate this condition by creating the premise of spatial mismatch. Distance between jobs and households compounded with transport inequalities and an overall inefficient mobility system are one of the drivers for inequality.

In short inequality in Bucharest is driven by:

Land-use and income level as primary attractors for new development

The overall decentralization of uses characteristic of post-communist cities which has created an uneven city structure in terms of the geography of economic activity, amenities and housing resulting in a landscape of fragments. There is a strong correlation between developed areas and new development, in short new development tends to go into already developed areas.

The high influence that income and land-value has on development where prosperous, high-income areas are attracting more development thus becoming richer while neglected poor areas are becoming poorer.

The mismatch between mobility needs and mobility distribution

The inefficient structure of the mobility systems of Bucharest coupled with the poor integration of mobility and new land-uses has resulted in an overall poor mobility between jobs, city amenities and households, where new development is entirely car-reliant and poorly coordinated with the city’s mobility systems.

These issues were compounded in the form of a series of graphs that map out the condition of neighbourhoods in Bucharest based on the level of development, average mobility conditions, accessibility to the metro system and income level.

By mapping the neighbourhoods onto space a map of inequality has resulted.
Real-estate value ►
(in EUR/sqm)

Level of land-use development ►
(mapped land-use office, retail, knowledge, culture, public, parks)

Overall level of mobility ►
(factoring primary roads, tram and metro connections)

Metro accessibility ►
Superimposed overall mobility, metro, development and real-estate value. Several conclusions can be drawn:

- New development is driven by car mobility.
- High-income level, area prestige and car mobility are important pull factors for new development.
- New development is generally unaffected by metro accessibility.
Intervention map. Mobility and land-use development is assigned based on mobility and development needs. Large symbols indicate high-priority.
Figure 18 - Derrogations from the General Use Plan

Approved projects within the GUP
Abandoned “ghost” projects

Source: author’s drawing from www.observatorulurban.ro

Ghost projects

Out of countless projects even Zaha Hadid Architects submitted a proposal for a tower office in the north of Bucharest. Like many others this project was discontinued. Its’ only reality is the one found online (source www.dezeen.com)
Spatial planning in Bucharest

As with all post-socialist cities, since the fall of Communism, urban development in Bucharest has been exclusively at the discretion of private initiative (Nae and Turnock, 2011). Therefore, private, profit-focused interests and not the public good permeates through the urban evolution of the city.

The spatial planning document that guides spatial development in Bucharest is The General Urban Plan (GUP). It represents a masterplan of land-uses and urban design rules that structure the urban design and architectural interventions in the city. While not eliminating the usefulness of the GUP in terms of it being a structure for urban morphology, urban density and land-use, the Masterplan does present several weaknesses that hinder the development of the city.

Inconsistent reality

Firstly the GUP can be derogated through neighbourhood plans that the private developer can get approved at municipality. What this entails is a change in the GUP regarding that specific project. With countless paper designs the GUP has lost its initial consistency. Therefore, the plan does not describe the reality of the city as it is nowadays, it only describes the reality of ghost projects, designs that on paper should be there but are not.

Land + paper project, profit tool and gentrification driver

Secondly, as a spin-off effect, speculation happens where lands with approved designs have a greater value than lands with no projects. These real-estate packages of land + project are sold by the private owner at high profits. Essentially this creates gentrification because with no rent-control policies rising land-values influence the value of adjacent real-estate.

No land-use and transport integration

Thirdly, the GUP does not prescribe anything substantial regarding transportation. In this sense, although there needs to be some provisions of mobility, in general land-use allocation and mobility distribution are segregated from one another. Essentially the GUP follows the same logic of socialist land-use planning where land-use and transport were planned as separate entities.

Nedovic-Budic and Tsenkova better frame the condition of the spatial planning in all post-socialist cities:

'Master plans, or urban general plans, approved to guide urban development are often revised on the basis of short-term bargaining rather than longterm goals and objectives. All this still does not mean that the processes and initiatives for urban development and revitalization are depoliticized or unchallenged by the variety of interests and views.'

(Nedovic-Budic and Tsenkova, 2006, p 353)

Public administration in Bucharest

The administrative make-up of Bucharest is a division of six sectors with each sector having its own mayor that report to the general mayor of the city.

Although each of the sectors are free to manage their own budgets and urban land it often times creates the premise of a clash of interests between the administrative bodies that compete for development incentives rather than cooperating together for the common good of the city (Nae and Turnock, 2011).

Moreover, because of the physical administrative limits, each sector has to tackle a widespread of spatial, social and economic issues ranging from the city centre, suburban sprawl and everything in-between. (Pen and Hoogerbrugge, 2012). Therefore each sector must deal more or less with all the problems of Bucharest.

Furthermore, some sectors have specific traits such as sectors 1 and 2 being among the richest while for example sector 5 is the poorest. That coupled with a lack of integration between the administrative bodies of each sector sets the stage incoherent urban management and development strategy.

It is critical to point out the mismatch between the ever increasing heterogeneity of the spatial development of Bucharest and the homogeneous make-up of the sector limits. It seems probable that in the future each sector will have increasing difficulties in resolving their specific problems while still retaining a coherent city strategy.

Conclusions

Several conclusions can be drawn regarding the factors that affect or hinder the development of Bucharest.

