access to the city for everyone
planning and spatial strategies to counteract residential segregation in Bogotá

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Graduation Project Msc Urbanism
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Graduation project report
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The following report presents the project ‘access to the city for everyone: spatial and planning strategies to counteract residential segregation in Bogotá’ developed as a graduation requirement of the mastertrack in Urbanism of the MSc in Architecture, Urbanism and Building Sciences programme of Delft University of Technology. This graduation project was developed within the last year of the programme (2012) with the collaboration of the Complex Cities graduation studio, which deals with understanding the spatial organization of cities today through the integration and comprehension of different approaches towards the built environment.

The development of this thesis was led through the simultaneous study of two subjects: on one hand, socio spatial segregation as a phenomenon in the context of Latin American cities; and on the other, the ongoing formal housing shortage present in these cities that afterwards entailed the study of social housing provision for the case of Bogotá city in Colombia. Laying down these two topics later permitted to develop a framework on which the initial qualitative research and subsequently the definition of the problem statement and final recommendations positioned. Therefore, the report is structured in six chapters that deal with the different stages undertaken during the entire process: research questions and methodology; theoretical framework; analytical framework; empirical framework and evaluation where the final conclusions and recommendations for further research are included.

Several persons and institutions helped me during the development and culmination of this graduation project and I would like to extend my gratitude to all of them. Firstly, I want to thank to the cooperation programme between The Netherlands and Colombia established through the Netherlands organisation for international cooperation in higher education (NUFFIC) and Delft University of Technology for granting me with this wonderful opportunity to study abroad and learn about Urbanism, multicultural environments and Dutch culture. Without this support, this dream and project could not have ever been realized. Likewise, I would like to thank my family who have always supported me in my academic endeavours and Jose who had to develop a passion for urban topics to be able to discuss with me the contents of this graduation project and which debates subsequently helped me clear my mind in several occasions. Thank you for your patience and support. Additional thanks go to my dear friend and colleague Catalina who helped me during this process with information about the city.

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This graduation project stands for the culmination of my studies at TU Delft and my stay in The Netherlands. It has been a great opportunity to learn and experience education in other context and TU Delft has become the perfect environment to question and challenge myself regarding future professional and academic life expectations.
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introduction

The study and comprehension of cities development processes becomes nowadays more relevant not only for academics but also for planners involved in practice, policy makers and other groups concerned with urban space shaping. On one hand, it is already known by the ‘state of world population report’ of United Nations, that about one in two persons of the worldwide population now live in an urban area (UNPF, 2011). Secondly, it is recognized that cities are places where production, circulation and consumption of assets and ideas take place by the means of spatial proximity. Although this condition is suitable for the concentration of wealth in cities, it also affects their socio spatial configuration when is exclusively based in the profit making capacities of land use value (Lefebvre, 1996 [1968], 2003 [1970]; Castells, 1977 [1972]; Harvey, 1973 in Brenner et al., 2009). Moreover, urban development especially under capitalist systems, is set in the middle of social and political clashes and embedded in conflicts between strategies for capital accumulation and satisfaction of social needs (ibidem).

These situations have raised concerns about human rights and the role of these ones in the urban environment (McCann, 2002; Harvey, 2008). Moreover, the right to the city is now considered in international debates (HIC-AL, 2008), and its definition as a concept now entails discussion in theory and practice of urban planning and city management. It is within those fields, due to the capacity they have to shape reality, where it is imperative to keep asking: what should be considered socially just in matter of planning policies, strategies and instruments?

With this in mind, the graduation project presented in this report: Access to the city for everyone: Planning and spatial strategies to counteract residential segregation in Bogotá attempts to reflect on the broad question mentioned above in a specific context -Bogotá city- and on a specific subject -the articulation of planning and spatial strategies for the counteraction of residential segregation negative effects and provision of social housing in inner city areas of Bogotá-. It does so, by reflecting first about socio spatial segregation in the context of Latin America, to subsequently study its different expressions for the case of Bogotá along with one aspect of the phenomenon: the provision of formal development of housing for low income population groups. Furthermore, an articulation between spatial interventions and planning instruments in different inner city areas is proposed as part of a deconcentration and diversification strategy of the social housing supply in the city.

socio spatial segregation in Latin American cities

The conflicting situations described above are even more visible in cities from developing economies like Latin American large cities where different forms of space production apart from the capitalist one coexist or collide (Jaramillo, 1999); and they deal with what Castells calls ‘old and new problems at the same time’ (2000: p. 51). Thus, along with the process of consolidating competitive economic scenarios, nowadays Latin American cities still struggle with spatial outcomes originated in the last century from their incomplete modernization process, namely lack of infrastructure, housing shortage, uneven urban development and poverty (Balbo and Navez Bouchanine, 1995; Castells, 2000; Gilbert, 1995). In addition, ‘the combination of speculative land markets, clientelist political systems, elitist urban planning practices and exclusionary legal regimes […] have long affirmed individual ownership rights over the constitutional principle of the social function of property’ (Fernandez, 2007: p. 203), limiting possibilities for acting to-
wards a more inclusive spatial development in these cities (ibidem).

Consequently, it is commonly assumed that large Latin American cities deal with a fragmented urban space and segregation is a frequent topic when addressing these cities due to the tangible existence of informal developments and inequalities in the socioeconomic structure of their societies. These assumptions led to develop an analysis of different worldviews regarding socio spatial segregation focused on socioeconomic grounds in this context, to understand particularities about its different spatial expressions and lay down an analysis framework for the case of Bogotá. In this regard, several aspects were found from the theoretical streams studied. Depending on how segregation is defined, the analysis varies along with the conclusions and the focus of the recommended courses of action.

The most relevant observation from this analysis was found in the especificities that different territory scales entail in terms of undesired spatial features. On one hand, Sabatini (2001; 2003) who deals with residential segregation as a changing spatial phenomenon refers to the importance of counteracting the negative effects of the large scale of segregation evidenced in the forced concentration of low incomes population groups in vast and isolated areas of the city. For this author, the spatial distance entails for those groups being away from the main job centres, long travel distances, poor access to facilities and the feeling of being uprooted from the opportunities the city has to offer. Other authors like Coy (2006) and Janoschka and Borsdorf (2006) who deal with urban fragmentation, approach the phenomenon from a social perspective in relation to the changes globalization processes have produced in the urban space. These authors refer to smaller scales of segregation which entail negative effects like the privatization of communal space, declining of public space and the creation of spaces of exclusivity linked with car-based mobility; aspects imported from North American models.

Bogotá: residential segregation and peripheral supply of social housing

Understanding socioeconomic residential segregation as a process not as a static situation (Sabatini, 2003) implied conceiving the urban dynamics of Bogotá within a historical context. Bogotá like other large Latin American cities is characteristic for the large scale of its segregation pattern (ibidem). From the beginning of the twentieth century in the 1930s, the city began to consolidate a polarized north-south social organization where poor population groups tended to locate in the southern parts of the city, and wealthier groups moved towards a northern direction along the city mountains. From a former distribution of the social groups in a relation centre-periphery in the nineteenth century, Bogotá went through the consolidation of this strong north-south social division (Jaramillo, 1999; Dureau and Salas Vanegas, 2010) that underlied to an accentuated concentration of job places in the centre-north axis and an industrial development in the centre-west axis of the city (Dureau and Salas Vanegas, 2010).

However, now is recognized that from this initial and polarized social organization in space, the city is going through changes that simultaneously present the enlargement and decreasing of segregation scales (Sabatini, 2001; Salas Vaneagas, 2008). These changes can be evidenced by how Bogotá is currently being urbanized. Moreover, the city is developing simultaneously according to a more endogenous model through the densification of its existing structures and the development of gated residential projects; and within a larger scale -the metropolitan one- through the expansion of urban development beyond the city’s established urban perimeter. A decisive moment recognized as driver for the ap-
pearance of these changes is to be found in the deregulation measures that Colombian government undertook in the 80s where land market liberalization and the retreat of the State in space production permitted a stronger participation of private developers; aspect also evidenced for the development of social housing.

Moreover, the current Colombian social housing policy consisting of a ‘subsidies to demand’ system has become a clear step towards supporting a neoliberal scheme. In this regard, the State nowadays assumes an indirect position in social housing development becoming private’s sector facilitator. The urban model supported by this system promotes a land expansive model of massive and homogeneous social housing development. Accordingly, the numeric relation between the subsidy amount and the housing building costs immediately establishes a peripheral location based on land price and on the expected profit of developers. Finally, this strictly sectorial policy implementation in Bogotá is contributing to the enlargement of the scale of the segregation pattern by the concentration of social housing projects in isolated areas of the city and without articulation with the job dynamics of the city. Therefore this project stresses in the need for social housing, especially the one addressed to poorer groups, to be progressively incorporated in the development processes of the city recognizing areas’ diverse spatial potentialities in relation to the job dynamic of the city. To be able to do so, the residential solutions for these population groups who do not have access to formal financial mechanisms should be left out of the market. In addition, the National social housing policy should be conceived more integrally to create the conditions for municipal levels to articulate the development of social housing in further city transformations.

Therefore, an analysis of different densification processes in the city was developed. Consequently, four areas from three different development processes were chosen: An urban renewal area: Comuneros/Veraguas; A new development area: Don Bosco Techo; and two consolidated areas: Garces Navas and San José del Prado. The identification of the areas’ spatial potentials; financial and management constraints for the development of social housing; and the study of foreign reference practices served to propose differentiated and combined strategies to achieve the proposed spatial de-concentration of the social housing supply and recommendations for their further develop-
ment.

Planning and spatial strategies for local areas of Bogotá

The recognition of an integral approach for the following recommendations comes from considering the three main elements involved in the socioeconomic residential segregation: the home, the socioeconomic level and the space (González et al., 2007). Therefore, actions in different dimensions other than the spatial to counteract the housing deficit and the evolution of residential segregation are needed. Moreover, and applicable to all the areas analysed, for the creation of conditions to allow social mix in the local scale, actions from the spatial planning and management spheres of the city need to converge for the development of affordable housing but primarily to permit these economic vulnerable groups to assure tenancy through the creation of conditions for endogenous economic activities, municipal aids and progressive inclusion in the participation processes of the city.

According to the above, the recommendations for urban renewal areas where the legal framework towards the development of social housing is unclear consist in: 1) the development of social housing in publicly owned land within the development of a local plan; 2) the articulation of this housing with the necessary facilities and public space of the intervention area and surrounding neighbourhoods and 3) the inclusion of vocational labour programmes and productive spaces in the architectural programme of these complexes.

For new development areas where the constraint for the development of social housing consists in the target groups the social housing units are aimed for, the recommendations for the development of ‘priority interest housing’ consist on: 1) the creation of municipal programmes to allow and oversee the progressive and self development of housing; 2) Official recognition of collective associations for ownership and; 3) the creation of spatial conditions to allow these groups increase their income like spaces for the development of urban agriculture linked with local and temporary markets programmes in the public space for this neighbourhood scale.

Last but not least, in the case of consolidated areas recommendations were oriented to include land management instruments for the development of social housing due to the current situation showed the inexistence of these instruments. Therefore, the recommendations for these areas consist on: 1) the delimitation of inner sectors that can be subjected to densification according to the existing urban structure and potential corridors that need to be enhanced; 2) the delimitation of social housing areas where enhancement of existing structures can be shaped or new development of social housing with the surplus value obtained from the densification rights; 3) the articulation of these interventions with public space and functional programming to allow the creation of productive spaces.
Readers guide

The following report deals descriptively with the different stages undertaken in this graduation project. Each chapter is composed by an opening page where an introduction to the chapter content is presented. Special attention has to be paid to the third chapter which is divided in three parts due to its extensive content. In this one, the presentation of Bogotá’s case is developed through the introduction to the city; the evolution of residential segregation and the social housing supply for the city. In addition, the appendices of this document can be found in its final part.

Introduction
- Problem field and aim
- Methodology

Theoretical framework
- Socio spatial segregation in Latin America
- The right to the city: conceptual and practical matters

Analytical framework
- The case of Bogotá: residential segregation and social housing supply
- Planning action framework

Empirical framework
- Study areas analysis
- Strategies for local areas of Bogotá

Evaluation
- Strategies
- Final reflections

Figure 1. Structure of the report and stages of the graduation project. Source: authors’ own

- Frequent abbreviations
  GIS: Geographic Information System
  IDB: Inter-American Development Bank
  OAS: Organization of American States

- Abbreviation and translation of Spanish terms
  BCH: Banco Central Hipotecario (Central mortgage bank)
  CAV: Corporaciones de Ahorro y Vivienda (Housing and saving corporations)
  CVM: Caja de Vivienda Militar (Military housing bank)
  DAPD: Departamento Administrativo de Planeación Distrital (District Planning administrative department)
  DANE: Departamento Administrativo Nacional de Estadística (National administrative department of Statistics)
  FONVIVIENDA: Fondo Nacional de Vivienda (National Fund of Housing)
  FNA: Fondo Nacional del ahorro (Savings National Fund)
  ICT: Instituto de Crédito Territorial (Territory credit institute)
  INURBE: Instituto nacional de vivienda de interés social y reforma urbana (National Institute of social interest housing and urban reform)
  POT: Plan de ordenamiento territorial (Strategic Plan of Bogotá)
  PP: Plan Parcial (Local planning instrument of the strategic plan of Bogotá ‘partial plan’)
  SMLMV: Salario mínimo legal mensual vigente (Minimum legal salary per month)
  SHDT: Secretaría Distrital del Hábitat (District Habitat Secretary)
  SDP: Secretaría de Planeación Distrital (District Planning Secretary)
  UVR: Unidad de valor real (Real value unit)
  UPAC: (Unidad de Poder Adquisitivo Constante (Constant Purchasing Power Unit)
  VIS: Vivienda de interés social (Social interest housing)
  VIP: Vivienda de interés prioritario (Priority interest housing)
1. Introduction

1.1 Introduction to the problem field

The study of two simultaneous subjects led the qualitative research used for this graduation project: on one hand, residential segregation and its progress in Bogotá and its surrounding municipalities; and on the other, the ongoing housing deficit of the city that afterwards entailed the study of social housing provision in the city. These two topics later permitted to develop an analytical and action framework for the case of Bogotá where the final recommendations positioned.

The interest on residential segregation emerged from the emphasis Bogotá’s most recent human development report (2008) makes on this topic. According to the report, Bogotá is a highly segregated city. Low and high incomes population groups reside in different parts of the city and do not interact often in the urban space (González et al., 2008). In addition, like most of large Latin American cities, Bogotá still deals with the consequences on an incomplete modernization process (ibidem) that has led to an uneven distribution of infrastructure, services and facilities (Gilbert, 1995). The reasons behind this segregated social and spatial organization are to be found in the convergence of several factors. Firstly, the existence of diverse forms of space production –informal, public and private—that contributes to an increasing fragmentation of space (Jaramillo, 1999). Secondly, State apparatus and urban planning limited role in the provision of infrastructure and in the control of land market processes that contributes to consolidate an irregular distribution of urban facilities (ibidem; González et al., 2007: p.14). And finally, the impact these different spatial conditions have on land market prices that subsequently affect
the access of different incomes social groups to the residential space (Jaramillo, 1999).

At the same time, the interest on Bogotá’s ongoing housing deficit emerged as a relevant subject in the comprehension of residential segregation, due to the spatial conditions on which the formal provision of housing for low incomes population groups sets in. This deficit of approximately 500,000 units nowadays (DANE SDP, 2007; DANE SDP, 2009), accounts for the population that migrates into the city, for the part of the population that lives in inadequate conditions inside the city and the homes that are created each year (SDHT, 2011). In order to diminish this deficit, approximately 51 percent of the social housing produced in the entire country during the last ten years has been produced in Bogotá (ibidem). However, approximately 70 percent of the housing units supplied1, are located in the south and south west periphery of the city, away from the main labour centres and where the concentration of homes in poverty conditions is high according to the unsatisfied basic needs survey (DANE-SDP, 2007). Moreover, the location of these projects contributes to intensify the distance between the low and high incomes population groups.

1.2 Problem statement

Bogotá’s current strategy of development is aiming towards the consolidation of a compact city. Likewise, the consolidation of a network of cities is sought in the relations of Bogotá and its surrounding region. In order to achieve this compact model, several areas of the city are set to densify and the formulation of a strict urban perimeter and limited expansion areas is set through the city’s strategic plan. Moreover, Bogotá is being transformed through and endogenous residential development.

In addition, the housing deficit of the city (qualitative and quantitative) estimated in 500,000 new dwellings continues to be present in the planning goals of the city. However, within the actual residential development, the inclusion of low cost or affordable housing represents a challenge for the municipality due to a general rise in the land prices structure of the city that makes difficult to support the construction of social housing. In addition, the retreat of the State in space production implied a more direct participation of private developers and building companies which will undertake this kind of development where the land price allows it. Likely in the outskirts of the city or outside the city itself. The isolation of low cost housing implies for their users, long travel distances to their job places and being away from main cultural facilities.

1.3. Motivation

Bogotá’s uneven spatial organization has represented different -and contrasting- life conditions for the inhabitants of the city. Moreover, low incomes population groups get clearly affected, due to the shortage of affordable and adequate residential environments within the city. The provision of quality social housing, but overall the creation and use of instruments to make it feasible became a challenge for municipal governments.

The motivation behind this graduation project therefore relies on the necessity of keep reflecting on how to articulate urban planning and housing provision in this case for the city’s most vulnerable social groups.

1.4 Aim of the project

To search for spatial interventions and planning instruments for the provision of social housing towards promoting affordable and adequate residential environments for low incomes population groups in Bogotá. These strategies will be directed to counteract the concentration and isolation of low incomes population groups in the city and its surrounding municipalities as well as to contribute to the diversification and de-concentration of the social housing supply inside the city.

This graduation project seeks to position these

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1 Approximately 36,634 units of the total units developed for the years 2000-2011 in Bogotá (SDHT, 2011).
instruments in the current spatial planning strategy of the city in order to reflect and intervene in the social and spatial reality of Bogotá.

1.5 Research questions

Two key questions were defined for the graduation project according to the main aim described above. The first one aimed to be developed in the analytical and research stage of the project; and the second one aimed to support the propositional stage of the same.

In addition, for each of the questions developed a set of sub-questions were also defined.

a. What kind of measures can be implemented to counteract the negative effects of residential segregation in Bogotá?

- What are the negative effects and causes of the residential segregation phenomenon?
- Which strategies can contribute to diminish these negative effects?
- How has the phenomenon evolved for Bogotá? And what are the measures taken so far to counteract its negative effects?

b. How to develop social housing in inner city areas of Bogotá?

- How the provision of social housing has been developed during the last decades in Bogotá?
- What are the negative aspects (in the spatial and management sphere) of the current national social housing policy and its implementation in the city? and the solutions proposed for overcoming the housing deficit?
- Who are the current stakeholders involved in the social housing provision in Bogotá?
- In which areas of the city it is possible to carry out social housing projects?

1.6. Relevance

a. Societal relevance

Although social inequalities can be grounded on racial, migration or economic aspects, in the Latin American context the studies conducted so far have been focused on socioeconomic aspects (Sabatini, 2003). In that way, the study of residential segregation in these cities emphasizes in the economic inequalities that characterize Latin American societies and how they affect the living conditions of poorer population groups.

Although residential segregation in some cases has positive effects (mainly associated with social identities strengthening) also has negative ones (Sabatini, 2003). The negative effects of residential segregation are associated with lesser interaction in the urban space among diverse social groups and the forced concentration of low incomes population groups in less-served city areas. In other words, the family who cannot pay for privileged conditions in the city is forced to locate in poor developed areas where the access to facilities and centralities is limited and the population is ‘socially homogeneous’ (Sabatini and Brain, 2008).

Furthermore, social disintegration is strengthened with the construction of stigmas and bad images of the social groups that live in those areas, making difficult for them to access to job or education opportunities and closing a residential segregation cycle (Sabatini, 2003). In that way, ‘the isolation of discriminated and poor population groups and the perception they have on their own condition is what favours social disintegration’ (ibidem: p. 9).

Therefore, the societal relevance of this project is associated with the provision of facilities in equality conditions for the population of Bogotá. In addition, its relevance is grounded on finding space for vulnerable population in the inner city areas and social justice.

b. Academic relevance
One of the main causes of residential segregation in Latin American cities can be found in the relation between land market and segregation (Sabatini, 2003). Firstly due to land prices are determined by land use permitting the exclusion of specific functions like social housing. Private owners set land prices in inner city areas according to the most profitable permitted use, making impossible for low incomes population groups to locate in those areas. Secondly due to city developers -public, private and informal- operate according to this land prices structure. In cities like Bogotá, the marginal location of state-promoted social housing projects is determined by low prices of land acquisition; same logic used by informal developers in the second half of the twentieth century (Sabatini, 2003). Based on the previous aspects, the author recognizes the role the State can fulfil in increasing or decreasing the concentration of poor population groups in Latin American cities, aspect also recognized by other authors like Marcuse (2005).

Taking into account the imminent role the public sector has in diminishing residential segregation negative effects, the academic relevance of this project is grounded on two main aspects: 1) on understanding the phenomenon of residential segregation in relation with the fragmented spatial conditions of Bogotá and 2) on searching for alternative mechanisms to permit the development of social housing in inner city areas in order to create the conditions for a more just population distribution.

Therefore the development of this project requires simultaneous thinking in the land development, urban planning and design spheres to conceive residential and urban environments integrally.

1.7 Methodology

The methodology for the project was developed in four stages: a theoretical, an analytical, an empirical, and an evaluation part. Different research methods were used in these stages, mainly official data research; literature research; and spatial analysis. In addition, mapping was used as a tool to compile different information sources. In the following paragraphs these tools and stages will be explained in detail:

a. Theoretical framework

For the theoretical framework, literature on residential segregation was dealt in order to understand socio-spatial segregation phenomena -its negative, positive effects, causes and the spatial features that need to be tackled- and set a broader context where Bogotá can be situated to understand its past and current urbanization and social organization trends. From this review, a theory paper was developed around two different perspectives on the topic: spatial fragmentation and socio-spatial segregation in Latin American cities (This paper is include as an appendix).

In addition, a review on the Right to the City from a theoretical and practical perspective was dealt to reflect on an approach towards social rights in the built environment for the propositional stage if the project.

b. Analytical framework

The analysis for the case of Bogotá was dealt taking into account not only the city scale but also the metropolitan one. In this framework two main processes converged: On one hand, the study of facilities, infrastructure and services distribution and the organization of social groups within that distribution; and on the other, the spatial characteristics of the social housing provision recognized in the city. In the first one, data about how segregation is studied and measured for Bogotá permitted to link what learned from the theoreticl framework. Finally, in the second one, social housing provision was studied not only from the provision and policy perspectives but also in relation to the Bogotá’s growth and .

c. Empirical framework

This stage was structured through the develop-
Planning and spatial strategies to counteract residential segregation in Bogotá

1. From theory: Understanding the phenomenon

1+2. Recognition of: Urbanization trends
Conclusions

Figure 2. (above) Problem field developed for the case of Bogotá and analytical framework established for the project.

Figure 3. (below) Conclusions definition process from the analytical framework established. 1+2 Recognition of Bogotá’s urbanization trends and conclusions from the topics chosen; Residential segregation and social housing provision.
ment of three main activities: First, an analysis of local inner city areas; second the study of reference projects. These activities permitted to conclude with the proposition of both spatial interventions and planning instruments for the provision of social housing and the counteraction of the expulsion and concentration process of low incomes population groups in the city and its surrounding municipalities.

In the analysis of local inner city areas, three different types of areas were chosen according with the actual urban plan and development of Bogotá: 1. new development areas, 2. urban renewal areas, and 3. built up areas. For the analysis, the following aspects were studied:

- Physical and socioeconomic data of the administrative units where the areas are located.
- Physical features of the areas in relation to main urban elements and provision of local scale facilities inside each area.
- Performance of land use and land value.
- Instruments available for social housing development.

For the study of reference projects, a matrix was developed on which best practices cases were chosen according to the three types of areas and the search for both spatial interventions and concepts and planning instruments and programmes. The criteria used for the analysis of this reference cases was the following:

- Location within a metropolitan context.
- Background of the programme where the project is located or the instrument is used.
- Planning framework.
- Potential or constraint aspects regarding adaptability to Bogotá’s case.

The local areas analysis where instrumental and spatial constraints were identified for the development of social housing, the conclusions and proposals obtained from the authors studied in the analytical phase and the ideas extracted from the best practices cases consolidated the proposed and recommended combined strategies of the graduation project.

d. Evaluation

Two levels were established for the evaluation of the graduation project: an evaluation of the local interventions in relation with the main strategy, transferability to other areas of the city and the feasibility of the strategies proposed according to the institutional capacity of Bogotá.

To conclude the graduation project, final reflections were developed regarding three structural aspects extracted from the outcomes of the project: The densification and development process of Bogotá, the provision of social housing and strategies to integrate vulnerable population groups in Bogotá. In addition, paths for further research were pointed out.
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<th>Analytical framework</th>
<th>Empirical framework</th>
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<td>Socio-spatial segregation in Latin America: Spatial features and causes</td>
<td>The case of Bogotá</td>
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<tr>
<td>How has the phenomenon evolved for the case of Bogotá?</td>
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<td>Phenomenon in Bogotá: Evolution/spatial features/causes</td>
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<tr>
<td>How the provision of social housing has been developed during the last decades in city?</td>
<td>Historical analysis of the provision of social housing: Growth and location of the supply</td>
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<tr>
<td>What are the negative aspects of the current social housing policy and its implementation in the city?</td>
<td>Current provision of social housing in the city: Stakeholders and location of the supply</td>
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<td>Who are the current stakeholders involved in the social housing provision in Bogotá?</td>
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<td>Which strategies can contribute to diminish the negative effects of residential segregation?</td>
<td>Envisioned solutions: Proposals for the counteraction of the phenomenon</td>
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<td>What are the recommendations proposed for overcoming the housing deficit?</td>
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<td>And what are the measures taken so far to counteract its negative effects?</td>
<td>Envisioned solutions: Proposals for the Colombian social housing policy</td>
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<td>In which areas of the city it is possible to carry out social housing projects?</td>
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Figure 4. Overall methodology scheme for the graduation project. Source: author's own
This chapter deals with underpinning a theoretical framework for the graduation project. Divided in two sections exposes on one hand theories about socio spatial segregation in the context of Latin America in order to position Bogotá in a larger framework and be able to contextualize its urbanization trends. On the other hand it reflects about different perspectives concerning the Right to the City in order to set and stress on the relevance of social rights in the urban environment.

According to the above, the first section of this chapter intends to make a distinction on several world views around socio spatial segregation in the context of Latin America. Depending on how segregation is defined and the scale where this one is studied, the analysis varies (Sabatini et al., 2001; Salas Vanegas, 2008) along with the conclusions and the focus of the recommended courses of action. In order to do so, the work of Sabatini (2001, 2003, 2008) who studies residential segregation in Latin American cities will be presented and confronted with some definitions developed by Marcuse (2005) who has studied the same phenomenon for North American cities. In addition to this perspectives, some precisions made by Coy, (2006), Janoschka and Borsdorf (2006), Balbo and Navez-Bouchanine (1995), who study spatial fragmentation and link the phenomenon with social segregation will be intertwined in order to have a more integral view.

The second section of the chapter deals with exploring 'the Right to the City' in its both theoretical and conceptual dimensions. In addition, the implication of the Right to the City in urban practice will be explained to delimit an understanding for the development of this project where combined strategies are sought for the development of social housing in inner city areas of Bogotá.
2.1 Socio spatial segregation in large Latin American cities: residential segregation and spatial fragmentation.

In order to present how segregation is understood for the case of Latin American cities, aspects concerning the definition, spatial features of the phenomenon and causes were established to expose what has been developed by different authors and subsequently facilitate the analysis of Bogotá’s case. This presentation will be dealt briefly, for in the appendix a deeper theory review can be consulted. Finally some reflections about the particularities of the different theoretical streams will be presented.

a. Residential segregation in Latin American cities

Sabatini (2003), who has studied residential segregation for Latin American cities and in detail Chilean ones, defines social segregation of the urban space or residential segregation as a changing spatial phenomenon related in a complex way with social inequalities. Although social inequalities can be grounded on racial, migration or economic aspects, in the Latin American context the studies conducted so far have been focused on the last kind (ibidem). In addition, the author stresses that the study and effects of residential segregation are strongly related to the scale where it is analysed. For instance the traditional segregation pattern of Latin American cities is characteristic for its large scale (as it can be observed in the bigger square in ‘B’ of the following figure). On the contrary, on a smaller territory scales like high rent neighbourhoods in these cities, segregation levels are lower due to the existence of diverse middle and high incomes social groups residing in these neighbourhoods (the small square in ‘A’ of the following figure) (Sabatini et al., 2001). In addition, the study of residential segregation that Sabatini elaborates for the Chilean cities (2001) shows evolution trends for large Latin American cities concerning with changes in the segregation pattern. These changes entail the diminishing of the distance among social groups in the scale of the city and simultaneously an enlargement of the scale in a metropolitan set up; aspect that it will be observed later for the case of Bogotá.

Sabatini’s general definition of the phenomenon defined is ‘clustering of families of the same social condition’ (2003: p. 7). In addition, three dimensions of this general definition are also stated by Sabatini, in order to develop a specific definition: 1) the degree of the social groups’ spatial concentration; 2) the degree of social homogeneity of one group accommodated in certain areas of the city; and 3) the prestige or lack of prestige of those areas (ibidem).

Moreover, Sabatini (2003) specifies residential segregation has positive as well as negative effects according to the predominance of the above mentioned dimensions. The positive effects are mainly associated with families that cluster to strengthen social identities (the first dimension). The negative ones are associated with lesser interaction in the urban space among diverse social groups and the involuntary cluster of low incomes population groups in less-served city areas, (a transition from the first to the second dimension) present primarily in the larger scale of segregation. In addition, the relevance of the third dimension, of subjective nature, defined by Sabatini is crucial to understand the negative effects of residential segregation. Lack of prestige or negative stigmas built collectively for some areas of the city strengthens the exclusion of groups that live in those areas. In that way, ‘the isolation of discriminated and poor population groups and the perception they have on their own condition is what favours social disintegration’ (2003: p. 9).

On the other side, Marcuse (2005), defines clustering and segregation as separate concepts. Clustering is understood as ‘the concentration of a population group in space’ and constitutes the ‘generic term for the formation of any area of spatial concentration’ (2005: p.16). And segregation is understood as ‘the process by

1 All quotations of this bibliographic source are translated by the author if this document.
which a population group, treated as inferior (generally because of race), is forced, that is, involuntary, to cluster in a defined area, that is in a ghetto. Segregation is the process of formation and maintenance of a ghetto’ (ibidem). Due to the differentiation Marcuse (2005) elaborates between segregation and clustering, notions like the one of ‘self-segregation’ are considered to be contradictory to him. In addition, Marcuse (2005) defines two types of segregation: one based on racial and other based on real estate market grounds. The differentiation between clustering and segregation made by Marcuse (2005) can be roughly assimilated with the differentiation Sabatini (2003) makes among the negative and positive effects of segregation. In any way, the authors’ definitions both entail positive and negative aspects of social clustering in space, mainly based on the voluntary or involuntary properties of this one.

Looking into the causes of residential segregation, Sabatini defines as the main cause land market dynamics but overall its relation with segregation (2003). First, due to land prices are determined by land use contributing to the exclusion of specific functions in inner city areas like social housing. And second, due to city developers -public, private and informal- operate according to this land prices structure. This means that the families who cannot pay for privileged conditions in the city are forced to locate in poor developed areas where the access to facilities and centralities is limited and the population is ‘socially homogeneous’, (Sabatini and Brain, 2008). In that way, Sabatini (2003) recognizes the role of the public sector in increasing or diminishing socio-spatial segregation by further or lesser control in land management, aspect also recognized by Marcuse (2005).

b. Urban fragmentation in Latin American cities

In addition, social exclusion and segregation processes are also considered to be related to fragmentation by authors dealing with the study of urbanization trends emerged by the impact of globalization processes in the urban space. The work of Coy (2006), Janoschka and Borsdorf (2006), Balbo (1993) and Balbo and Navez-Bou-

Spatial segregation of a social group* according to the scale measured

Figure 5. Scale interpretation changes the analysis of segregation. Source: Sabatini et al, 2001: p. 29 (modified and translated by author)
chanine (1995) that deal with the phenomenon of urban fragmentation, the first three for Latin American cities and the last two for cities from developing countries’ will be presented in the following paragraphs.

In order to give an overview of the already mentioned authors, it needs to be said firstly that on the study of urban fragmentation, there are several approaches from a cultural, political, spatial and economic perspective (Michelutti, 2010). Moreover, already Michelutti has underlined the lack of precision in the conceptualization of the fragmentation concept leading towards confusion with social and spatial phenomena. “Thus, fragmentation has become part of a “liquid” lexicon (in the Zygmund Baumann’s meaning of the word) that includes the words “dualism”, “segregation”, “segmentation”, etc. without enhancing a precise definition’ (ibidem: p. 1). Moreover, Burgess (2005) explains that “a wide range of theories has been proposed to explain the process of urban fragmentation and its effects. These theories often differ over what is meant by or conceived of as the ‘urban’ and therefore what is identified as being fragmented: The urban structure; the urban form; the system of land uses; public or private space; the system of cities or the socio-economic and cultural integrity of the city etc.’ (p. 1)

In that way, the diverse approaches about urban fragmentation definition lead towards vagueness when defining what a fragment is. For Balbo (1993; 1995) the reasons to define the fragment seem to be found in urban morphology differentiation. Each fragment of the city displays a different pattern, based more in terms of morphology (Balbo and Navez Bouchanine, 1995). To name a few: ‘the “modern” centre, the historic city, the planned districts, the various types of illegal settlements and the slum areas’. In addition, aspects like tenure and legality conditions become drivers for new spatial patterns and therefore new fragments with differentiated infrastructure and services conditions. In the case of Coy (2006) and Borsdorf (2003), they concentrate in the analysis of specific types of fragments: gated communities and enclosed spaces. For those last authors, the fragments are mainly defined in spatial terms by the walls or enclosure of gated or bunged complexes and their link to car-based mobility, aspects imported from North American models. However, the what defines other types of fragments was not evidenced by these authors.