► The General Urban Plan - The structurally weak and outdated Masterplan that does not portray the actual condition of the city due to endless derogation of ghost projects. It has become placeholder for paper projects and real-estate speculation.
No adopted spatial visions / strategies - Spatial planning in Bucharest is devoid of any tradition or experience with strategic / vision planning. Therefore, the lack of a legally binding spatial strategy to give direction has resulted in a myriad of projects with conflicting aims that affect the future development of the city.

No history of land-use and transport integration - At present transport and land-use in the city are handled by separate bodies. There is no regulation of land-uses when concerning mobility a condition which has contributed in a negative way to the actual reality of the city.

The planning and design process - The desire to let development entirely to private forces in an attempt to attract investment coupled with the manner in which these projects are conceived and debated has set the precipise where projects in this city give little to the public good in terms of space. That is not to say that these projects (e.g. office development) are bad in the sense that they do bring much needed economic activity however there argument must lie in the actual design quality.

Deficient administrative spatial division - A mismatch between the spatial administrative division of Bucharest and the actual spatial and social realities where certain sectorial divisions have to deal with all the problems at the same time.
Figure 19 - Spatial administrative division of Bucharest and its spatial and social condition

**INCOME**
- Highest income areas
- High income areas

**OFFICE**
- Office development
- Planned office development

**PROBLEM AREAS**
- Slums
- Ghettoes
- Chinese enclaves

Source: author’s drawing from GIS processing of OpenStreetMap data - downloaded on 07.03.2013
Figure 20 - Structure of the CSB 2035 Plan

NODES AND LAND-USE
- Inner city core
- Urban cores
- Urban sub-cores
- Stations
- Activity corridors
- Land for public projects
- Strengthening of existing areas

TRANSPORTATION
- Existing metro line
- New metro line extensions
- Existing rail line
- New rail line extensions
- Airport
- New airport
- New port

Source: author’s drawing from The Strategic Concept Bucharest 2035 (CSB 2035)
Visions for Bucharest

Research Question 3

What are the strategies and visions for Bucharest?

• The three main outcomes of the CSB are:
  - The pan-European corridors and rail stations will structure new development.
  - New metro lines sparking development in the South.
  - The Southern Ports as catalysts for the South.

Strategic Concept Bucharest 2035

The Strategic Concept Bucharest 2035 (or CSB), dating 2011, is the only recent strategic planning document for Bucharest. Although it does not have any legal power its role is to act as a guide for the future development of the city and for the future General Urban Plan of Bucharest.

Over-arching goal

The CSB tries to transform Bucharest into a more competitive and attractive city on the European sphere, a city with a strong identity.

Strategic objectives

► An educated, socially inclusive population that can react to challenges.
► High quality of social services.
► Healthy and safe living environment.
► A capital connected to its regional settlements and to the pan-European corridors.
► An even, balanced and dynamic structure of economic activity.
► A carefully planned, managed and evaluated urban development.
► A capital with a strong urban identity.
► An efficient and cooperative public administration system.
► A sustainable management of energy and waste.

Policies

Policies regarding mobility and the public administration system have been selected. Policies related to land-use and social segregation have not been identified in the document.

Mobility

► An integral development of rail transport.
► A better functioning public transportation system.
► The promotion of sustainable transportation.
► The encouragement of pedestrian movement through the development of a pedestrian network.
► A park-and-ride policy.
► Exclusive inner-city pedestrian and public transportation mobility.

Public administration system

► The optimization of the functioning capacity of City Hall and personnel training.
► The encouragement of dialogue between the community and the public administration and decision making system.
► The establishment of an administrative body to monitor, plan and evaluate the urban development of Bucharest.

Addressing mobility and uneven development

The strategy is a disguised TOD implementation for Bucharest. What it does is to propose an improved overall mobility structure for the city by distributing new mobility in disconnected areas in the attempt to even out future development in Bucharest. These areas are usually in the South.

Notwithstanding the fact that this is quite an extensive document with many implications and prescriptions, three main strategy directions can be extracted as core-actions for the strategy.

New metro lines sparking development in the South

Secondly the strategy connects several struggling areas in the South with the rest of the city via new metro links. These metro lines are seen as development corridors that if successful will bring new development into these more disparaged areas.

The pan-European corridors and rail stations

Firstly, the importance of the pan-European rail corridors is recognized. This together with the rail structure of the city assigns rail station as new incentives for development.

The Southern Ports as catalysts for the South

Secondly, the strategy proposes two main projects, that of an airport and port to the Danube in the southern region of Bucharest. These are seen as catalysts for development and will speed up investments in the South. The desired effect is that the South through these projects and more local interventions can play catch-up to the more developed North.
Scenario 1. Business as usual

At present development in Bucharest happens out of private initiative and is exclusively driven by income speculation.

Out of this condition and others identified within the research the structure of the city has become uneven and uncontrolled. To put it shortly, income-driven development made it so that specific affluent areas in the North of Bucharest attract even more development. Furthermore, by examining future projected office development and major retail boxes, specific areas in the North will, for the coming future, remain as sole attractors for investment. These areas will in the future become development paradises.

Moreover, this continual dispersal of land-uses based that is also characteristic nowadays of Bucharest will overstretch the limitations of the mobility systems further segregating the already vulnerable socio-spatial structure of the city. Although there is some interest in future housing in the South, its inherent nature of the enclave, renders it oblivious to the current needs of the city. Its suburban, non-integrated by public transportation character is however toxic to the overall mobility of the city.