Coy makes a radical distinction among fragments. Ones are occupied and used by wealthy social groups as shopping and entertainment centres; ‘islands of wealth’, and others by low incomes population like places of informal activity and low-cost housing projects; ‘Oceans of poverty’. Coy specifies this social and spatial structure, ‘islands of wealth in oceans of poverty’ (ibidem), is not new as Latin American societies have always been characterized by social inequality. For Janoschka and Borsdorf (2006) urban fragmentation and the development of gated communities are seen from an historical perspective. Therefore, urban fragmentation is linked with the actual stage of the Latin American city structure a process that started in the 1980s. In addition, Borsdorf (2003) mentions how gated residential projects which were aimed commonly to be occupied by high and middle incomes groups were later directed to other and lower social classes.

When it comes to defining the causes of urban fragmentation, the authors establish as definitive the role of the State, aspect also very relevant in the work of Sabatini (2003) and Marcuse (2005) about residential segregation. The authors mention two main aspects of public intervention: for Balbo (1993; 1995), the capacity of the State to cope with the provision of services and facilities having into account the rapid urbanization processes of cities in developing countries and for Balbo (1993; 1995), Borsdorf (2003) and Coy (2006), the weak capacity of the State to control informal processes and private development the latter being stronger since the 1980s.

In addition, social dynamics are related to the fragmented state of space but there is no specific consensus in this matter. Balbo (1993;
1995) refers initially to the dualistic configuration of the colonial society and how fragmentation originated as a direct cause of this divided society. Although this ‘dualistic’ development was the reflex of a ‘dualistic’ (1993: p. 27) society, the author also mentions that it is more difficult to establish a direct relation between the current urban society and spatial fragmentation. In fact, in the case study of spatial fragments in Rabat Salé (Africa), Balbo and Navez Bouchanine (1995) discover that different and opposing urban spaces coexist without necessarily causing societal conflicts. In addition, Balbo (1993) stresses on the functioning of urban economy and how informal dynamics could be related to the fragmented distribution of space, however that aspect is not mention in depth in the studied sources. Coy (2006) establishes urban fragmentation as a consequence of Latin American societies ‘disparities’ (2006, p: 122), but overall is very vague in specifying the link between this two aspects.

![Image of Illustration 1](Image 165x36 to 548x311)

**Fig. 1.** The fragmentation of Latin American cities

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**Figure 6.** (above) The fragmentation of Latin American cities. Source: Coy, 2006: p. 123

**Figure 7.** (below) Actual Latin American city structure model. Source: Janoschka and Borsdorf, 2006: p. 95.
c. Reflection on the different theoretical streams

Analysing the different theories becomes a complex task due to all the authors seem to talk about different aspects of two main issues displayed in large Latin American cities: first, the existence of diverse forms of space production with different spatial conditions and second, social inequalities in these societies and what that means for vulnerable population groups in terms of access to certain opportunities. Moreover, these two aspects are related in different ways revealing a complex and rich web of causality and correlation among social, spatial and economic issues.

A first relevant subject emerged from the study of the different theories and it concerns the consideration of the scale in which segregation is studied. Indeed the definition of a study scale matters in the analysis of social segregation of the urban space and its spatial features differ accordingly to the territory studied. To Sabatini (2003) the territory scale determines the effects of segregation in the study of Latin American cities. While Latin American cities traditional segregation pattern is characteristic by its large scale where the distance between low and high incomes population is high; in the scale of the high rent neighbourhoods diverse middle incomes and high incomes population inhabit. In that sense, the presence of walls in gated residential complexes (Coy’s ‘islands of wealth in oceans of poverty’) and increasing fragmentation is to this author an expression of exclusion on a lower scale, but a way to reduce the distance between diverse social groups in the city scale, aspect also mentioned superficially by Balbo (1993: p. 33).

Moreover this scale differentiation also refers to different spatial features. On one hand, for Sabatini (2001) the forced concentration of low incomes population groups in the city scale entail for those groups being away from the main job centres, long travel distances, poor access to facilities and the feeling of being uprooted from the opportunities the city has to offer. On the other hand, for Coy (2006) and Janoschka and Borsdorf (2006) the enclosure of residential communities, commercial and entertainment centres...
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entails aspects like privatization of communal space and declining of public one. However, the contribution this spatial fragmentation can fulfill in bringing closer together in space different income groups when considering a larger scale is not considered by these authors.

A second aspect identified as relevant refers to the stated causes of the phenomenon. As it was mentioned before, according to Sabatini (2003; 2008) land prices formation according to land use and the actions of urban development stakeholders (public, informal and private) according to this structure of prices is what is causing higher levels of segregation on the scale of the city. Also, other authors like Jaramillo (1999) who has studied land market and the relation of this one with Latin American cities spatial configuration, states the importance of land market role in the development of different kinds of built space production. To Jaramillo, the accentuated fragmentation of space is to be found in the different forms of space production and in the relatively weakness of the State to provide infrastructure and control urban processes what contributes to the speculation with land prices (1999: p. 112).

Although Coy (2006) and Balbo (1993) mention as well the importance of the State’s role as a provider and controller of urban development in the increasing fragmentation, land market and its relation with segregation in the scale of the city was barely or not at all taken into account by these authors.

In addition, social inequalities correlate in a complex way with the phenomenon more than constitute a direct cause of spatial segregation for the case of Latin American cities. Segregation (more specifically social clustering) is a fundamental part of social reality (Sabatini, 2001). Moreover, it permits to social groups to strengthen or consolidate social identities (Sabatini and Brain, 2008). However, it is not possible to translate social inequalities to spatial segregation what Sabatini calls ‘the law of the mirror’ (Sabatini and Brain, 2008). The author stresses in the necessity of differentiate social distance from spatial distance (Sabatini, 2001)
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and residential segregation phenomenon refers to the second. This complicated link was also put as evidence by Balbo and Navez Bouchanine (1995) when they developed the study case of Rabat Salé in Africa. The study concludes that there is no direct relation proven between fragmentation and social conflicts. Social conflicts are more likely to appear when the existence of social or economic differences, more than the existence of urban fragments. Moreover, behaviour or mobility patterns within the city do not necessarily vary from one fragment to the other.

To finalize, the varied approaches of the authors also permitted them to relate spatial segregation with current and past urbanization trends encountered in the Latin American context. Sabatini’s (2001, 2003, 2008) historical and phenomenological approach allows him to understand residential segregation as a phenomenon that progresses and evolves in time with the presence of positive and negative connotations, not as static a problem. The author’s comprehension on how Latin American cities grew permits him to point out the recent changes revealed in the segregation pattern of these cities in the beginning of the 1980s.

Regarding urban fragmentation, the studies developed by Coy (2006) and Borsdorff (2003, 2006) could be embedded, in what Burgess calls ‘technological determinism’: ‘the view that social organization and culture are predominantly and ultimately shaped by technologies of production, exchange, communications and consumption [...]. Social and cultural change is generated by transformations in these technologies and this process unleashes a spatial dynamic that transforms the form and structure of cities’ (2005: p. 1). Indeed, the comprehension developed by these authors of the Latin American cities’ spatial structure is based on the recognition of recent development trends carried out in these cities dealing with the adoption of foreign urban models and lifestyles emerged from globalization processes. Although Borsdorff (2006) recognizes urban fragmentation within a historical framework and therefore recognizes changes in the social ad spatial organization of these cities, Coy’s (2006) focus in only a part of the phenomenon, (segregation caused by the enclosure of wealthy social groups’ gated communities) leads him to refer exclusively to the local negative impacts than the possibility fragmentation could have in other scales.

For the purposes of social inclusion or integration it becomes necessary to understand causality and correlation of spatial and social dynamics to respond in an adequate way. Moreover, developing interventions for counteracting segregation requires from understanding its different scale manifestations. In addition, for further urban fragmentation studies, detailed spatial conceptualizing and clarification of its relation with segregation needs to be done. This can be realized through the superimposition of different spatial environments, the organization of population groups and the conditions of facilities and infrastructure distribution at different scales. The study in depth of these variables relies on identifying segregated population groups and city areas that need special attention for the development of planning policies and strategies.

2.2 Right to the city and social justice

‘The Right to the City’ is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right since this transformation inevitably depends upon the exercise of a collective power to reshape the process of urbanization’ (Harvey, 2008: p.23)

‘The Right to the City’, term initially coined by the philosopher Henry Lefebvre in 1968 in his book Le droit à la ville, has evolved nowadays into a theoretical stream that now involves a reflection about human rights in the urban environment. Although some authors state the initial term developed by Lefebvre has been diluted into a ‘fashionable’ concept (Lopes de Souza, 2010), implying the trivialisation of Lefebvre’s initial idea, other authors have attempted to de-
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limit what the term implies both in theory and practice. Regarding this dual meaning Marcuse (2009) explains ‘(T)he right to the city is both an immediately understandable and intuitively compelling slogan, and a theoretically complex and provocative formulation’ (p.189). The consideration of the term in both critical urban theory and recent legal frameworks has shown ‘the right to the city’ dual significance and importance in actual conceptual and practical urban fields.

Theoretically speaking the quest for delimiting ‘the right to the city’ goes from the interpretation and understanding of the initial proposition developed by Lefebvre to define what it implies conceptually nowadays, what should be the path to realize it and the actors involved in the exercise of ‘the Right to the City’. As an example, Marcuse (2009) reflects about ‘whose right, what right and to what city?’. Also reflection about what actors should be the drivers and agents of change is considered by authors like Harvey (2008), Marcuse (2009) and Borja (2011). Reflecting about ‘whose right’ Marcuse (2009) explains that ‘Lefebvre’s right is both a cry and a demand’; is a ‘demand by those deprived of basic material goods and existing legal rights’ (p.190) but also an ‘aspiration for the future by those discontented with life as they see it around them, perceived as limiting their own potentials for growth and creativity’ (ibidem). ‘(T)he demand is for material necessities of life, the aspiration is for a broader right to what is necessary beyond the material to lead a satisfying life’ (p.190). In this sense, the author separates the ‘excluded’ from the ‘alienated’ explaining that if priorities would have to be given, the former groups’ demands will have to go first.

Referring to ‘what right’ the Right to the City is, Marcuse (2009) explains than more than a right meant as a legal claim, it refers to multiple rights. Apart from the right to public space, to information and transparency in government and the right to the centre is overall the right to a totality, ‘a higher moral plane that claims a better system in which the demands can be fully met’ (p. 193). In addition defining exactly ‘what

‘The complexity and the meaning linked to the city do not emerge automatically from the concentration of population or from the size of its economic activity or from being the seat of governmental and administrative powers. If exchange is a fundamental dimension the ‘city-city’ is the one which optimizes the contact opportunities, bets on diversity and the functional and social mixture; the one which multiplies the meeting spaces’ (Borja, 2001: p.2 translated by author)

Figure 12. Bogotá: picture taken from its mountains. Source: Pablo de Medina www.flickr.com
city’ the same Lefebvre (1973) wrote: ‘the right to the city cannot be conceived of as a simple visiting right or as a return to traditional cities, it can only be formulated as a transformed and re-newed right to urban life’ (p.138). For Lefebvre, more than the demand to the city how it exists today, ‘the Right to the City’ was embedded in a future city, a place in urban society. Therefore concepts like ‘justice, equity, democracy, the full development of human potentials or capabilities’ (Marcuse, 2009: p. 193) have to be incorporated in this city as general principles.

The conceptual formulation of ‘the Right to the City’ engraves simultaneously on the core of a deep reflection but also a strong critic on capitalism and its effects on the urban environment; ‘its [capitalism’s] associated process of profit-driven urbanization and its relentless commodification and re-commodification of urban spaces’ (Brenner et al., 2009). The immersion of capitalism in political, economic and spatial organization and its strategies for capital accumulation have revealed exclusive dynamics for those who cannot afford quality urban space (Harvey, 2008). Therefore the discussion of who are the ‘actors of change’ is embedded in the debate of until what point the actual situation in cities all around can be counteracted, through which mechanisms and by whom: public institutions, social movements, ONG’s or city dwellers to name a few.

To Borja (2001) social movements are key actors above conventional political structures to initiate change; embedded in the diverse values of each context and with the subsequent institutional frameworks to make official and develop policies, change can emerge. Harvey (2008), referring for instance to the recent 2008 economic crisis in the US explains ‘these movements are not strong enough or sufficiently mobilized [...] nor have [...] yet converged on the singular aim of gaining greater control over the uses of the surplus let alone over the conditions of its production’ (p: 39). To Lopes de Souza (2010) Lefebvre’s ‘Right to the City’ followed a radical path meaning this one cannot be reduced to better human rights in a capitalist framework, therefore ‘social move-ments must continually reinvent themselves, their strategies and tactics, and finally their language, in order to avoid the colonisation of radical slogans and to cope with new and old challenges [...] and they must do it sometimes together with the state’ (for tactical reasons, and always in a very cautious and limited way), but above all ‘despite the state’ and essentially ‘against the state’ (p:330). In addition, Marcuse (2009) refers to the compelling role of critical urban theory due to its linking theory - practice abilities through exposing, proposing and politicizing urban dynamics (p: 194).

In addition and speaking from the practice perspective, a step into the consolidation of ‘the Right to the City’ was undertaken in 2004 with the development of the World Charter on the right to the city in the Social Forum of the Americas. In the definition of the term Mathivet (2011) explains that the human rights framework where the right to the city sets in is consolidated by the existing Economic, Social and Cultural rights (ESCR) structure. Therefore, the right to the city is not an independent human right but involves the reinforcement of the formally established rights in cities. Within that framework ‘the right to the city is: the right to habitat that facilitates a network of social relations; the right to social cohesion and the collective construction of the city; the right to live with dignity in the city; the right to co-existence; the right to influence and access the municipal government; the right to equal rights’ (ibidem: p. 25).

Fernandes (2007) states ‘this [‘The Right to the City’] concept has been generally understood from a combined philosophical and political perspective, providing substance to the formulation of both a general discourse of rights and social justice, and a more specific rights-based approach to urban development. However, very little attention has been placed on the legal nature and implications of such a concept’. This author explains Latin America as a context has been present in discussions regarding the ‘Right to the City’ especially since countries like
Brazil is incorporating the term in the recently released ‘City Statute’, but further discussions should be made in what it implies in the legal framework and additionally in the mechanisms to materialize this new legal order. Talking specifically about Brazil but also being relevant for other large Latin American cities, Fernandes (2007: p.203) explains how ‘the combination of speculative land markets, clientelist political systems, elitist urban planning practices and exclusionary legal regimes […] have long affirmed individual ownership rights over the constitutional principle of the social function of property’ in these cities where housing shortage, lack of infrastructure and informal urbanization processes appear as some of their main spatial characteristics.

a. Reflection about the different theoretical streams

Exposing the diverse analytical streams of both conceptual and practical representations of the ‘Right to the City’ led to the appearance of diverse demands, necessary processes, actors and mechanisms that have to be involved in the urban environment. For Latin American cities and specifically for the case studied in this project -Bogotá city- approaching the right to the city lies in the recognition of the city’s uneven spatial organization and what this one entails in terms of different -and contrasting- life conditions for the diverse inhabitants of the city. Moreover, low income population groups get clearly affected by this distribution, due to the shortage of affordable and adequate residential environments within the city. Therefore, the need of recognizing the social rights framework described before but also, the legal means to institutionalize and make effective these rights lies in the core of providing with equality the positive effects that agglomeration of activities in a city like Bogotá has to offer.

‘With land property being conceived almost exclusively as a commodity, the economic content of which is to be determined by the individual interests of owners, any social use values over the use of urban land and property are limited, as are the possibilities for the state to act in the determination of a more balanced and inclusive public order in cities. Typical of the civil law tradition is the absolutization of individual freehold rights, to the detriment of other forms of leasehold or collective forms of real rights, not to speak of other legal institutes such as rental housing.’ (Fernandes, 2007: p. 209)
This chapter is dedicated to introduce Bogotá and the analytical framework developed for the city. The first section of the chapter presents briefly introductory aspects about Bogotá and its surrounding municipalities: location, administrative structure, urban and population growth and socioeconomic characteristics.

In the second section of the chapter Bogotá’s residential segregation will be analyzed attempting to comprehend its dynamic social and spatial expressions. In order to do so, studies dealing with this phenomenon will be presented in order to introduce the reader into the social organization of the city and its spatial conditions. Moreover, in order to expose how residential segregation has been analyzed for the city, quantitative indicators and findings of how it has been measured developed by González et al. (2007), González and et al. (2008) and Dureau and Salas Vanegas (2008, 2010), Rios (2010) will be presented.

The third section of the chapter will deal with the study of social housing provision. For that purpose, an historical analysis to contextualize the current policy is developed along with the actual supply situation. It is of interest to present not only relevant aspects of the Colombian housing policy but also how it has been implemented in Bogotá in the last ten years. Finally, in the concluding part of the chapter, some reflections articulating the theoretical framework about segregation and how Bogotá’s reality is observed through the different studies developed will be presented. The conclusions formulated in this final part will intertwine three aspects: development trends, residential segregation and social housing provision in Bogotá.
3.1 City introduction

a. Geographical location.

Bogotá, the capital city of Colombia, is the largest city of the country with 7,050,228 inhabitants in 2007 (approximately the 16 percent of the National population). It is expected that by 2020 the city reaches 8 million inhabitants (DANE SDP, 2007). It is located in the geographic centre of the country in the east mountain chain of the Andes; on a fertile plateau called ‘Sabana’ to be found at 2,625 metres above sea level. The city is surrounded by two main natural elements, Bogotá River to the west and the mountains along the east and southern sides of the city, where Guadalupe and Monserrate mountains become representative as urban landmarks. Nowadays, Bogotá (the capital district) is the main economic and industrial centre of the country and accounts for the 22 percent of the National Gross Domestic Product; figure that can go up until approximately 40 percent if the surrounding region is considered (González et al., 2008).

Figure 14. (above) Bogotá’s city mountains. Source: Nicolás - http://universidadnacional.com.co/habitar/56

Figure 15. Location of Bogotá within different territory scales – South America, Colombia, the Cundinamarca department and the city itself. Source: author’s own with data from DANE, 2005 DANE-SDP, 2007
b. Administrative structure

Regarding its administrative structure, Bogotá is located inside the Cundinamarca department but the city functions as an independent administration district. It is divided into 20 different localities and one of these –Sumapaz- is situated on rural land. Each of these administrative units is governed by a local mayor who is elected by popular vote, in the same way as the city mayor. There are larger differences in the area of this localities and the city’s administrative division does not respond necessarily to a geographic or social criteria (Salas Vanegas, 2008).

At the moment, Bogotá does not count with an officially defined metropolitan area, yet the social, economic and spatial interdependence relations of the city with its surrounding municipalities reveal that this one exists and affects the residential dynamics. The statistics department of the country (DANE) has considered for analysis purposes in the last population census (developed in 2005), a metropolitan area formed by Bogotá and other 17 municipalities of the surrounding region. However, other studies concerned by understanding the metropolization process of Bogotá, consider a smaller or larger amount of municipalities surrounding the capital city², making the comprehension of these dynamics difficult in terms of data collection and processing. For the purpose of this project when referring to Bogotá’s metropolitan area the one to be considered should be the one defined by DANE.

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² Along the analysis developed by Saldías (2009) the metropolitan area of Bogotá is considered to have either 20 or 18 municipalities (including Bogotá). Something similar occurs with the study of Alfonso (2010) where the municipality Subachoque is considered and left out in different parts of the analysis. In the consultancy developed by Rincón (2009) several studies referring only to six surrounding municipalities were considered to develop the analysis of Bogotá and its metropolization process.
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Figure 17. Metropolitan area of Bogotá according to DANE (2005).
Source: author’s own with graphic base from SIG SDP, 2009
c. Population and urban growth

‘Conurbation had been in Europe the spatial expression of rising industrial capitalism breaking the urban model of the closed medieval city. [...] It was presented as the territorial expression of industrial revolution, through urban regions namely cities agglomeration. But in Bogotá, in the peculiar conditions of modern urbanization, a deformed process was developing different mechanisms and industrialization was not the main factor behind that phenomenon. It happened in a notably tertiary city and almost exclusively through the development of residential use’ (Aprile-Gniset, 1992: p. 647)

Bogotá’s rapid process of urbanization consolidated mainly in the second half of the twentieth century. By 1938 Bogotá’s population was approximately of 300,000 inhabitants and by 1972 that figure had increased up to more than 2,000,000 inhabitants (ibidem). In the same way, the city’s urbanized land grew up to more than five times its size in the same period. Massive rural-urban migrations were the main reason behind this demographic and urban change (Gilbert, 1995).

Moreover, the city transformed drastically between 1946 and 1960 in two dimensions: in a vertical one by densifying processes of the city centre and in a horizontal one by the expansion of residential areas in the peripheries (Aprile-Gniset, 1992). Its development passed from a linear urban structure in the beginning of the twentieth century, to a tentacular one with the extension of urbanized land in the direction of its neighbour municipalities. ‘The city lost its physical homogeneity and its cohesion: it was converted in an urban stain’ (ibidem: p. 647). This chaotic pattern of growth resulted in remaining vacant plots that later favoured the speculation with land prices. By 1954 the annexation of the surrounding municipalities -Usaquén, Engativá, Bosa, Usme, Suba and Fontibón- to the city perimeter was established attempting to recognize the reality of conurbation.

Bogotá’s rapid urban growth, drastic demographic changes and massive housing demand, involved different forms of space production: formal, informal and state promoted (Jaramillo, 1999). Informal development permitted to a large part of the population to supply their spatial needs through different mechanisms: land sale of illegal plot division and massive social occupation being the first one most common in 1970 (Aprile-Gniset, 1992). By this year, only half of the neighbourhoods of the city were authorized, more than 200 were illegal and every 4 of 10 houses had applied for a construction licence. Even so, the housing deficit both qualitative and quantitative at that time was of 134,218 units (ibidem).

Figure 18. Different forms of space production. Sources from above to below: author’s own; Architectures Colombiennes, 1981; Jannis Werner account in flickr Figure 17.
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During the 1980s Bogotá continued growing at a slower rate, but at the same time the surrounding municipalities started to grow faster than the city itself (Salas Vanegas, 2008; Rincón, 2009); a trend that continues until today. However, more than migration, the main reason behind this emerging process was the natural increase of the population and the increase of homes formation (Gilbert, 1995; Alfonso, 2010). From this period onwards Bogotá’s urban development was undertaken through a more endogenous model by means of a transformation and rapid densification of its urban space, and simultaneously within a larger scale: the metropolitan one (Dureau and Salas Vanegas, 2010). Within this metropolization dynamic, nowadays the functional and social organization of the city expands beyond its established perimeter and all in all inner city displacements become the main reason behind the population’s settlement dynamics (ibidem).
Access to the city for everyone.
d. Socioeconomic characterization

By 2009 the population of Bogotá (capital district) was 7,259,597 inhabitants 52 percent of these women and 48 percent men. Its most populated localities are Suba, Kennedy and Engativa and the least populated are Sumapaz, La Candelaria and Los Mártires. In addition, from Bogotá’s 1,978,528 homes in 2007, five percent were considered to be in poverty conditions and 0.5 percent in destitution conditions according to the basic unsatisfied needs survey developed for Bogotá. Basic unsatisfied needs indicators are measured considering criteria like inadequate housing, critical overcrowding, inadequate services, high economic dependence and school dropout per each city locality. The analysis showed the localities Sumapaz, Ciudad Bolívar, Santa Fe and Usme are the most affected ones with percentages of poverty from 9.1 to 21.3 percent. Bosa is the third locality with more homes without public utilities and San Cristobal is the third in school dropout. In addition it was revealed that 0.8 percent of the population at that time (7,035,155 inhabitants) lived in inadequate housing conditions, 0.2 percent counted with inadequate public utilities, four percent lived in critical overcrowding, 0.7 percent presented school dropout and 2.3 percent high economic dependence.

In addition the live quality survey developed in 2007 also analysed the perception that heads of families have about the homes’ purchasing power. In this sense, a categorization on this perception was made: perception of insufficient income to cover minimum expenses, sufficient only to cover minimum expenses and sufficient to cover more than minimum expenses. This classification showed that 24 percent of the city homes expressed not to have enough to cover their minimum expenses, 56.5 percent expressed to have barely enough and 19.6 said to count with enough. However this indicator can only be considered as an observation due to its subjective nature. (DANE-SDP, 2007)

In addition to the existent conditions of housing shortage and inadequate urban and economic conditions of the city, it is relevant to mention additional migrant groups that arrive to the city where the most visible and vulnerable population group is constituted by the ‘desplazados’ (displaced). These groups arrive to urban areas due to the violence conditions caused by the Colombian internal armed conflict. In the case of Bogotá the population growth rate of the city descended in the 1980s however, this migration phenomenon reinforced in the 1990s with the intensification of the illegal armed groups’ conflict. According to DANE (2005) Bogotá is a moderate receiving city for these vulnerable social groups, however surrounding municipalities like Soacha and Mosquera in the south west part of the city are allocating more directly to these groups.4

Figure 24. Approximately between 800 and 1000 displaced families settled in the Tercer Milenio Park for several months in 2009 to request the government aids and help for their future inclusion to the city. Among those demands adequate housing and job opportunities were presented as prioritary. Source: www.radiosantafe.com modified by author.

4 For year 2011 statistics show Bogotá has allocated 320,518 persons and Soacha 35,179 persons. Source: Acción Social www.accionsocial.gov.co
3.2 Residential segregation in Bogotá

Understanding socioeconomic residential segregation as a process not as a static situation (Sabatini, 2003) implies conceiving the urban dynamics of Bogotá within a historical context. To understand the phenomenon, the social organization inside the city, its physical characteristics and development trends need to be intertwined to grasp the evolution of the phenomenon, its spatial features, negative effects and possible courses of action.

In order to develop this analysis, studies formulated to analyse residential segregation in Bogotá were considered. These studies have revealed both spatial trends and social organization characteristics of the city. The following section also intends to present these studies, to on one hand comprehend the residential segregation process undertaken in Bogotá and on the other complement the introduction to the city presented above, before determining strategies or spatial interventions. Therefore, the work of Salas Vane-gas (2008, 2010); Dureau (2010); González et al. (2007, 2008); Uribe Mallarino (2008); Ríos Ortegón (2010) and Alfonso (2010) will be presented and analysed. The different methodological approaches of the authors will be mention superficially to briefly understand how they measured residential segregation for the city. In addition, Sabatini’s work (2001, 2003, 2008) will also be considered due to the study he develops for Chilean cities is also relevant for the case of Bogotá.

a. Bogotá: a traditional segregation pattern historically determined that shows recent changes.

The traditional segregation pattern of most of large Latin American cities is characteristic for its large scale (Sabatini et al, 2001; Sabatini, 2003). During the twentieth century high elite families tend to concentrate generally in one geographic direction that links the city centre with the city periphery (Sabatini et al, 2001: p. 22, Jaramillo, 1999). Roughly towards the other side, poorer groups established in less equipped areas through several forms of informal development and later through the location of housing projects aimed to allocate these groups.

In the case of Bogotá, from the beginning of the twentieth century in the 1930s, the city started to consolidate a polarized north-south social organization where poor population groups tended

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Figure 25. Distribution of different socioeconomic groups (1- poor, 4- wealthy) in Bogotá (includes Soacha municipality) from 1973 to 1993. Source: Salas, 2008 translated and modified by author.
Planning and spatial strategies to counteract residential segregation in Bogotá
to locate in the southern parts of the city, and wealthier groups moved towards a northern direction along the city mountains. From a former distribution of the social groups in a relation centre-periphery in the nineteenth century, in the second half of the twentieth century Bogotá went through the consolidation of this strong north-south social division (Jaramillo, 1999; Dureau and Salas Vanegas, 2010) that underlies to an accentuated concentration of job places in the centre-north axis and an industrial development in the centre-west axis of the city (Dureau and Salas Vanegas, 2010). Moreover this polarization was supported by the actions of city dwellers. During the 30s and 40s, already the inhabitants of the south part of the city complained of an unequal treatment in the distribution of facilities and infrastructure from part of the municipality (Aprile-Gniset, 1992). In addition, land owners and developers contributed to strengthen positive and negative connotations respectively for the northern and southern parts of the city through the institution of ‘good lands’ and ‘bad lands’ leaving the latter for the location of ‘working-class neighbourhoods’ or ‘second class housing’ based on their poor physical or location conditions (ibidem: p. 549).

The study developed by Salas (2008) for Bogotá where the spatial organization of different social groups was analysed for the census period of 1973-1993 permitted to confirm the former statement: ‘the north of the city houses the majority of wealthy homes and the south is characterized by the low incomes population groups that there inhabit’ (p.351). However, the detailed analysis made by the author allowed her to conclude more precise characteristics of this social organization.

The study, based on the spatial organization of four groups (1-poor, 2-medium/poor, 3-medium, 4-wealthy) revealed at the scale of the census tracts a concentration of wealthy population groups in the shape of a cone that parts from the centre of the city towards the northern periphery of this one, aspect recognized by Sabatini as characteristic of the Latin American cities’ traditional segregation pattern (2003, 2001). In contrast, poor population groups concentrate in the shape of an arc that links the city centre with the western side of the city, passing by the south city periphery. In the case of the second group, the homogeneity of the social composition in space is higher than in the case of the first one; trend that consolidates during the 1973-1993 period (Salas, 2008: p. 351). Furthermore, in this period the expansion in an east – west direction occurs for all the social groups however it is more visible according the social scale goes higher. This means that the poorer groups disperse slower than the wealthier groups who tend to disperse also in a northern direction.

However, from the above described social organization pattern developed along the beginning and half of the twentieth century, Bogotá is undergoing through changes in this pattern making more complicated to state sharply that the city has a rich north and a poor south. Moreover, these changes are showing new scales and representations of segregation. On one hand a larger scale is evidenced related to the already mentioned expansion of urban development beyond Bogotá’s perimeter and a generalized increase in the land prices of the city (Sabatini, 2001). On the other smaller scales of segregation related to the development of gated residential environments inside the city were also evidenced. To be followed these changes will be explained further presenting as well some characteristics of Bo-

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5 Regarding the study developed by Salas (2008, 2010), it is important to specify two main aspects regarding the methodology used: First, the scales used by the author to measure residential segregation according to census data and second, the characterization of the population the author realizes in order to divide it in four socioeconomic groups. Regarding the scales, the author develops statistic data in the block, census districts, census tracts and city localities levels. In addition, in order analyze the socioeconomic condition of the population, four hierarchical groups were established based on the ‘social condition indicator’ calculated for each home. This indicator is calculated according to the average of years of study of home members older than 15 years divided by the number of persons per housing room (overcrowding measure).

6 All quotations of this bibliographic source are translated by author.
gotá and its surrounding municipalities’ urban development.

Salas’ study developed for the metropolitan area of Bogotá and the city localities permitted to show changes in the social organization of Bogotá’s surrounding municipalities. These changes relate to the metropolization process undertaken by the city from the 1970s onwards. With the expansion of urbanization beyond the city boundaries, the traditional pattern of social organization is extended (Dureau and Salas, 2010). However, in the case of Bogotá in the period studied, this enlargement and social polarization is observed only in the city dynamics with its strictly immediate surrounding municipalities (Salas, 2008: p. 353). The northern and western metropolitan municipalities continue to accommodate low incomes population groups and even from 1985 and 1993 they tend to lose population of the intermediate and higher social hierarchy (ibidem: p. 201).

Indeed, the perpetuation of the traditional pattern in this larger scale can be observed according to different spatial characteristics of suburban residential environments. In that sense, several roles are assigned to the surrounding ‘metropoli-

tan habitat system’ (ibidem, 2010: p.195) by the city’s expansion: northern metropolitan municipalities like Sopó, Chía and La Calera account for higher percentages in the development of suburban low density gated residential projects which are aimed for higher income population groups (Alfonso, 2010).

Figure 26. (above) House in ‘Altos de yerbabuena’ in Chía. Source: CAUT www.flickr.com modified by author.

Figure 27. (middle) The development of ‘Ciudad Verde’ in Soacha. Source: http://www.minambiente.gov.co and http://www.ciudadverde.com.co/

Figure 28. (below) Distribution of different socioeconomic groups (1-poor, 4- wealthy) in Bogotá’s metropolitan area from 1973 to 1993. Source: Salas, 2008 translated and modified by author.
On the contrary, the municipality of Soacha (nowadays no longer physically separated from Bogotá’s core) allocates a large part of low incomes population groups and where recently the National government decided to locate a massive project of social housing to allocate up to 24,000 new dwellings.

Moreover, according to the study developed by Salas (2008), the faster expansion of wealthier groups beyond the city perimeter to the north and the slower one of the poorer groups show that middle groups of the social hierarchy are remaining inside the city. González et al, (2008) also refer to this fact exposing that a large part of the taxpayer obligations are imposed to them due to the lack of metropolitan distribution mechanisms.

In addition, this study (Salas, 2008) permitted to show the segregation pattern also evolved towards smaller scales of concentration. For instance, this closeness among social groups can be observed in the northern part of the city where poor population groups inhabit near to wealthier groups (ibidem). Indeed these changes can be observed when looking at the development of residential projects inside the city between the 1970 and 2005. Gated residential projects and new enclosed buildings (type ’predio medianero’) developed in the beginning of the 70s for higher and middle income groups in the centre-north axis of the city are being recently developed in other areas of the city permitting diverse groups to get closer in space. Sabatini and Cáceres (2004) refer to this emerging process and stress on its double integration/segregation dimension. The development of these residential complexes is permitting to shorten the distance among social groups in the scale of the city, and simultaneously is intensifying segregation on a reduced scale when these typologies are built in areas where the population is predominately poor (p. 11).
Access to the city for everyone.

b. **The distance in space and the access to facilities.**

After understanding the segregation pattern dynamics and how this one has evolved in the case of Bogotá, a different approach towards the spatial and social dimension of residential segregation was explored to further understand physical and social characteristics of the city. In order to do so, the work of González et al, (2007, 2008) that approaches residential segregation from an economic perspective was analysed. González et al (2007) define socio spatial segregation through the establishment of two different modalities: ‘socioeconomic residential segregation’ and ‘socioeconomic access segregation’ (ibidem: p. 11). The first one is understood as ‘the relative absence or shortage of socioeconomic mix in the city’s territory subunits’ (ibidem: p.12) and the second one as the ‘access discrimination to diverse facilities, land, transportation, roads etc. based on socioeconomic grounds’ (ibidem: p.14). Three main aspects are considered in these two modalities with different qualitative conditions: **the home, the socioeconomic level of the population and the space** (ibidem).