That being said, there is some interest in the South, especially when isolating on retail development. However, without any involvement from public actors, private initiative will, at best, firstly focus on the most suitable areas to invest in here. If retail is to follow the same trend of income speculation then areas that are in most need of development are of low-priority.

Therefore if the South is going to develop because the North is over-developed and land-prices will have reached extreme values, as it happened with city centers of all post-communist countries, what will matter is how this development is going to take place. Simply put, with time things will get better and the South will attract development, that is inevitable however, what is important is addressing the when, how and for whom questions that now seem to go unanswered.

- When will the development gap be overcome?
- What form will new development take in these locations?
- How will this affect the local socio-economic geography?

Scenario 2. Top-down implementation

With a strong and decisive input from the government and municipality there will be an accurate prioritization of development in Bucharest. Specific areas in the city which lack development will be assigned top priority and the municipality will make sure that these areas are being development not only to benefit the investors but also, through a careful consideration of project design, there will be some return to the public goods of the city (such as public spaces and social program). This could be called, development triage, where sick areas are assigned as top priority for development.

Furthermore, the municipality will play a strong role in implementing the mobility strategy. If this would to happen then the city will have a superior connectivity, disconnected and dense areas will be provided with much needed metro and tram connections that will make jobs and amenities easily accessible.

Thus by using the newly created high connectivity to drive future socially conscious projects, weak areas in the city will gain much needed social program and public amenities that will help alleviate some of the social pressure and vulnerability of disparaged social groups.

However, the simple condition of post-communist institutions coupled with the Romanian experience make this scenario overly optimistic and extremely futuristic. In a city that has not built any public goods over the 20 last years apart from modest investments in infrastructure, while always struggling to attract development and to improve its economy it seems highly unlikely that all of a sudden development in Bucharest will undertake a complete turnaround.

Scenario 3. A mix of both

Development in Bucharest will most surely continue to be out of private initiative in the future. It is the job of the municipality to attract investors and guide development so that it benefits the city as a whole and not just private interest.

That being said, it is safe to speculate that without certain incentives for development it is improbable that developers will be interested to invest low-income and disparaged areas. What seems most probable is a scenario where both the city and the developer will benefit from new development.

Therefore it is crucial to point out that mobility, as being the sole responsibility of government and the municipality, can become one of the incentives for development while also bringing much needed economic activity to the city as the construction sector is deemed as having a high potential to stimulate and improve the economy.

With this in mind, it is perhaps better to frame the issue not as a prioritization of land-use development with a very strong top-down influence but more as a set of stages of investments in
mobility, which, if successful, will bring much needed incentives for development in disparaged and disconnected areas while connecting those areas with the rest of the city.

Though it seems as it would be a question of the chicken and the egg, of what comes first, the chicken (land-use) or the egg (mobility) as both need the other to exist, if one were to base the argument on Bucharest’s current condition of congestion, transport inequality and spatial segregation then mobility needs addressing first.

▲ Scenario 1. Projected income-level of Bucharest’s neighborhoods

In time poorer areas will attract development however the overall difference between well-off areas and disparaged ones will increase.

▲ Scenario 2

Through top-down development there will be a prioritization of inequality where disparaged areas will receive the bulk of development. Therefore the overall difference between areas with regards to development and socio-economic structure will be negligible.

▲ Scenario 3

By using development incentives in disparaged areas to attract new private development these areas will grow. The problems of inequality will not have been fully resolved however, poor areas will fully benefit the trickle down effects through improved mobility.
Metro (red) and tram (black) as the backbone of public transportation in Bucharest.

The road structure. A concentric structure of rings and transport corridors meant to decrease inner city congestion through mobility options and park&ride stations.

The rail stations. Multi-modal transport-oriented-development as incentives for developing disparaged areas.

Industrial brownfields. Along newly formed transport corridors as development vectors the dead space of Bucharest will be turned into a new breed of mixed-use development that will improve the spatial, social and economic conditions of the city.
Describing the future of growth in a post-communist metropolis

A flexible, resilient system of mobility that can feed off of potentials and can incorporate future structures in a greater whole.

Vision

As a capital of a former Communist state, Bucharest can hardly evade the effects brought on by its past ideology. However, it is ironic that the present condition of the city is as much a result of the last 20 odd years of democratic misguided development as it is of its former authoritarian one.

What is even more surprising is that Bucharest’s Communist inheritances and its’ post-communist condition have the potential of becoming important drivers in shaping its future development.

In 30 years’ time Bucharest strives to become a more equal and just city through an integrated land-use and transport spatial structure.

Over-arching goals

Based on previous investigation the strategy proposed three over-arching goals as guides for the whole development:

Connectivity – Bucharest strives to become a more mobile city where its spatial amenities are easily accessible by its inhabitants, greatly supporting their lives.

Cohesiveness – Bucharest will become a more balanced, socially and spatially cohesive city providing spatial equity for its inhabitants.

Cooperation – the governance system will be efficient, transparent, decent and accountable and will help and guide future developments of the city and raising the overall quality of life.