In the following figure these two modalities are represented in a schematic way. Although it is not possible to unlink and simplify the intertwined social, economic and spatial issues in the comprehension of segregation it was developed for understanding purposes. In the upper part the first modality, the ‘socioeconomic residential segregation’, understood as the lack of social mix in space is associated with the socioeconomic dimension (what you earn and what you can pay for) and the second one ‘socioeconomic access segregation’, understood as the inadequate supply of facilities is more associated with a spatial dimension. The authors carried out different methodologies to measure these two modalities of socioeconomic segregation. The following paragraphs will present these different analyses without intending to describe thoroughly the methods used by the authors but more the conclusions they arose.

In order to measure the ‘socioeconomic residential segregation’ the index of residential segregation was used (González et al, 2007; González et al, 2008). This index explains if segregation is high when the territory unit chosen shows little socioeconomic variation among the homes located there. In other words, if the index is high there is little mix of several socioeconomic levels (ibidem). The study of this index was also developed in the human development report formulated for Bogotá and it was measured for each of the city’s localities. The authors explain that if

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Figure 30. Own scheme understanding the socioeconomic segregation developed by González et al, (2007). Source: authors’ own
Planning and spatial strategies to counteract residential segregation in Bogotá

a smaller unit like the neighbourhood were studied, the index would show higher results.

The study conducted shows the index is high when considering the price per constructed square metre, even higher than when homes incomes and expenses are considered (González et al, 2008). This means that what creates a greater distance between low and high incomes groups in the city is the housing price (price per built sqm) (ibidem). This can be explained due to the difficulties low incomes population groups have to use their house as an asset and in addition because the used housing market is more fluent among wealthier population groups (González et al, 2007).

In the case of the 'socioeconomic access segregation' the most visible feature to study is the access to facilities. The study developed by the authors (González et al, 2007) showed the correlation between the city's poverty indicators and the variables of distance and space. As a result, they discovered this correlation is higher over distance than over public space per capita. This means that when poverty incidence rise\(^8\) the distance increases as well. Therefore, the city localities that are more distant from the main business centre are the ones with bigger percentages of poor population groups. However it is important to specify that in a city like Bogotá this relation cannot be stated so sharply due to the city has different centralities (ibidem), with different characters and identities.

In any way, from the data it can be observed that localities like Usme in the south of the city, and Bosa\(^9\) and Ciudad Bolivar in the south west part of the city display high poverty incidence figures and equally are the ones within large distances to work, study and shopping places.

<table>
<thead>
<tr>
<th>H</th>
<th>I</th>
<th>DKM</th>
<th>EPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Bogotá</td>
<td>0.5293</td>
<td>0.4754</td>
<td></td>
</tr>
<tr>
<td>Usaquén</td>
<td>0.3184</td>
<td>0.4605</td>
<td>8.76</td>
</tr>
<tr>
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<td>0.3613</td>
<td>0.4478</td>
<td>5.78</td>
</tr>
<tr>
<td>Santa Fe</td>
<td>0.6713</td>
<td>0.5101</td>
<td>5.93</td>
</tr>
<tr>
<td>Suba</td>
<td>0.4238</td>
<td>0.5052</td>
<td>9.26</td>
</tr>
<tr>
<td>Usme</td>
<td>0.4802</td>
<td>0.5061</td>
<td>19.03</td>
</tr>
<tr>
<td>Tunjuelito</td>
<td>0.5568</td>
<td>0.4502</td>
<td>6.24</td>
</tr>
<tr>
<td>Bosa</td>
<td>0.7774</td>
<td>0.5102</td>
<td>11.9</td>
</tr>
<tr>
<td>Kennedy</td>
<td>0.4565</td>
<td>0.425</td>
<td>8.93</td>
</tr>
<tr>
<td>Fontibón</td>
<td>0.4813</td>
<td>0.4843</td>
<td>8.56</td>
</tr>
<tr>
<td>Engativá</td>
<td>0.4764</td>
<td>0.4231</td>
<td>8.31</td>
</tr>
<tr>
<td>Suba</td>
<td>0.3578</td>
<td>0.4455</td>
<td>9.19</td>
</tr>
<tr>
<td>Barrios Unidos</td>
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<td>0.3887</td>
<td>6.18</td>
</tr>
<tr>
<td>Teusaquillo</td>
<td>0.1245</td>
<td>0.479</td>
<td>6.24</td>
</tr>
<tr>
<td>Mármol</td>
<td>0.4112</td>
<td>0.4027</td>
<td>9.57</td>
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<tr>
<td>Antonio Nariño</td>
<td>0.4255</td>
<td>0.5107</td>
<td>6.39</td>
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<tr>
<td>Puente Aranda</td>
<td>0.4958</td>
<td>0.4238</td>
<td>7.02</td>
</tr>
<tr>
<td>Rafael Uribe</td>
<td>0.6788</td>
<td>0.496</td>
<td>9.66</td>
</tr>
<tr>
<td>Ciudad Bolívar</td>
<td>0.762</td>
<td>0.5184</td>
<td>11.1</td>
</tr>
</tbody>
</table>

H: Poverty impact
I: Poverty intensity
DKM: Distance average; in km from house to work, study and shopping places
EPC: Public space per capita

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\(^8\) Based on the unsatisfied basic needs survey of the year 2003 (DANE-SDP, 2003).

\(^9\) The first two localities -Usme and Bosa- are the localities where the majority of lowest range of social housing is being developed.

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Figure 31. Poverty, distance and space measures per locality, 2003 Bogotá. Source: All data from CID, (2004) except Dkm from Duarte (2006: p. 32) Table found in González et al., 2007: p.15

Figure 32. Residential segregation index - social and economic distance in space. Source: Human development report developed for Bogotá 2008 (González et al, 2008: p. 87) translated by author
Access to the city for everyone.

Moreover this fact reveals that the poorer groups in the city spend more time arriving to work places, aspect described by Sabatini (2001) as one of the negative consequences of the large scale of the segregation pattern. To this author, the larger scale is the one contributing to increase the ‘malignancy’ of segregation’s negative effects. His study developed for Chilean cities (Sabatini et al, 2001) shows higher correlation between distance and unemployment indicators possibly due not only to the times of travel but also the lack of job information networks (ibidem: p. 33).

Indeed, as it can be seen in the map of times of travel in Bogotá, higher displacement times are shown in the south and north western peripheries of the city. In addition, Alfonso (2010) who studies the intensification of the metropolization process for Bogotá explains that the daily trips made from Soacha (the southern neighbour municipality) to Bogotá constitute by themselves approximately the 62 percent of the total trips made from the metropolitan municipalities to the city. Moreover approximately 80 per cent of those trips are made for job purposes. This facts stress on the high concentration of job places that can be found in the centre north axis of the city and the centre west one while the southern and west parts of the city as later will be seen present high times of inner city displacements and inadequate spatial conditions.

Other spatial analyses carried out showed the unequal access to facilities of different areas of the city. Density of roads and persons per facilities analysis were developed considering the city’s localities as reference. In the first one maps showed the main and neighbourhood roads density for each administrative unit of the city (with the exception of Sumapaz). There, it was possible to see that in the south western parts of the city, the main roads density is lower and the local roads density is relatively higher (González et al, 2008). The localities before mentioned –Bosa, Usme and Ciudad Bolívar- present lower densities of main urban roads in the city.
Planning and spatial strategies to counteract residential segregation in Bogotá

Regarding density of persons per facility, the following chart shows higher concentration of persons per facilities in the Bosa, Kennedy and Suba localities and lowest concentrations in Teusaquillo, Chapinero and La Candelaria localities. In addition, Bogotá counts with 31,507,552 m² of green areas (without including regional parks) having the best indicators of m² per person the localities of Teusaquillo (14), Santa Fé (9,5) and Barrios Unidos (7,6) and the lowest the localities of La Candelaria (1,4), Bosa (1,9) y Los Mártires (2,3) (SDP, 2009c).

c. Collective imaginary and negative stigmas

The former spatial analysis developed for Bogotá showed diverse physical conditions of the city’s localities and their relation with poverty indicators. In addition, the study developed by Salas (2008) evidenced the evolution of the social organization (according to the social condition index) inside the city and its surrounding environment and the relation this one holds with the current metropolization trends of Bogotá. Still, other aspects of Bogotá’s urban dynamics show collective representations of segregation linking collective imaginary with the urban space. Moreover, stigmas about how Bogotá’s society sees and perceives its social differences linked to the city’s physical characteristics is strengthening the isolation of city areas. In this sense, Sabatini (2003) explains how these stigmas and bad images created for social groups that live in certain city areas, make difficult for them to ac-
cess to job or education opportunities, closing a residential segregation cycle (Sabatini, 2003). In that way, ‘the isolation of discriminated and poor population groups and the perception they have on their own condition is what favours social disintegration’ (ibidem: p. 9).

For the case of Bogotá, Uribe Mallarino (2008) refers to the impact the Colombian policy of urban stratification has had in the way citizens perceive social differences. Urban stratification is a tool developed by the State in the 80s where housing, immediate surroundings and urbanised context is classified in order to address subsidies and aids to the population living in the most deprived areas (SDP, 2009). Although these categories only adduce to the classification of physical characteristics of the urban environment, they seem now introduced in the common imaginary of how the Colombian society sees social differences (Uribe Mallarino, 2008). Moreover, the translation of stratums into ‘types’ of urban habitats appear as suitable to associate physical environments with ways of living reinforcing negative images of the population that lives in the most deprived areas and subsequently restraining residential mobility opportunities for these groups (ibidem; El Tiempo, 2011; Rios, 2010).
In addition, developers’ representations on these categories have contributed to consolidate the concentration of specific social groups in the city. In their practices as economic stakeholders the urban stratum take a great part in deciding what kind of housing typologies they will build in certain areas of the city (Salas Vanegas, 2008). Indeed, besides the land price developers take into account the stratum and the target families that can afford public utilities fees in those areas to decide on the type of housing and commercial price of the housing units (ibidem). Indeed this classification is also assumed by the families who choose their housing location according to their incomes and the public utilities fees they can afford.

The policy then helps consolidating a model under the presumption that poorer families can only afford less served areas while higher strataums can only be afforded by wealthier families. Salas Vanegas (2008) explains this direct relation between socioeconomic level and strataums can be found in the most extremes strataums (1-low 5 and 6 high) while probably strataums 3 and 4 can permit the cohabitation of diverse social groups.
d. Needed courses of action to counteract the negative effects of residential segregation.

As a response to negative effects residential segregation and after recognizing the role the State has had in increasing these ones, Sabatini (2003) proposes the development of a public policy where social integration becomes the main objective. In that way, key goals of that policy would be:

1. A more physical interaction among different population groups;
2. A higher access of the poorer groups to the city and;
3. The weakening of negative stigmas developed for city areas.

The author specifies this policy should aim to shorten the distance between low and high incomes population groups through the transfer of poor families into other areas of the city, mandatory percentages of social housing in real estate projects and upgrading of peripheral areas. In addition, special attention has to be addressed to land management and public transportation strategies.

In addition, González et al (2007) stresses in the necessity of pursuing two main goals to tackle segregation:

1. The reduction of the socioeconomic gap of society and;
2. The improvement of the spatial distance

In addition he refers to four aspects related to reach the former goals: the importance of direct or indirect measures to improve the purchasing power of the low incomes homes; the effective use of land management instruments to the collection of surplus values, the reduction in public utilities fees like the water and energy consumption for vulnerable social groups; and the improvement of the spatial quality through the development of social housing in better located areas, improvement of the public transportation network and subsidies in the transportation fees and the access to facilities.

As an important fact to highlight, it is observed that the authors refer mainly to the counteraction of the larger scale of segregation therefore aspects like public transportation and the location of social housing fulfil an imperative role in their proposals.
3.3. Social housing supply in Bogotá

The following section presents a brief overview of the process social housing supply has undertaken from the mid twentieth century until today, in order to confront the formal housing supply for low incomes population groups with the evolution of the segregation pattern evidenced in Bogotá and the city’s spatial conditions. Therefore, the section is organized in two parts: First, a brief historical description on the supply of social housing where social housing supply is intertwined with diverse urban plans developed for the city in order to analyze the articulation of the housing policies and development, with the urban models the city was conceived under. Second, a brief review of the actual social housing system was developed where stakeholders, population demand and current supply is presented.

a. State-promoted housing provision in the twentieth century and its relation with city growth and city planning

’In the last few decades what has been presented as housing policy in Colombia, really consists on policies to finance housing’ (Arango, 2001)

In the beginning of the XXth century, state promoted housing was barely developed in Bogotá. Arango (2001) presents the changes the housing financing system and provision have gone through in three historical periods, namely the welfare period from 1945 to 1972, the transition period 1973 to 1988 and market oriented period from 1989 onwards. In addition, more detailed periods were established by Saldarriaga - INURBE (1996) and Jaramillo (1994). A compilation of the last two is presented in Ballén (2009). To be followed, the broad periods established by Arango (2001) will be described and complemented with what has been explained by the other authors. Moreover, it is intended to link each period with what it was developed in Bogotá in terms of urban planning.

• Welfare period 1945-1972:

It was approximately in the mid 1940s the State assumed the direct responsibility in the provision of housing for low and middle incomes population. Along the first half of the twentieth century, a few examples of housing for working class groups were developed mostly by private or charity organizations (Maya Sierra, 2007). However, the first law concerning this issue was established in 1918 (law 46) with the beginning of the ‘industrial development’ (Ospina Varón and Bermudez Obregón, 2008). In this one the emphasis was put in the hygiene aspects of workers’ housing conditions. Also before the 1940s important national institutions in charge of promotion and provision of state housing were created, like the ‘Banco Central Hipotecario’ (BCH) in 1932 and the ‘Instituto de Crédito Territorial’ (ICT) in 1939. Other institutions like the “Caja de vivienda Militar”11 in 1947, the ‘Fondo Nacional del Ahorro’12 in 1968 and also institutions of the municipal level like the Caja de Vivienda Popular (CVP) in charge of producing or financing state housing were created in this period (Dávila, 2006).

Several aspects are recognized as positive from the housing developed under the institutional approach in this period. For instance, the articulation between State promoted housing and the architectural trade, for several of the projects developed during this period were designed and built by important Colombian architects imprinting a recognized spatial quality. Institutions as ICT and BCH, in their role as public developers, had both administrative and technical departments that permitted them to be involved in both financial and physical aspects of housing (Ospina Varón and Bermudez Obregón, 2008). In addition, the creation of CINVA (Centro Interamericano de Vivienda y Planeamiento Urbano – Inter-american Centre of housing and Urban planning) programme financed by OAS (the Organization of American States) and situated in the National University of Colombia permitted the link among State institutions, housing development and academy (Saldarriaga - INURBE, 1996). This framework allowed the experimentation with building and technical solutions that

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11 This one was oriented exclusively to promote housing for members of the Military forces.
12 This one oriented to workers in the public sector.
Access to the city for everyone.

Figure 43. Social housing and urban growth in Bogotá. Source: authors’ own from graphic source from Instituto Distrital de Cultura y Turismo, 1999 and Ballén, 2009.
nowadays still constitute remarkable examples (Arango, 2001). On the other hand, this period was characterized by the experimentation in diverse financing schemes that sought to involve different actors in housing and urban development all within a public control framework (ibidem).

Without a doubt the housing projects developed during this period were significant in the architectural and building fields (Maya Sierra, 2007). Moreover, housing was conceived as a structuring element in the city construction in charge of articulating coherently architecture and urban tissue (Torres, 2008). However despite of the accomplishments in the housing production and the technological innovations inside the public sector, several of the housing projects provided ended in hands of high-low and middle incomes population groups (Arango, 2001; Dávila, 2006); great part of low incomes population groups had to turn to informal mechanisms to build their residence places taken into account the rapid population growth characteristic of this period.

Concerning urban planning, different plans for Bogotá were developed in this period being the first ones formulated around the 1920s. In 1923, the Plan ‘Bogotá futuro’ (future Bogotá) was developed mainly as a road reserve plan. In the coming decades, from 1933 until 1940s with Karl Brunner, the Austrian ‘urbanist’ in Bogotá’s planning department, several plans were developed for the expansion of residential areas; however several of them were not realized. In 1939 he developed the Urbanism manual for the city.

In 1947, the law 88 obliged the largest Colombian municipalities to develop a master plan (‘plan ordenador’). After the riot occurred in 1947 denominated ‘El Bogotazo’ where the liberal leader Jorge Eliecer Gaitán was killed and several buildings were destroyed, the municipality enters a moderniser stage (Aprile-Gniset, 1992; Beuf, 2011). For that one, Bogotá’s municipality hires Jose Luis Sert, Paul Lester Wiener and Le Corbusier to develop a plan for Bogotá. Both plans developed, the pilot plan and ‘regulator’ plan were conceived around a monocentric model based on the demographic data the plans were based on. Le Corbusier’s pilot plan, was expecting Bogotá to have 1,000,000 inhabitants in 2000, and by that time Bogotá was already 6,000,000 inhabitants. Although, Le Corbusier’s plan never saw reality, several of the normative features of the functional city were adopted by the city like the roads classification system and the focus on zoning (Aprile-Gniset, 1992). Moreover, several of the residential projects develop by the institutions before mentioned were design under the influence of CIAM’s ideas (Maya Sierra, 2007).

During the 1950s the short dictatorship of Rojas Pinilla (1953-1957) realized several spatial infrastructure interventions developed outside the master plan formulated by Le Corbusier. In addition during this period, in 1954 Bogotá’s Special District was created with the annexation of the surrounding municipalities -Usme, Usaquén, Suba, Fontibón, Bosa and Engativá- to the capital perimeter (see introductory part of the city, urban growth chapter 3 c). Other plans formulated in the end of the 1950s and 1960s were basically developed as roads reserve plans. However, with the inclusion of these municipalities, Bogotá started to conceive more than one centre. Beuf, (2011) interprets this moment as the first one where signs of polycentricism are considered in the managerial and spatial spheres of the city.

• Transition period 1973-1988:

The transition period is recognized as the intermediate period between the welfare and strong market oriented periods. In this one, housing starts being seen as an aspect capable of boosting the construction sector more than a social need or a fundamental element in the city construction (Arango, 2001). The National governments of this period started to articulate the role of the private sector in housing development (in previous years private developers were subcontracted by the State) with the State’s responsibility in providing housing for low incomes population groups (ibidem).
In order to fulfil this goal, financial measures were created to support the private sector and the saving capacity of the housing buyers parallel to the functioning of the public institutions from the former period. In that sense, the UPAC (Unidad de Poder Adquisitivo Constante – Constant Purchasing Power Unit\textsuperscript{13}) was created along with the CAVs (Corporaciones de Ahorro y Vivienda – Housing and saving corporations) of private character. The system created in 1972, under the ideas of the economist Lauchlin Currie (Ospina Varón and Bermúdez Obregón, 2008), permitted to generate a saving culture among mainly middle and high incomes population groups and to create a dynamic housing market by providing financial support to private construction companies who got involved not only in the construction but also in the design of housing projects. The system as it was initially designed permitted to adjust the savers’ deposits and the debtors’ duties with the inflation rate (Arango, 2001; Ballén, 2009; Cuervo and Jaramillo, 2010).

As UPAC was aiming exclusively to middle and high incomes population groups, State promoted housing continued to be developed by the ICT and the Caja de Vivienda Popular in Bogotá (Saldarriaga, 1996). In this period technological solutions and experimentation with self-built programmes was sought (Torres, 2008). For instance, Ciudad Bolivar constitutes the biggest example of residential development made under self built initiatives where institutions like the CVP and the Inter-American Development Bank (IDB) were involved (Cuervo and Jaramillo, 2010). Projects developed in this period characterized by higher densities and more efficient land occupation (Ospina Varón and Bermudez Obregón, 2008). Moreover the first gated residential projects for middle and high incomes populations were developed in this period (Ballén, 2009).

In 1979 other plan was developed, the Acuerdo 7 (Agreement 7). Beuf (2011) recognizes this plan as ‘the norm without the plan’ (p. 49) and explains this one (along with the latter ‘agreement 6’ developed in 1990) ‘assured State’s subordination to the market forces’ (ibidem). The relation between territorial decentralization and social objectives was confided to a redistribution policy\textsuperscript{14} in the payment of services fees. The urban model developed was not completely monocentric but, the polycentric model conceived did not correspond to any specific social or spatial objec-

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\textsuperscript{13} Literal translations developed by author.

\textsuperscript{14} The urban stratification policy created in 1983 and previously mentioned.

Figure 44. (next page) author’s own with data from Arango (2001); Jaramillo (1994) and Saldarriaga (1996); Ballén (2009)
In any way, the densification benefits granted to private developers by this plan permitted the densification of central areas resulting in the extension of services and commercial activities from the city centre towards the north (ibidem); area that nowadays still concentrate great part of the financial and services functions of the city.

- **Market oriented period from 1989 onwards:**

The law 3 of 1991\(^{15}\) created the ‘National system of social interest housing’ and established the figure of housing subsidies to demand (current until today), leaving behind State’s direct and complementary measures in the provision of social housing. The system was created after the Chilean experience although adapted within a more liberal framework (Cuervo and Jaramillo, 2010). INURBE (Instituto Nacional de Vivienda de Interes Social y Reforma Urbana – National Institute of social interest housing and urban reform) was created after the closure of the ICT and BCH in the end of the 80s. This institution (also closed in 2003 and replaced with the National Fund of Housing FONVIVIENDA) was in charge of administrating the allocation of subsidies within this new policy framework (Arango, 2001).

The housing subsidy, created to help families with lower income capacity, is allocated to families who comply with previously established eligibility criteria (ibidem). In addition, the system established that the housing subsidy must be delivered directly to the target families in order to help them be part of the solvent demand (Cuervo and Jaramillo, 2010). With the subsidies, the families could complete their savings to get access to a financial loan and therefore access to housing in the formal market conditions (ibidem).

In addition, reforms applied to UPAC’s financial scheme and the introduction of other liberal re-
forms lead to its abolition in 1999 decision made by the National constitutional court after thousands of families lost their homes due to the impossibility of paying increasing interest rates of the loans and several of private developers broke. In the same year the UVR (Unidad de Valor real – Real value unit) was created to replace UPAC and to re-establish its initial concept.

Regarding urban planning in 1990 the Acuerdo 6 (Agreement 6) is developed. In this one, the general guidelines of the Agreement 7 are conserved; both of these consolidated as ‘actually zoning and building codes rather than territorial plans’ (Carmona et al., 2009: p. 111). In 2000, the current plan of the city was developed, the ‘Plan de ordenamiento territorial’ POT (Territorial Ordering Plan). Some changes were made to the plan in 2003 and 2004 and a final version was compiled in 2006. This plan conceives different centralities, and the territorial dimension of the metropolitan area and surrounding region were included through the different versions. Also this plan represented a change in the establishment of an urban structure and the inclusion of several land development instruments within the framework of the national laws 9 of 1989 and 388 of 1997.

**b. Current housing supply in Bogotá**

‘In Bogotá as in other Latin American cities for a long time in the matter of housing policy, two hardly compatible objectives have been sought to be accomplished: On one hand it is pretended to overcome the housing shortage that is severe especially for lower incomes social groups and that it is associated, among other aspects, to the accentuated poverty conditions of these groups and to the strong expansion of those needs concomitant with the population growth in the city. On the other hand, housing construction is sought to be consolidated as a productive branch in order to contribute to general wealth, to the creation of job opportunities and to boost other economic sectors’16 (Cuervo and Jaramillo, 2010: p. 249)

The above mentioned objectives have been pursued by the National government during great part of the twentieth century and with the reforms elaborated in the 1990s it was evident the housing policy shifted towards a liberal approach (Arango, 2001; Cuervo and Jaramillo, 2010). Cuervo and Jaramillo (2010) recognize two main axis of the current policy that characterizes this change. On one hand the strengthening of the financial sector that lead to the elimination of a specialized banking system that existed for low cost housing. On the other hand the elimination of a State developer, the Instituto de Crédito Territorial. With its elimination and institution of the subsidies to demand system (p. 250), it is expected that the total of the housing production needed would be developed by the private sector. Including the housing that should be aimed to the lowest incomes groups (ibidem: p. 262).

Since 1991 until today the ‘subsidy on demand’ system has been adjusted several times mainly in its administrative aspects. Part of those changes will be referred here briefly however the interest of this section relies more on developing a general overview on the provision that social housing undertakes in Bogotá to expose the limitations that the current system has shown and finally get conclusions.

- **Stakeholders:**

‘Housing is also an expression of the multiplicity of sectors that intervene in the city construction’ (Torres, 2008: p. 134). In the current social housing system several stakeholders are recognized from both the National and Municipal...
level. For instance, from the National level public stakeholders as the Ministry of Housing, City and Territory in charge of formulating policies and plans regarding housing and the National Fund of Housing, FONVIVIENDA, in charge of consolidate the policy and administrate the allocation of subsidies are recognized.

The setting in operation of the policy aims for the municipal level to directly finance social housing projects and/or complement the housing subsidies the national government provides, through money, urbanized land and/or infrastructure. In the case of Bogotá, the Habitat Secretary which comprises several institutions, is in charge of implementing the social housing system in the city. As an example the Caja de Vivienda Popular part of this Secretary and formerly involved in housing development decades ago, now is in charge of the rehabilitation of informal settlements. In addition, the municipality created the institution Metrovivienda in 1998, also part of the Habitat Secretary. The creation of Metrovivienda was aiming to promote social housing development in accordance with the difficulties that low cost housing overcome due to the constraints that land price impose for its development, and the reluctance of private developers to build it because of its low profit and high risk (Carmona et al., 2009). The institution contributes to the supply of social housing by providing urbanized land for its development and it functions as a land bank under a mixed (public and private) framework. Therefore, the company buys or expropriates suitable land for development and serves it with the necessary facilities and according to the public space standards of the city. The resulting urbanized land blocks are sold to private developers controlling building standards and final price of the housing units.

Metrovivienda has been a key stakeholder in the provision of social housing in the last decade due to it is main objective is to promote the production of the lower range of social housing, one that is rarely developed by private developers in regular market conditions. However, as it will be later explained there is still a part of the population that cannot have access to the projects promoted by this institution.

In addition, private sector stakeholders take great part in the functioning of the system. Such is the case of the ‘Cajas de compensación familiar’, private agencies without a business character that administrate the allocation of the ‘subsidies on demand’ system and also can be involved in the development of housing projects. Other private developers companies are involved in the supply of social housing, although what is most common is that they find more suitable to be engaged in the construction of the highest range of this type of development.

• Social housing supply:

Housing typologies are defined by a price range according to the minimum wage determined by the Colombian law\(^\text{17}\). In the beginning of the system’s implementation this classification established four different ranges according to the different amounts of the subsidy. In this sense, housing typologies follow this logic and architectonic typologies become the result of this land price/subsidy/building costs calculation. By 2008, the typologies were reduced to two. Housing called ‘priority interest housing’ that goes until 50 min. wages and ‘Social interest housing’ that goes until 135 (Torres, 2008).

From the period of social housing supply studied by Ballén (2009), 1990-2005 it was possible to establish that the majority of the supply developed during these years was aiming to be linked with the highest range of the National subsidy with 70%, for subsidy type 4 against 2% for subsidy type 1, the lowest range of social housing (in this study the projects developed by Metrovivienda were not included) (2009: p.101). Moreover, this study stresses in the fact that in the initial years of the system’s implementation, this subsidy constituted an aid directed more to middle incomes than to low incomes population groups which still have to turn to the informal market to have access to a residential solution.

\(^{17}\) For 2012 is aprox. 240 euros (COP $566.700)
In addition, seeing housing as a market product has displaced the deeper reflection of typological matters to assume architectural form as a resulting price. Moreover, some of the massive housing projects disregard the articulation with urban elements due to the rigid occupation scheme that deal more with efficiency of land occupation than with the consolidation of urban spaces. Several authors explain how the units produced by the set in operation of the policy also disregard the occupation and functioning dynamics of the people that inhabit these housing projects (Arango, 2001; Torres, 2008). Moreover, often productive spaces are left out in these housing environments; spaces needed for these social groups to overcome their social condition. Also, the typologies and their spatial set up which impose administrative schemes for these population groups is questioned.

- Social housing demand:

Despite the efforts Metrovivienda has done in providing quality urban space for social housing, it is recognized that the lowest income population groups still have not access to adequate housing. According to official data from the city, the housing deficit is about of 500,000 units accounting for both the qualitative and quantitative ones. Part of the problem is to be found in the fact that people belonging to the informal job market cannot have access to a house loan in formal conditions (Salas Vanegas, 2008). In addition, other families do not comply with all the requirements for the subsidy allocation. Moreover, aspects rooted in how the system works appear as contradictory. On one hand the families applying for the subsidy have to prove they need urgently the financial aid and on the other hand they have to prove to loan banks they have enough economic resources to respond with the load of the loan (Cuervo and Jaramillo, 2010: p.269). In that sense, several of the subsidies that the National government provides remain unclaimed, in the case of Bogotá the figure of unclaimed subsidies for 2010 was of 33,439 housing subsidies (Pari...
Planning and spatial strategies to counteract residential segregation in Bogotá

Indeed, the families that do not find access in the current policy have to return to the informal market for solving their housing demands. Parias (2010) develops a study of the transactions developed in the informal market to find that between 2000 and 2004, 61 percent of the transactions in this market were rent transactions and 50 percent of those tenants were born in Bogotá. In addition, 71.5% of this demand gain less or 1 minimum wage while the lowest range of priority housing developed by Metrovivienda aims to population with incomes of 1.5 the minimum wage (ibidem). The study permitted to contradict several of the common believes about informal market adducing that the biggest section of the demand is composed by new city migrants. Being from Bogotá a large part of the population that live or rent in these areas, the study showed how for several of the families these housing solutions permit them to stay close to their social networks assessing proximity over ownership.

- Spatial quality of the existing stock:

Although Metrovivienda’s efforts in providing an adequate urban layout to the development of social housing is recognized, apart from the higher prices the institution has acquired the land to, resulting in higher prices of the housing units and in some occasions the reduction of the housing units areas (ibidem: p.289), spatial considerations necessary for the articulation of the urban space and housing typologies have been also pointed out. The analysis elaborated by Parra et al. (2011) showed that the most critical aspects of these ‘priority interest housing’ projects’ spatial set up, is their distant location to work places implying higher transportation times for their inhabitants than the average of trips times encountered for the city, and the high density of population that some of these projects allocate. Moreover, recently the project ‘Ciudadela el Recreo’ suffered from the Bogotá river flooding raising the debate on how suitable the location of these projects is and until what

Figure 47. (left) SDP, 2010 Bogotá ciudad de estadísticas - Densidad Urbana. Translated and modified by author with graphic source with SDP GIS, 2009

Figure 48. (right) informal development in Bosa Source: María Clara Vejarano modified by author

Figure 49. (above next page) Ciudadela el Recreo social housing development. Source: cybex - www.panoramio.com
extent these solutions can become an asset for the users whose life efforts are put in purchasing a home (Semana, 2011).

c. Envisioned solutions

Arango (2001) and Torres (2008) who analyze the Colombian policy establish several courses of action that will be briefly described in this section. For Arango an integral housing law should be formulated with at least three main points: parameters for housing physical quality standards, assured possession through a guaranty regime for housing purchase and stimulation of other types of tenancy (rent, collective property, leasing) for different types of homes, a compromises and responsibilities regime for the stakeholders involved and regulation of each ones’ roles. In addition this author also recognizes the importance that a National information system is created to characterize the population in situation of housing demand. This system could be created from the municipal governments that have access to local information and would permit precise solutions to housing problems.

In addition, the author stresses that sooner than later social housing needs to be left out of the market. This does not imply to adopt immediately the old welfare model. ‘It is more about understanding that not only one applicable answer can be the response to society as a whole, and that in order for the poorer groups to get access to housing, a multiplicity of options adjustable to their situation need to be available to permit their progressive entrance to the job networks, improve their incomes and get access to more conventional tenancy options.’\(^{18}\) (Arango, 2001 p: 40)

Torres (2008) coincides with Arango (2001) and calls for a more integral approach where a di-

\(^{18}\) Translation by author. Original of the quotation ‘Se trata más bien de entender que no puede haber una respuesta única aplicable a toda la sociedad, y que para los más pobres se deber abrir un abanico de modalidades de tenencia que se ajusten a su situación y les permita, en la medida en que vayan entrando a las redes de empleo y mejoren su ingreso, pasar a otras forma de tenencia más convencionales.’
versification of the supply be studied in order
to achieve social integration. The author explains
that the right for housing cannot be fulfilled in the
short or medium term, what it means that differ-ente alternatives should be implemented with the
purpose of becoming long term measures. In ad-
dition, it is necessary to create macro work poli-
cies and mechanisms to a better redistribution of
wealth to improve the purchasing power of the
vulnerable social groups.

As the current policy is oriented to the con-
struction of new dwellings; solutions from early
stages that were left behind like: used housing
purchase; self built construction; housing im-
provement; informal settlements rehabilitation;
collective ownership of housing; recycling urban
structures and abandoned buildings; agricultural
and productive housing in city borders and design
of rural human settlements should be considered
now. Moreover, in countries of limited resources
like Latin American ones, the recuperation
and rehabilitation of existing structures
must be supported in order to exploit existing
infrastructures (Torres, 2008). In addition, the
author also states that for the Colombian case
the priorities should be: 1. jobs and incomes, 2.
land, 3. housing, 4. access to public services and
5. the improvement of public space.