Main strategic objectives

► To improve the overall mobility between households and city destinations (jobs & amenities).
► To rebalance the spatial unevenness of Bucharest by assigning a new polycentric structure for development.
► To revitalize disparaged areas by introducing new activity here through new jobs, amenities and mixed-use housing.
► To improve the overall social mobility of the city.

Main strategic elements

Two synergistic public transport networks. Metro and tram

At present, Bucharest’s metro system is keeping the city alive and mobile. The metro represents the city’s singular high-capacity, fast, efficient and comfortable public transportation system. The metro bypasses urban morphology and condenses time and space. Destinations are easily within reach if they are serviced by a metro station.

However the current metro structure is incomplete. Only two out of the total four metro lines fully extend into the city’s fabric servicing, apart from the city center, dense residential neighborhoods. The remaining residential stock is forced to rely on other means of transportation that use the highly congested road system of the city.

It is of no surprise that almost all of the problem neighborhoods are not linked to the metro system. Be that as it may, it is unlikely that any metro system will ever be complete as its inherent condition is that of an evolving structure.

Nevertheless, improvements to the metro structure can have a huge impact on the whole overall accessibility of the city. Developed cities tend to have developed metro systems with the two of them evolving off of one another.

The New Metro System

The strategy assumes the role of the metro as the backbone for fast, high-capacity passenger mobility. For this four new lines and two surface rings are proposed.

The tram. Feeder to the metro.

One of the main weaknesses of the public transportation system of Bucharest is the poor coordination between its transportation networks. To redress this the current tram structure will undergo two changes.

Firstly an optimization strategy is proposed where all possible coverage redundancies between the metro system and the tram...
system are removed. Secondly, where metro lines do not have the possibility of extending, the tram will supply the need for mobility. The new and improved public transportation system will be two intertwining networks, one primary network for fast, long travel, high-capacity mobility (the metro) and one secondary for short travel, low-to-mid capacity mobility (the tram). The secondary tram network will function as a feeder system for the primary metro network.

The new roads of Bucharest. A system of rings and transport corridors

The present major road system of Bucharest is a radial structure of thoroughfares crossing the city center. What this means is that all major traffic crosses the center which has become a car-paradise. Because of road topology and volume of road traffic the road system of Bucharest presents high levels of congestion and pollution.

Moreover, today’s car ownership share is estimated at 1 car per every 1.6 city inhabitant. That makes up for a total of over one million cars on the city roads, this not counting incoming traffic from neighboring settlements.

Fortunately Bucharest already has a recently completed inner ring road (R1) and although the infrastructure for the outer ring road is underdeveloped its completion is entirely feasible. A new middle ring road (R2) will complete the road structure.

Thus, regarding road infrastructure Bucharest will possess a system of three ring roads (inner, middle and outer; dubbed R1, R2 and R3 respectively) that are connected by transport corridors assigned on the city’s major thoroughfares. The new structure will assure that heavy traffic is diverted from the city center and onto the new rings and radials.

However, it is a known fact that increased density of road structure, even with an improved road structure, will eventually generate more traffic. Therefore, although one of the desired effects is to increase the efficiency of road travel and reduce congestion, there needs to be a solution for reducing the number of cars on the roads.

A somewhat strange benefic side of Communism is that it had imposed low car ownership rates and regulated the number of cars on the roads by law. Thus, after the fall of Communism, the car has risen to become an important gauge for social status and a sign of personal freedom and seamless mobility. Unreliable, slow and inefficient public transportation systems do not make adequate alternatives for the car.

Therefore, park and ride facilities will be proposed in close conjunction with the road system and the two public transportation networks. The assumption is that the new developed metro structure of Bucharest will convince people to leave their cars and settle for public travel.

Industrial wasteland. Space for the future

Reusing the old industrial stock in the first years of post-communism was problematic due to complex ownership schemes and high technical and environmental costs attributed to reuse-and-restore projects. This fueled the already burgeoning patterns of decentralization developments towards the city periphery.

However, at present former industrial platforms represent the city’s prime reserve for developable land. Moreover, their geographic location in the city structure adds weight to their potential for future development.

Firstly, these areas already present an overall good level of connectivity both to the road structure and public transportation systems, although not all platforms are serviced by the metro system. By reinforcing their overall accessibility through an improved mobility strategy of metro, tram, road and rail, the potential of these areas of becoming important city nodes is immense.

Secondly, the industrial areas are evenly spread throughout the whole structure of the city, both in the north and south sections. Therefore the conditions are set for the south side in catching up with the north in terms of economic activity and city amenities.

As such, the strategy will assume the role of the industrial brownfields as prime locations for the development of new city nodes. These areas will be fully linked to the city’s new transportation system and will provide a supplement of mixed-use development (live-work-leisure) that adds vitality to the neighboring households.

The Rail Stations of Bucharest. Drivers for new development

At the level of European Union transport policy, Bucharest will be linked with Europe through two future pan-European transport corridors. Corridors 4 and 9 will fully integrate Bucharest with major European cities East-to-West and North-to-South respectively.

While the proposed road structure with outer-ring road R3 will provide junctions with the road corridors 4 and 9, the current rail infrastructure is underdeveloped to support the new pan-European rail links. However, the city’s ample disused reserves of rail infrastructure have the capacity to achieve the new links while also creating a new coordinated metro-tram-rail structure for the city and its neighboring settlements.