In addition, Sugranyes Bickel et al. (2007) who
studies the Chilean housing policy where the Co-
lombian model was taken from coincides in sev-
eral aspects with the last two authors. For this
author urban rehabilitation and regeneration of
existing urban fabric should be considered as
an option for social housing in order to take ad-
vantages from infrastructure existing capacities.
Other lines of research should be oriented to: a
thorough characterization of the demand to un-
derstand and differentiate their housing require-
ments; a residential mobility system stock
which facilitate to slow down the construction
of low cost housing in the periphery and would
provide alternatives for the population that have
not yet got access to housing; a more flexible
approach of the State where enabling the partici-
pation of the population could be considered; the
reflection on the physical components of housing
and its surroundings where housing materiality,
its environmental location and its symbolic value
could be assessed and recognized. Moreover, the
author states ‘The city has to be made by con-
solidating the central areas and not by facilitating
the urban sprawl’ (p.130).

3.4 Conclusions

The dynamic and changing understanding of
residential segregation permits to relate the
evolution of the social organization of the city
in relation to urban growth and the participation
of different actors in shaping the city. For the
case of Bogotá now is recognized that from a
polarized social organization north-south in the
beginning of the ninetieth century, the city is go-
 ing through changes that simultaneously present
the enlargement and decreasing of the segrega-
tion scales (Salas Vanegas, 2008). Linking both
of the theoretical streams presented in the previ-
ous chapter with the analysis performed for Bo-
gotá, a decisive moment recognized as driver for
the appearance of these changes is to be found
in the deregulation measures that Latin Ameri-
can governments undertook in the 80s where
land market liberalization and the retreat of the
State in space production permitted a stronger
participation of private developers; moment also
recognized as crucial when looking the provision
of social housing in Bogotá (Sabatini, 2001; Ja-
oschka and Borsdorf, 2006).

The differentiation of segregation scales permit-
ted to show different space development trends
for Bogotá. Also among the envisioned solutions
regarding residential segregation developed by
the authors studied, it was posible to recognize
they refer as urgent the counteraction of the
larger scale of segregation due to the nega-
tive effects the concentration and isolation of low
incomes population groups in vast areas of the
city has in self perception and the access to op-
opportunities by the means of spatial distance
(Sabatini, 2003, González et al, 2007, 2008). In
the case of Bogotá the consolidation of this larger
scale is recognized in the dynamics among Bogo-
tá and its immediate surrounding municipalities, coincident with the study of the metropolization process carried out in Bogotá’s surrounding region (Alfonso, 2010) that also showed the current importance of Bogotá as a job attractor for this immediate region.

Regarding the formal supply of housing for low income population groups it has been clear that the Colombian National government, through the implementation of a ‘subsidies to demand’ policy moved towards a clear neoliberal scheme; a process that started in the 1980s. The State then assumed an indirect position in housing development becoming private’s sector facilitator. This role supported by the decision of strengthening the construction sector as a macroeconomic leader points out opposing objectives (Arango, 2001; Salas Vanegas, 2008; Torres, 2008; Cuervo and Jaramillo, 2010) and not compatible economic and social aims. Moreover, its dependence from the private financial sector diverts social interest goals to support the financial and building sectors (Arango, 2001). In this framework the main elements of the policy are dictated from the National level leaving to the municipal levels minimal action tools (Cuervo and Jaramillo, 2010). Also, the strongly sectorial approach of the policy makes difficult its articulation with urban planning instruments in the municipal level.

Moreover, there is a contradiction between the urban model promoted by the urban plan of Bogotá and the implementation of the National housing policy. While the urban planning model promoted by Bogotá is based on consolidating a compact city by a strict perimeter imposition, the promotion of densification processes inside the city and further control in development processes; the model the social housing policy promotes is a land expansive model of massive and homogeneous social housing development. The numeric relation between the subsidy amount and the housing building costs immediately establishes a peripheral location based on land price and on the expected profit of developers. This strictly sectorial policy implementation in Bogotá is contributing to the enlargement of the segregation scale by the concentration of social housing projects in isolated areas of the city and without articulation with the job dynamic of the city. This expansive approach is recognized by the
public institutions and even supported by the National government that in the case of Bogotá’s metropolitan area intends to develop a massive housing project in the municipality Soacha. In addition, conceiving housing as a commodity has left on a side the technological and innovation processes that were carried out by the National government when the ICT was functioning (Torres, 2008).

Finally, the current supply of social housing in Bogotá through the implementation of the before mentioned policy continues to be not enough for the demand, with existing problems in targeting and location; and disregarding informal market’s residential dynamics which are based on the recognition of proximity and social networks.

Informal settlements densification
Lack of affordable and adequate areas for part of the population and for new migrants
Increasing overcrowding importance of proximity relations

Changes in the segregation pattern in the last three decades
↓ City scale
↑ Immediate metropolitan municipalities
↑ Neighbourhood scale (through spatial fragmentation)

Lack of articulation between planning instruments and social housing policy
Peripheral social housing location responds to land prices structure (especially the one of lowest range)
State’s indirect approach towards the social housing provision

So far, understanding socio-spatial segregation in its dynamic dimension, its negative effects, and causes permitted to differentiate its scales, and grasp its manifestations and collective representations. Moreover, the analysis developed for Bogotá in relation to a part of the phenomenon—the provision of housing for weaker economic social groups—showed conflicts in the interests of governance levels and opposing social and economic goals. Above all, it showed how the implementation of the current policy in Bogotá is contributing to an enlargement of the segregation scale through the peripheral location of housing projects that responds mainly to a matter of land price.

In addition, the consolidation of a segmented housing stock also determined by land use, land value and facilitated by the urban stratification policy of the city reinforce the concentration of homogeneous social groups by establishing which social groups can afford certain city areas. This dynamic perpetuates the idea that economically weaker groups can only live in poorly served and isolated areas.

Therefore, this chapter has as a main goal to consolidate a framework where strategies and interventions proposed can be situated. The process of consolidating this framework was developed through three different analytical exercises. First, a comparative analysis of what the different authors have proposed as needed measures for the counteraction of residential segregation negative effects; and needed measures for the Colombian housing policy to contribute overcoming the housing deficit. The second part of the chapter will contain a brief analysis of how residential segregation has been approached by the institutions in Bogotá and what recognizable measures have been taken so far. Third, an analysis for each of the scales—metropolitan, city, and local—where constraints to act and challenges will be presented to finally define an action framework.
Access to the city for everyone.

4.1 Comparative analysis of envisioned solutions.

Analysing what the different authors have proposed about residential segregation counteraction and the necessary changes envisioned for the Colombian housing policy, lead to discover a complexity yet a similarity of intertwined aspects in different dimensions. This was not surprising for housing location is part of a phenomenon like residential segregation which involves simultaneously social; economic; spatial and governance aspects. In the same way, the authors dealing with Bogotá’s and overall Colombian’s social housing deficit relate to higher governance levels; economic; and social aspects that intervene in the provision of housing for vulnerably economic population groups and determine their quality of life.

Figure 53. Reasoning approaches of the authors dealing with residential segregation and the housing policy of Colombia. Source: author’s own
A scheme was developed as analytical exercise aiming to synthesize some of the authors’ guidelines, to identify the dimensions where these ones relate to. The purpose of this analysis is to generate a framework where the proposed strategies can be situated, more than propose a strict classification.

In the case of residential segregation, the already mentioned proposals of Sabatini (2001; 2003) and González et al. (2007; 2008) were considered although their policy proposals imply different focus and actions. These focus differences can be traced primarily on how these two authors define segregation. Sabatini sees residential segregation as a changing phenomenon where segregation can be supported on diverse grounds other than socioeconomic and González directly concentrates on socioeconomic residential segregation.

In addition, it was recognized that the proposals these two authors develop are aiming towards counteracting residential segregation and its larger scale due to the urgency of creating suitable conditions to shorten the distance among different social groups. Moreover the importance of spatial distance is found in both of these authors as a main element to consider in the integration of poorer groups. On one hand, Sabatini (2003) recognizes the larger scale of segregation as the one increasing the ‘malignancy’ of its negative effects by the concentration and isolation of low incomes population groups away from the job centres and aggravated by negative stigmas developed for those city areas. On the other hand González et al, (2007) recognize a high correlation between poverty indicators and distances to work, study and shopping places in Bogotá linking distance with the socioeconomic condition of the population and the location of centralities in the city.

In the case of the social housing deficit and the implementation of the country’s policy in Bogotá the already mentioned envisioned solutions proposed by Torres (2008) and Arango (2001) were incorporated. In addition, the ones developed by Sugranyes Bickel et al. (2007) were also considered as reference due to the relevance Chilean housing policy experience has for the case of Colombia.

Although the authors dealing with residential segregation refer to dynamic urban processes, (evident in the case of Sabatini) and the authors dealing with Colombian’s social housing policy refer to the analysis of an imposed and current policy (in a specific context) and its impacts in the urban environment; common aspects to integrate low incomes population groups can be recognized: the distribution of wealth; the importance of effective land management instruments; and the need for mechanisms to enable residential mobility in the city.

These common aspects deal with structural issues embedded in the socioeconomic reality of Colombia and therefore relate to general and National legal frameworks where the basis for municipal development should be instituted. That is the case of direct and fairer distribution of wealth or the establishment of relevant and effective land management instruments. Therefore for the development of combined strategies in the local level dealt further in this document, these aspects are recognized as necessary however their modification slip out the scope of this graduation project. In addition, this analysis permitted to evidence that the metropolitan environment where the segregation is shown to be increasing has no visible role as a territorial entity and therefore the individual development of the municipalities around

19 Colombia is the third country behind Haiti and Angola in inequality of incomes distribution according to the Gini index. Source (Portafolio, 2012)

20 The same can be evidenced in the development of effective land management instruments that are dictated from the National level to be applied by municipal governments.
Bogotá is contributing to the consolidation of an expansive and fragmented space.

Finally, as a main and overall evident conclusion obtained from this analysis is that in order to propose strategies for the integration of low incomes population groups and development of social housing in Bogotá—the aim of this project—an integral approach is needed containing actions and programmes in the economic, spatial, planning and governance dimensions. Also the already mentioned importance of the scales in the study of socio-spatial segregation implies for the case of Bogotá that a multi-scalar approach is also needed in order to differentiate the levels and stress on the relevance of different interventions to counteract its negative effects.

4.2 Measures implemented in Bogotá for the counteraction of residential segregation.

After the former analytical process where envisioned solutions about counteracting residential segregation and overcoming the housing deficit were confronted, it was clear that a brief review of how residential segregation has been tackled in Bogotá was needed to determine a planning framework where to act.

Salas Vanegas (2008) who reviews several of the official planning documents of Bogotá finds that socio-spatial segregation presence in these ones is diluted and very weak. The lack of continuity in the urban policies about how residential segregation has evolved in the city, and what measures can be taken to reduce its negative effects shows that the topic has not been treated as a priority by the government. The author finds the topic present in the planning agenda in 1973 with the study ‘Fase II’ to disappear completely on 1974 and regain importance in the late 80s and in the 2000 with the first version of the POT. ‘Fase II’ study was also referred by Beuf (2011) who explains how for the first time the attention was directed towards a functional decentralization and the need to link mobility with land control in the city. From ‘Fase II’ the relevance of ‘cities within the city’ emerged stressing in the importance of linking spatially residential areas with recreation, collective facilities and job sources (Salas, 2008).

The model ‘cities within the city’ recognized also the need for a diversified housing stock setting the conditions for social mix. Although ‘Fase II’ is recognized as a relevant diagnosis elaborated for the city at that time, the latter city plans did not manage to incorporate its recommendations. Some of those guidelines were developed relatively recently in the POT where residential segregation was considered again as an imperative issue in the city. This plan was also considered as a strategic spatial development framework for a period of relevant transformation of Bogotá. Therefore, some of the most visible physical interventions that also can be linked as counteracting processes of residential segregation will be highlighted here without intending to be an exhaustive analysis.

- Transmilenio:

‘Transmilenio is a BRT system that works with a trunk-feeder set-up. Based on the bus rapid concept that originated in Curitiba, Brazil, it operates with high-capacity articulated buses circulating in dedicated bus ways of one or two lanes in the trunk corridors. Operation in the trunk lines is done both with local and express services. Additional feeder lines (alimentadores) give free service to access the system from locations surrounding the terminal stations of the trunk lines (portals).’ (Munoz-Raskin, 2010: p.73).

The system was inaugurated on 2000 with two of the lines -Line Calle 80 (see purple in the following map) and line Caracas (dark blue and orange)-. In 2002, the line of the Avenida Jimenez was finished (pink). From 2003 to 2005 other three lines were put in operation –Calle 13 (red), Avenida Suba (yellow) and Carrera 30 (brown and light blue)- and nowadays the line connecting in the east- west direction the airport with the city centre is being developed –Avenida El Dorado. Transmilenio constituted a enormous improvement in the mobility of the city. On one hand the system permitted to shorten transport times within the city. On the other hand the improvement of public space along the system cor-
ridors helped to consolidate a cohesive city image and its design incorporated spaces for physically handicapped groups, aspect that had not been approached so visibly before in the city’s transportation and public space network (Salas Vanegas, 2008).

Indeed, as a transport infrastructure Transmilenio permitted to improve the times spent in transportation for different social groups inside the city and as an urban intervention permitted to boost the enhancement of public space in former informal settlements and the consolidation of the network of bike paths inside the city. Its role as spatial integrator lies in these two aspects; however, already some authors have recognized also segregation dynamics the system did not anticipate. On one hand for some areas of the city the times in transport increased due to the elimination of some local bus routes. Also for users located along the feeding lines of the system, the times of transportation incresed (Salas Vanegas, 2008).

In addition, the strictly sectorial intervention of Transmilenio in terms of infrastructure has shown uncontrolled market dynamics that contribute to the expulsion of social groups in the city. The perception of space improvement and...
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the location of new commercial facilities have permitted the municipality to increase the urban stratum (see section 3.2) of city areas implying higher and not affordable living costs for social groups that live there and which job income sources maintain the same before the interventions (Hurtado Tarazona, 2008). Moreover, the increasing fee of the system also implied for some inhabitants especially from outside the city to restrain from making use of Transmilenio i.e. the inhabitants of Soacha that have to take additional buses to access the system.

• Bike lanes network and de-concentration of public facilities:

The reasons behind Bogotá’s rapid change during the last one and a half decade have been and still are a source of debate. However, it is recognized this change had to do with a sort of physical interventions and social programmes that were possible to realize due to a former restructuring of the city’s finances (Jaramillo, 2010). In addition, relative continuity in programmes and projects from local mayors made possible and contributed to improve the image of Bogotá before its inhabitants and even worldwide. Although Transmilenio is one of the most visible examples of this change, the consolidation of bike paths network and the de-concentration of several public facilities like urban libraries and the enhancement of schools and other public facilities is also recognized.

The network of bike paths permitted a change in the urban culture of Bogotá, permitting to incorporate this mode of transportation in the city dynamics. The network was conceived according to the existing city physical features and its network is consisted of a hierarchical system of diverse bike paths. Nowadays, this network stills continues in consolidation, however the city image that
Figure 58. (previous page) Departure (left) and arrival (right) of persons travelling for job purposes. Source: SDP (2009b) modified and translated by author

Figure 59. (left) Network of bike paths in the city. The map shows the lanes, parking and meeting places 2009. Source: Patton www.flickr.com modified by author
entailed along with the public space permitted to bring cohesion to the city’s urban environment. Also, the creation of new public libraries permitted to de-concentrate these facilities to different areas of the city and the consolidation of a network –Bibliored- where different libraries of different scales organized to generate spaces not only for learning but also for cultural purposes. In addition a plan for improving and building new schools was implemented in 2004 with already the recognition of almost total coverage in the city.

- Urban space improvement:

Other visible interventions in the city that contributed to the improvement of peripheral space were constituted by several programmes of urban space enhancement for diverse areas of the city including poorer informal settlements. The emphasis in public space was also complemented by the development of facilities plans in 2006, which defined and developed projects in the short, medium and long term and along with the restructuring of these settlements –public utilities like water supply, sewage and energy- contributed to the cohesion of these neighbourhoods as urban areas.

4.3 Scales analysis: trends, challenges and constraints.

Through the development of the analytical framework three relevant scales were found relevant for reflecting about socio-spatial segregation: Bogotá’s metropolitan area; the city itself and neighbourhood or local scale. Therefore an analysis according to the evolution of the segregation pattern was developed in each of these scales aiming to recognize urbanization trends, challenges and main constraints to counteract the large and smaller scales of segregation focusing in the development of social housing.

A general and structural aspect lay above all the scales and was evidenced and before mentioned in the conclusions of the previous chapter. The strong and rigid managerial aspects of the housing policy dictated from the Colombian National level impacts the range of action that municipal governance levels could have. Authors reflecting on this subject agree on the fact that the policy should be reformulated completely instead of continuing to adjust it progressively (Arango, 2001; Cuervo and Jaramillo, 2010). The need then for a public developer to manage the lower range of social housing leaving it outside the market is recognized as necessary to contribute overcoming the housing deficit (Arango, 2001).

a. ‘Metropolitan scale of Bogotá’

As evidenced by Salas Vanegas (2008) for the case of Bogotá, the pattern of segregation is in-
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Figure 61. (above) Biblioteca el Tintal located in the west of Bogotá. Source: @amarulero www.flickr.com modified by author

Figure 62. (middle) Public space improvement in Bosa. Source: María Clara Vejarano modified by author

Figure 63. (below) Public school in Bosa. Source: María Clara Vejarano modified by author
increasing with the development of Bogotá beyond its established perimeter. Moreover as it was explained by Sabatini (2001) this larger scale of the segregation is the one increasing the ‘malignancy’ of its effects by the concentration and isolation of poorer groups from the urban space. This means that in a city like Bogotá the proximity in space—the distance to job offer places— not only facilitates the exchange of goods and ideas but also the access to opportunities especially necessary for these vulnerable groups.