Therefore, by coordinating between existing rail infrastructure, metro and tram, road structure and industrial wasteland four new stations coupled with the existing North Station and the now defunct Obor Station are proposed as emerging nodes for development. Out of the six stations four are located in the north while two new stations are in the south as drivers for regeneration.

Overall, the stations of Bucharest will fall in the lines of fully transport-oriented-development and will support the urban mobility and land-use strategy for the whole city.

The southern ports

The ports can become important catalysts for pushing for a more developed South. By linking the new ports in the south region of Bucharest to the city’s fast transport system a corridor development type condition can be attained that will fuse between the ports and the South Station. However, because their condition is uncertain the strategy can function without them by not hinging the a huge part of the development of Bucharest on them.
Strategy map

MOBILITY

METRO

- M5
- M6
- M7
- L1 - Light rail (connecting N-S)
- S1 - Light rail (middle ring)
- S2 - Light rail (outer ring)

TRAM

- NEW TRAM LINES
- EXISTING TRAM LINES

ROAD

- NEW MIDDLE R2 ADDITIONS

RAIL

- EURO RAIL LINES
- NATIONAL RAIL LINES
- REGIONAL RAIL LINES

DEVELOPMENT

- Existing stations to be transformed
- New Multi-modal stations
- Development corridors
- Mixed-use development (social program, office, retail, culture, housing)

- Existing airports
- New airport
- New port
**Phase 1 - Mobility** - 2 New lines

This represents the kick-off to the strategy. Areas that are in dire need for mobility are connected via two metro lines to the city’s metro system. This phase is essential for the success of the strategy as it initiates the first stages in the new structure for mobility.

**Effects**

A better connectivity of disparaged areas to the city.
Improved connectivity between neighborhoods and jobs

**Spin-off effects**

Because of added metro density road traffic and surface public transport improve.
The improved mobility can generate potentials for social mobility in these areas.
Small development starts to appear around new metro stations and along metro lines.

**Phase 2 - Primary Mobility** - South integrated

The West-to-East relationship of the South will be strengthen by initiating the first construction of the middle ring road additions. This, coupled with the new surface metro lines will improve the lateral mobility of these areas. It is important to point out that because this phase will complete the mobility structure of the city it is critical for the new development of the South as it will link development here with the rest of the city.

**Effects**

An improved mobility structure for new South development
Improved mobility choices for the South and faster West-to-East movement.
Park and ride facilities near transport nodes to discourage private transport and decongest the center.

**Spin-off effects**

Surface transport is improved because of the almost complete middle ring road.

**Phase 3 - Secondary Mobility** - Further neighborhood integration

This phase represents the final piece before commencing new development. Now that these areas have a good structural base for fast, high capacity mobility via the new metro lines and road additions the stage is set for further neighborhood integration. Therefore the local tram structure will be improved through a two-stage operation of densification and optimization.

**Effects**

Improved accessibility to the metro.
Better neighborhood mobility.
Faster access to the city center.
Faster access to park amenities near the center.

**Spin-off effects**

Social spill over effects between better-off areas and poor areas.
The southern Ferentari neighbourhood can faster access southern amenities to the South-East.

**Phasing**

- **Start phase 1 - The two metro lines**
- **Start phase 2**
- **Start phase 3**
- **Phase 1 complete**
- **Start phase 2**
- **Start phase 3**
- **Start development**
- **Critical mobility complete**
- **Start phase 5 - The first two stations**

**Critical development complete**

**Main mobility Critical phase**
Phase 4 - Mobility + Land-use. Kick-off to TOD

Now that the city has a good base of mobility and the issues of mismatch between mobility needs and mobility distribution have been improved new land-uses can be introduced in these mobility rich but disparaged areas. New land-uses introduced can be office, retail, mixed-income housing, space for creative and start-up companies with public & leisure functions.

Effects
Revitalized dead neighbourhoods by introducing new program and public facilities and achieving the first step towards a more even development of the city.
Complete middle ring road with park and ride facilities creates the premise for a more car-free city center.

Spill-over effects
Greater social mixity and greater improvement of social mobility for lower classes.
A better connection and accessibility of the city center.

Phase 5 - The two railstations. Setting the stage

This stage is when Bucharest truly goes European. The new rail stations will integrate with the two proposed pan-European corridors to put Bucharest on the map. Now that the city already has a better performing mobility system the stations can be linked to it and to each other by a new light rail line that uses the existing but disused rail structure. Therefore the stations can be used as catalysts and incentives for new development in these areas.

Effects
New mobility in new performing areas.
Greater modal integration of international, national, regional and urban scale.
A critical mass of economic activity.

Spill-over effects
Increased visibility for the city generating an influx of migrants and FDI.
More opportunities for employment for the whole city.
Possibility of establishing new connections on a territorial scale.

Phase 6 - Bucharest on the European map

This stage represents further refinement of the mobility and land-use conditions previously established. The South receives another station in an important transport node while the new station in the North becomes a truly interconnected CBD.

Effects
New job generation.
Location of foreign companies.
Living and working paradise.

Spill-over effects
New companies choosing the station areas as headquarters.
Enhanced visibility of Bucharest on the European scale.
Reasoning for the development model. The case of transport oriented development

Transport oriented development describes the physical integration and linkage of public transportation investments and land development at or near a station (Cervero, 2012).

Aims that conform with the strategic approach

The main aims of transport oriented development are:

1. To encourage public transportation and reduce traffic congestion while improving environmental quality
2. To revitalize urban districts
3. To encourage the production of more affordable housing
4. To stop the consumption of agricultural land and open space

What are the main benefits of TOD?

From Transit-Oriented Development and Joint Development in the United States: A Literature Review, transport oriented developments have shown:

► Provide mobility choices. By creating “activity nodes” linked by transit, TOD provides important mobility options, very much needed in congested metropolitan areas. This also allows young people, the elderly, people who prefer not to drive, and those who don’t own cars the ability to get around.

► Increase public safety. By creating active places that are busy through the day and evening and providing “eyes on the street,” TOD helps increase safety for pedestrians, transit-users, and many others.

► Increase transit ridership. TOD improves the efficiency and effectiveness of transit service investments by increasing the use of transit near stations by 20 to 40 percent, and up to five percent overall at the regional level.

► Increase households’ disposable income. Housing and transportation are the first and second largest household expenses, respectively. TOD can free-up disposable income by reducing the need for more than one car and reducing driving costs, saving $3000-$4000 per year.

► Play a role in economic development. TOD is increasingly used as a tool to revitalize aging downtowns and declining urban neighborhoods, and to enhance tax revenues for local jurisdictions.

► Contribute to more affordable housing. TOD can add to the supply of affordable housing. It was recently estimated that housing costs for land and structures can be significantly reduced through more compact growth patterns.

Phase 7 - Development vectors. Final integration of industrial dead space.

This phase represents the final stage in Bucharest’s track towards a true European capital. Once the mobility conditions have been improved for much of the urban area of the city, the municipality can start thinking of extending the fast transport lines towards the outer ring belt. By doing so, a coherent greater mobility structure can be created. These transport corridors, coupled with the present ones can be regarded as development vectors that will integrate all of the remaining industrial wasteland of the city into a complete TOD model.

Effects

A complete mobility structure for the city and its urban fringe.
Final integration of industrial wasteland.
New economic activity and new exposure for the city.
Newly integrated space can become a true system of international production and networking.

New metro lines driving bottom-up processes ►
(Phase 3)

New metro infrastructure will decongest the major thoroughfares and set the premise of new additions to public space and green land.

The new road structure as an alleviator for congestion and catalyst for new public space and public transport efficiency ►
(Phase 4)

The new additions to the road structure will greatly improve mobility conditions throughout the city and help decongest the center. The major roads here can be narrowed as they are no longer the primary arteries for car mobility. In doing so new public space and bus lanes can be introduced.
1. Overview

The empty urban island represents the project site. During communism here operated a state controlled company (ROCAR) manufacturing trucks and busses. Industrial activity was driven by the rail lines that run parallel to the site. This industrial estate, among many others, faced the consequences of economic restructuring. After communism the company was foreclosed and the land was bought off by private actors. The rail lines followed the same logic and now they are disused although still controlled by the Romanian state.

Because of poor connectivity to the city center while also being engulfed within a poor area with little economic interest this land has remained empty and fenced-off from the rest of the neighborhood. Two main spatial elements proliferate in the area, namely the socialist housing block and the detached house while amenities are scarcely to be found.

2. Extreme poverty. Dilapidated socialist blocks and detached houses side by side

Although living in poor conditions, these people are owners of their land and within in they have created a microcosm that supports their lives.
South Station
Establishing growth in one of the most depressing areas of Bucharest

Premise
One area in the South that calls for immediate attention is the Ferentari neighborhood. Since the fall of Communism there has been little activity in this area and nowadays it is one of the most infamous neighborhoods of Bucharest.

The reasons for pursuing this project are several.

Firstly, this area seeks immediate attention regarding mobility as it is one of the most disconnected areas within the city.

Secondly, regarding land-uses there is hardly any economic activity in this neighborhood nor there exist any amenities.

Thirdly, this area has an important strategic role within the mobility logic of the city as it is here that one of the Euro rail corridors will pass. Most importantly, the disused rail structures present on the site can be linked with the north station development to better link these areas between them.

Lastly, this area represents an important potential for development as it is unoccupied by any built structures.

4. Perimeter condition
The perimeter of the site is bounded by single detached houses. This requires attention when thinking about the major infrastructure pipeline that will connect this area with the rest of the city. Moreover, this perimeter residential line can become an convincing premise to exploit the opportunity of social program and public space.
Main problems

There are many problems inherent with this area and with the whole South. However there are several critical issues that must be addressed before commencing upon others. These can be divided into issues concerning mobility, urban space and societal make-up.

Mobility

► Disconnected area with low mobility options to reach city amenities and jobs.

Urban space

► Monofunctional area with little or no amenities.
► Mismatch in urban morphology between site and neighborhood areas resulting in low permeability and low pedestrian accessibility.
► Overall poor quality of urban landscape.

Socio-economic condition

► High degree of social vulnerability and social inertia.
► Makes-up for the poorest areas of the city.
► High concentration of young population.
► High concentration of low educated inhabitants.

Project aim

Taking the critical problems into considerations, the main vision for the area is to become a more vital part of the city where the local inhabitants can enjoy new amenities while also have new employment opportunities. The overall objectives can be ascribed as four main desires:

► To improve the mobility conditions of the area both on an urban and neighborhood scale.
► To introduce public uses and social program to strengthen community relationships.
► To further improve accessibility through the TOD model.
► To provide much needed social program and jobs in order to improve social mobility and economic level.
► To transform this area into a vital neighborhood interconnected within the city.

Phase 1 - Iteration 1 - Critical Mobility + Initial social program

The first phase begins so as at to be completed just in time with the new tram in the area. This stage introduces the first public amenities in the area: the linear park and the community center. Consequently, new social housing together with mixed-functions at the groundfloor will be completed.

Effects

Better neighbourhood inter-connectivity and better accessibility to the city center.
First signs of economic and social recovery through the new uses.
New amenities to be used by the inhabitants.

Spin-off effects

Visibility for the area. First signs of public support.
Better social cohesion and first signs of economic recovery.

Phase 2 - Mobility - Light rail kick-off and complete social housing

This phase starts the light rail construction needed for the next phases. Also

Effects

Better housing provision for the area.
Improved connectivity between neighborhoods and jobs

Spin-off effects

Because of added metro density road traffic and surface public transport improve. The improved mobility can generate potentials for social mobility in these areas.
Small development starts to appear around new metro stations and along metro lines.
Phase 3 - TOD - Station, light rail and first office tower

The first phase of the TOD will start after a gap of two years from the final completion of the social project. During this time municipality can gather support for the TOD and complete the PPP procedure. Also during this time the social conditions here will have time to improve. The light rail will completely integrate this area with the metro system of the city. The station and first office development will bring new economic activity.

Effects

Fully developed urban mobility. This area is now connected within the mobility system of the city. New economic activity and superior program in the area increases social mobility and personal income.

Spin-off effects

Increased social mobility. Local population can gain access to new jobs introduced.

Phase 4 - Complete TOD - Complete rail lines, office, cultural prism

The final phase will complete the transportation structure for this area. The two rail lines, Euro-rail and regional-rail will integrate this area both internationally and nationally. Three new mixed-use towers are completed furthering the economic benefits previously created.

Effects

Complete mobility and connectivity of this area to the city, region and Europe. Complete range of amenities, jobs and housing provision in this area.

Spin-off effects

Because of added metro density road traffic and surface public transport improve. The improved mobility can generate potentials for social mobility in these areas. Small development starts to appear around new metro stations and along metro lines.

Final land-use condition

The design phases are implemented as autonomous projects. The most critical part of the whole implementation is complete at the final steps of the second phase. The linear park with allotment gardens is seen as the first initial step in creating the community building social program (1st iteration). It is not to say that the project can stop here, however, if it should happen by some unforeseen events, the area will have already gained quite a lot.

Regarding land-use the center of the project site holds the bulk of formal program and the new station. Densities here are higher than the whole neighbourhood and regress towards the outer site perimeter where densities are more attuned to local neighborhood conditions.
Four design principles inform the whole design process.

► Firstly, by moving the infrastructure pipeline within the heart of the project site the neighbouring areas are shielded from traffic noise and pollution. This condition is further augmented by sinking the rail lines below street level in order to not hinder pedestrian movement.

► Secondly, the idea of two overlapping grids was used, a pedestrian grid which falls in line with the present street logic and a “dumb” grid which provides for adequate urban island for new development. The desired effect is to re-stitch the urban fabric and achieve a coherence of scale and a pedestrian friendly environment.

► Thirdly, by exploiting the present condition of a perimeter of residences the outer edge of the project site was treated as a sort of community boundary that interfaces with the neighborhood. This informed the linear park and the edges of social housing.

► Lastly, the overall design falls in line with TOD concepts. As such, the greatest density of development will be around the station. Here is the business, commercial and cultural heart of the area. Lower densities are to be found at the northern and southern tips of the project site which are serviced by tram, these areas are also the social part of the development.

Maximum density was kept around the station where the main business heart of the project is located. The development further interfaces with the existing neighborhood through the linear park and social housing at a lower density and height.
Project implementation

A project of this social and spatial magnitude requires careful consideration to assure the successful implementation of all its objectives. Because of its two-fold manifestation, firstly that of a social project and secondly that of a TOD project, the project must balance-out two seemingly different and opposing directions. However, this issue can be addressed by following the same logic of the strategy and establishing a priority of intervention with regards to its iterations.

The first iteration will be mostly concerned with neighbourhood mobility and social program in order to improve the social and urban conditions of this area. If proven successful the effects of this will alleviate some of the social vulnerability in the area and prepare it for the coming TOD development. More so, during this first period of development the municipality can refine policies concerning rent-control in order to discourage gentrification and lastly, can use the success of the first phase in order to promote and generate support for the next iteration.

The second and final phase is concerned with true TOD principles. Therefore by introducing a new multimodal station (South Station) together with high-order program such as culture, office and retail, mixed-income housing, economic activity will be improved together social mobility. This project phase will be implemented through a PPP business model in order to firstly overcome financial gaps and secondly to shift part of the risk to the private sector.

Main Stakeholders and roles

Civil society

The civil society is formed by several associations that specifically have an interest in Ferentari as a whole. Their main roles are:

► To give voice to the local inhabitants by interfacing between them and more active stakeholders.
► To work together with the municipality of Bucharest to provide ideas for the implementation of social functions in the area.

Public actors

The Romanian State

Will oversee the TOD development and assure that the project goes accordingly. The Romanian State will:

► Assure that the PPP contract is respected.
► Provide the legal framework for the PPP.
► Intervene on legal grounds if PPP is not respected.

The Municipality of Bucharest

The Municipality has several roles. It will own the social program of the first iteration together with the public park. During the first iteration it will generate support and prepare tender documents for the PPP. Its main roles are:

► To buy the land through public purchase.
► To subcontract various companies into the designing, building and operation of the first iteration.
► To assure that civil society is an active collaborator in both iterations of the project.
► To generate political, public and private support for both projects.

Private actors

The private actors are various investors, sponsors and developers. They can be both local and foreign. Firstly, they will form a PPP contract for both iterations with the public actors and civil society. If they are determined to invest in the first iteration they can receive development incentives. These can be take the form of higher densities and cheaper land purchase. In general the roles of the private actors will be:

► To provide capital finance for the project
► To design - build - operate the Station and infrastructure for the duration of the PPP contract.
► To return the Station and infrastructure over to the public actors according to the contract parameters.
► To invest, design, build and operate land-uses around the station.
SOCIAL ITERATION
- New tram mobility
  - The Linear Park
- Community center
  - Homeless shelter
  - Infant daycare
  - Positive youth development facility
- Open market
- Social housing

PUBLIC ACTORS
- Romanian State
- Bucharest Municipality
- Romanian Railways
- Bucharest Metro Company

PRIVATE ACTORS
- Local and foreign developers
- Sponsors and investors
- Investment Banks

CIVIL SOCIETY
- Ferentari Housing Assoc.
- Bucharest for the Homeless Assoc.
- Fighting child abuse Assoc.
- Farmers of Bucharest Assoc.

TOD ITERATION
- MOBILITY
  - South Station
  - Euro rail
  - Regional rail
  - Urban light rail
- LAND-USE
  - Office and retail
  - Culture center
  - Public space
  - Housing

PPP contract
- Invest own & operate

PPP handover
- Invest own & operate

Ideas
- Invest & receive incentives
Reflection

Through this thesis I have tried to examine the several ways in which the urban space of Bucharest together with its most popular elements of spatial production and the logic of the city’s mobility systems affect social and spatial inequality. Thus, the issue inequality was used as an over-arching theme and as a way to give aim and purpose to the whole research process.

There are several reasons for approaching the post-communist city and Bucharest via the relationships between urban space, mobility and inequality. The results of the research can be ascribed to a three-fold phenomena.

Firstly, regarding new urban space, the present condition of development and the income-level of the local population are important pull or push drivers for new development. Almost entirely private, new development in these cities tends to populate already developed areas.

Secondly, regarding mobility, new development is more interested in car mobility than anything else. This creates the condition where certain new land-uses locate themselves around and along major roads while generally ignoring public transportation. This also happens due to the nature of spatial planning here which does not integrate land-use and mobility into one structure whole. In short, these cities are perfect examples of mismatches between mobility needs and the distribution of mobility.

And thirdly, from a societal standpoint, post-communist societies segregate themselves based on shared traits within the community. Given all of this, there is a low degree of social mobility within the post-communist city where the gaps between rich and poor seemingly get steeper.

So one can ascribe post-communist cities as a plurality of systems that more often than not function independently from each other. As with Bucharest, I have tried to describe the city as a product of the exquisite corpse process as Bucharest is a compound of spatial contradictions that are what gives the city its identity. Sadly, the city is also an archipelago of inequality that needs addressing.

By examining Bucharest as a case-study by using several methods of mapping, literature review, interviews and documentation of various reports on the city a map of inequality was created. What this represents is an actual prioritization of development in the city, in short it tells us what areas need better connectivity or more land-use development. In a way, it is similar to a node-place model for usual TOD analysis.

It is safe to say that any strategy on this city cannot be treated as a blueprint phenomenon. Bucharest simply does not possess either human or financial resources to implement any grand schemes to the letter. Taking this into consideration, the strategy was treated more like a chain of events that have to happen in order to achieve the goal. More so, each event represents an incentive for its subsequent event and while traversing this series of events the process gains momentum.

While each event affects the city on a structural level there are several phases which are critical for the city. For instance if the strategy stops after the first chain of three phases the city will have create a structurally sound mobility system and, although not perfect, so much has been gained.

The strategy therefore is a sort of compromise or bargaining tool where, certain pieces of the strategy can be replaced or even ignored. So the argument lies not in the idea of complete achievement but in a process that strives for a goal.

As such, the actual design is in a way a fractal mirroring of the strategy, a process more than actual design. It is important to mention that in a context where hard and fast measures need to be taken the way in which the design will actually look is less important than the manner in which it will perform. Therefore, project design here takes somewhat of a backseat to project implementation.

To conclude, it is not a matter of reverting the exquisite corpse. At least for the coming years, development in Bucharest will be an entirely private affair. However, by giving certain incentives to private enterprise, the municipality can assure that new development generates a cohesive structure within the city. And by prioritizing the sequence of new mobility projects, it will make sure that the newly connected areas get their fair share of development.
Inequality and mobility


The Post-socialist City


Bucharest


Urban models


Transit-Oriented Development and Joint Development in the United States: A Literature Review, In Research Results Digest, October 2002, No. 52