Therefore for the metropolitan scale and specifically for Bogotá and its immediate surrounding municipalities, the creation of distribution mechanisms becomes relevant for the de-concentration of the social housing supply. In addition, this process needs to be embedded in the improvement of peripheral space and the consolidation of a regional transport system where priorities should be directed to the areas with higher population flows and longer commuting times. Nowadays although authors like Rincón (2009) and Alfonso (2010) have recognized the relevance of the commuting patterns between Bogotá and Soacha in the southern part of the city, the most recent discussions about a regional transport system are directed to consolidate a western train line towards Mosquera using the former rail tracks inside the city and the surrounding region (“Tren de cercanías”). In conclusion this scale requires further consideration in relation to the provision of social housing and as such requires to be considered as a whole for the definition of new interventions or the counteraction of residential segregation. Moreover, from the territorial balance achieved in this scale depends the future development of Bogotá.

b. Bogotá Capital District

In contrast, Bogotá’s urban growth is going through an endogenous phase of development based in a pursued compact model. Moreover, densification processes in consolidated areas, new development and urban renewal projects are now carried around inside the city perimeter.

However, the already explained relation between the land price structure of the city and the recognition of this structure by city development agents is contributing to a peripheral and concentrated social housing supply that overlay to Bogotá’s concentration of job offer places in the centre-north and centre-west axis of the city.

Therefore it becomes necessary for social housing to be progressively incorporated in the urban processes of the city. Moreover, the recognition of taking social housing into account in the future development of inner city areas (specifically the development of the lowest range of social housing called priority interest housing that according to developers can only be built outside Bogotá) relays on the necessity to reflect about the housing deficit in qualitative terms. Therefore, additional efforts should be put to develop simultaneously to the state of how social housing is being developed currently, strategies and mechanisms to permit the deconcentration and diversification of the social housing supply and allow residential mobility for low incomes population groups. Moreover, the acknowledgment of location in terms of proximity to job places as a fundamental issue in the counteraction of residential segregation negative effects, is aiming to stress for the need of assessing the social capital over economic gains. Consequently the residential solutions for these population groups that do not have access to formal mechanisms should be left out of the market and the National policy should be conceived in a more integral way to allow the municipal level to include the development of social housing in further city developments.

Bogotá has made progress in creating planning
Improvement of peripheral space in particular infrastructure and public transport conditions.

De-concentration of the social housing supply: in Bogotá and other municipalities of the surrounding region.

Regional transportation - Priorities should be directed to peripheral municipalities with longer commuting times and higher population flows i.e. Soacha.

Creation of land instruments and redistribution measures to act in the metropolitan territory.

To counteract the expulsion and shorten spatial distance by creating conditions for affordable spaces in inner city areas of Bogotá in the larger scale.

Providing opportunities for access to facilities and economic activities by articulating building typologies, public space and functional program.

Improvement of functional peripheral space and consolidation of the public transport system.

Deconcentration of the lowest range of social housing by creating conditions to allow social mix in the urban space - incorporate social housing in the development processes of the city.

Programmes to secure tenance for economically vulnerable population groups and indirect aids to permit them keep their location.

Articulation of land uses with relevant local corridors.

Exploration of new building typologies allowing local mix of functions and more efficient use of the typologies plinth.

Development of spatial and management settings for cohabitation of different social groups.
Access to the city for everyone.

instruments for the development of social housing through the establishment of mandatory percentages of social housing as we will see later in the next chapter where a detailed analysis of inner city areas will be developed, however further control over these percentages needs to be executed and complemented with diverse tenancy schemes besides ownership and mechanisms to permit vulnerable population to keep their location.

c. Local scale

The former confrontation of the different authors’ proposals regarding the housing provision and the counteraction of the negative effects of residential segregation permitted to show the authors refer as urgent to confront the larger scale of the segregation pattern by creating the conditions for social mix in the consolidating urban space. However little reference is made on how the interaction of a diversified housing stock could be articulated with the integration of these poorer groups. Moreover, spatial and management conditions for cohabitation of different social groups in the local scale in order to counteract the fragmentation of the urban space is still an open subject to explore.

Although this scale will be explored further in the next chapter of this document, the focus should be addressed to the search of spatial strategies to articulate housing with social infrastructure facilities. Moreover, in this scale is imperative to reflect on the creation of suitable conditions for allow these groups to involve in different economic activities.

4.4 De-concentration and diversification of the social housing supply in inner city areas of Bogotá

The recognition of the intermediate level Bogotá fulfils in the above mentioned scales was determinant to choose it as the scale to intervene especially for the already mentioned concentration of job places the city concentrates. Indeed, the interventions developed in the city would have an impact in both the metropolitan and local scales. As it was explained before, in order to counteract the large scale of residential segregation it is compelling to deal with two simultaneous processes:

- The improvement and enhancement of peripheral - metropolitan space (attraction of facilities, social mixed projects towards the periphery and improvement of infrastructure) and,
- The provision of affordable spaces in inner city areas of Bogotá (de-concentration of the social housing supply and taking advantages of existing infrastructures).

However, the recognition of the current development dynamics of Bogotá designates the city as suitable for concentrating on the second path. Additional arguments were supporting this decision. In Bogotá several land management instruments are already functioning and an institutional capacity is already recognized (Rincón, 2009). In addition, the instrumental capacity of the metropolitan area is still very weak. (Saldías, 2009)

Therefore, the next chapter will deal with the recognition of different development processes in the city in order to consequently reflect about differentiated strategies -physical interventions articulated with the use of land management instruments or social programmes- to contribute to this de-concentration of the social housing supply focusing on the ‘priority interest housing’ and the integration of economic vulnerable social groups.

While the first, -physical interventions- will be addressed to the articulation of typologies with functional programing and the creation of conditions for economic activities, the second -land management instruments and social programmes- will be presented in order to stress on the importance of the location of social housing in relation to the job dynamic of the city. Moreover, the recommendations developed for the different areas of study will aim to explore how social housing can be articulated in the city more in terms of activator than burden.
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Deconcentration of the housing supply in inner city areas of Bogotá - a step towards counteracting the large scale of segregation in the metropolitan environment.

Stress on location recognizing the job dynamic of the city

Land management instruments

Measures and schemes to secure tenance

Bogotá as intermediate scale capable of impacting metropolitan and local scale

Spatial interventions

Stress on articulating different housing typologies and functional program to counteract fragmentation

Diversification of the housing stock and articulation with hierarchically dependant land uses - A step towards alternatives spatial settings to counteract the smaller scale of segregation.

Figure 65. The project focuses on one aspect of residential segregation; the supply of social housing. Bogotá is chosen as intervention scale for the de-concentration and diversification of this supply due the capacity it has to impact both scales - metropolitan and local scale. Source: author's own.
5. Planning and spatial strategies for different inner city areas of Bogotá

The following chapter has as main goal to present local strategies developed in inner city areas to counteract the isolation process of economic vulnerable population groups in Bogotá and its surrounding municipalities. It does so, by searching possible and diverse mechanisms for the development of social housing in different city areas, especially ‘priority housing’. In the first section of the chapter, an analysis developed for the selected areas is presented. This analysis, as soon will be realized, implied to widen the scope of the interventions not only to the provision of social housing but also to the enhancement of the urban space and provision of needed facilities as part of an integral approach. In this section, the criteria used to choose the areas and the aspects studied in each of these ones is presented. Subsequently, the analysis and finally, some conclusions are formulated.

The second section of the chapter deals with the process undertaken to propose strategies for each of these areas. In order to do so, three main steps were followed. First, an analysis of reference practices was developed where spatial interventions and planning instruments or applied programmes were searched according to the different development processes chosen to study in Bogotá. These reference practices permitted to explore experiences mainly in the context of Latin America. Second, programmes and needed actions for setting social housing provision in a densification framework with an integral characterization and before mentioned approach are formulated.

Finally, recommendations and spatial guidelines are developed in the last part of this chapter for the three chosen types of areas.
5.1 Characterization of selected inner city areas in Bogotá

This section deals with the analytical process of study areas. In the part a. of this section the process of defining the areas is presented. In the part b. the criteria used for the analysis is explained and in the part c. the conclusions of the analysis developed are exposed (In the appendix is possible to see the entire analysis developed).

a. Criteria for selection of study areas

Four main aspects were established to choose the study of local areas. These criteria were mainly laid, based on spatial aspects like the proximity to the main transportation network of the city, and representative facilities that depend on the urban scale.

In addition, the further development potentialities of the areas were also considered, due to the project seeks to formulate a combination of planning instruments and spatial interventions for the integral development of social housing in inner city areas of Bogotá. Therefore, the importance of considering Bogotá’s current plan and the areas this one selects for future development was acknowledged. Moreover, the recognition of differentiated development processes and their diverse spatial potentialities was taken into account for establishing diverse courses of action in each of these areas.

According to the current city plan –POT- the development model that Bogotá aims to pursue is based on consolidating a network of cities in the scale of the region through a functional de-concentration. In addition, a network of centralities is pursued in the scale of the city by limiting the expansion of urban areas and consolidating a compact and dense city.

Within Bogotá’s current planning strategy, several areas are defined for the future development of the city or for future densification processes. Each of these areas entail different development processes not only in the built spatial image that
it is desired to achieve but also in the diverse procedures required for obtaining building permits in each area: urban renewal areas; new development or greenfield areas; consolidated areas (where different intensities of densification are allowed); and areas located in informal developments that are subject to restructuring through integral upgrading.

From the five types of areas found (see next page), only three types were selected with the purpose of learning and identifying their different development processes, spatial characteristics and capacity to allocate social housing development: • urban renewal areas; • development areas; • and consolidation areas under moderate densification. Consolidated areas under change of pattern and integral upgrading areas were left out of the analysis. In the case of the first ones, the decision of leaving them out from the analysis came from the fact that the majority of these areas are located in the north east part of the city; zone where the highest land value of the city is found (see map of land value of Bogotá in 3.2c). The second ones were not contemplated due to the guidelines for intervention within these areas are oriented to the development of facilities and infrastructure.

To be followed each of the areas will be introduced through a brief explanation on the types of development, general information and background of the areas:

- Renewal areas:

The city plan defines two modalities of development for this type of areas: **Re-activation** and **Development** depending on the permitted renewal intensity and the physical characteristics of the areas i.e. in the case of the first one, renewal interventions need to recognize the existing urban environment and must be progressive to allow the re-activation of the area.

Moreover, in the case of renewal areas of re-activation, urban transformation is allowed progressively through the expedition of construction licenses according to the building codes established by the municipality. On the contrary, the instrument used for the development of renewal areas of re-development is a local plan called ‘plan parcial’. This plan is determined to develop land pieces responding to a fair distribution of benefits and duties and within a framework of functional de-concentration.

The selected study area from this type of development belongs to first modality: re-activation. The area is located in the centre of the city in the 30th avenue and 6th street; in the Puente Aranda locality (See map of localities in the city

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21 The delimitation of these areas is established through different ‘urban treatments’ namely: Conservation, Consolidation, Integral upgrading, development, renewal and protected land. Source: SDP, 2004 POT Bogotá

22 Moreover, a recent consultancy (Martínez, 2009) developed for the SDP dealt with defining guidelines and procedural processes of these areas. In the city plan POT (decree 190 2004) these areas are defined as it follows: Zones that require to generate accessibility conditions, provision of facilities and infrastructure of urban and local scale through specific projects that integrate several sectorial actions and interventions’ (SDP, 2000-2004)

23 The decree 333 of 2010 and the 159 of 2004 establish the development guidelines for urban renewal areas of re-activation and consolidated areas.

24 Decree 190 2004 - POT Bogotá
urban renewal areas 1,832 ha

New development areas 3,000 ha

Consolidated areas under change of pattern 1,413 ha

Consolidated areas under moderate densification 5,153 ha

Integral upgrading areas under restructurin 745 ha
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Introduction 3.1b). Located in the confluence of two main city roads, and along the massive transportation system of the city, this area was selected also for its proximity to the city’s traditional and commercial centre. Moreover the city’s future ‘Centre plan’ was taken into account due to the potentialities of job and cultural opportunities that social housing tenants could be benefited from in this location.

- Greenfields or new development areas:

In the case of development areas, also two different procedures are established by the municipality. In this regard, these areas can be intervened through the already mentioned plan called ‘plan parcial’ approved by the municipality or through an urbanism license before a private figure also allocated with the responsibility of giving urbanism licences ‘curadurías urbanas’.

The area chosen is located in the Kennedy locality and situated along the Ciudad de Cali Avenue. The choice of this area was based on the proximity of important facilities like the Tintal library (see picture in the section 4.2) and public space interventions like the Porvenir walkway. Adjacent to the area the Techo wetland lays; an element of ecologic value. Although this area is not located along Transmilenio’s main network, it is located in the influence of its feeding system.

- Consolidated inner city areas:

Regarding consolidated areas two different modalities are defined in the city master plan:

Figure 69. (previous page) Areas of the city where is allowed to densify or develop new projects according to the POT urban model. Source: author’s own with SDP GIS 2009

Figure 70. Localities, main road network of the city and the areas chosen. Source: author’s own
Change of pattern and moderate densification. In these areas, a functional programming transformation is recognized, and densification is allowed. Thus, the difference between these two modalities lays in the intensity of the functional changes allowed regulated by the building codes established by the municipality. Both of these modalities are required to issue their building licenses according to the building codes established by the municipality and before the already mentioned ‘curadurías urbanas’.

Of these two modalities only the second one was chosen to perform the analysis. However, two areas were chosen inside the moderate densification modality.

These two areas, located along two main roads of the city –The 80th street and the north highway- were chosen with the purpose of compare them in terms of development due to one of these ones is located in the ‘high rent cone’ of the city recognized by Sabatini (2003) and Salas Vanegas (2008), where a high concentration of high and middle income population live. In addition, these two main city roads -the north highway and the 80th street- constitute the existing city roads with better constructive specifications to connect the city with the surrounding region (Rincón, 2009).

b. Definition of criteria for the analysis of the selected areas.

Four main aspects were defined for the analysis of the four selected areas:

• Context - socioeconomic and spatial data:

The study of each of the areas in relation to their surrounding environment implied to understand physical and socio-economic conditions of the localities where the areas are positioned in relation to the whole of the city. This analysis was developed to get an idea of spatial aspects like: population density in each of these localities, number of persons per facilities, supply of parks and number of m2 of green areas per person. In addition, social and economic data was also displayed according to the whole of the city. Aspects like population, persons per home and poverty conditions were studied according to unsatisfied basic needs survey (DANE-SDP, 2007).
• Recognition of spatial features:

For the recognition of the physical structure of the areas in the local and the city scale, mapping and spatial observation was used. In order to this analysis, the structure of the areas in relation to their surrounding and higher city structures was developed. Also in the local scale block morphology, supply of parks, facilities and local transportation corridors were observed and analysed.

In addition, the recognition of physical aspects was complemented with the development of a space syntax study of each of these areas, to get an overview of the connectivity relations of each area and in this sense be able to compare relevant corridors or connections with the ones that are relevant in the current situation.

• Performance of land use and land price:

Land use was displayed to observe the functions that are located in each of the areas in relation to the land price structure of the city for two years: 2004 and 2009. From the data encountered from these two years and with the observation of aerial photographs of different years in google earth it was possible to observe changes in both the land price structure and the development process of these areas.

• Recognition of development instruments which apply for the areas:

The focus of this analysis was put on recognizing several of the development and financial instruments of Bogotá that can be applied for these areas with the purpose of identifying constraints in the development and allocation of social housing with emphasis in ‘priority housing’.

Finally, the quantitative data extracted was processed by a web chart that permitted the comparison of the different areas and the qualitative data summarized through a SWOT analysis that permitted as well to establish opportunities and constraints of each of the areas in the development of social housing under an integral approach.

c. Conclusions of the analysis developed

To be followed the conclusions of the analysis are presented through the different aspects described above (the overall analysis is included in the end of this document as an appendix). In order to do so, the following colour code is used to asimilate each of the areas with a colour and facilitate the presentation of conclusions:

Urban renewal area: comuneros/veraguas
Greenfield area: don bosco/techo
Consolidated area west: garces navas
Consolidated area north: san josé del prado

• Context - socioeconomic and spatial data:

Through the study of socio-economic data and the physical conditions of the localities where the analysed areas are situated, it was possible to see that these localities do not represent the administrative units with better physical conditions on the city as a whole. However it is necessary to elaborate more on that:

Of the four areas chosen, the population density of the renewal area Comuneros/veraguas situated in the locality Puente Aranda, is below the general density of the city (149 pp/ ha), condition also encountered in the locality Suba (162 pp/ha) where the area San José del prado is located. In the case of the last one, this low density can be attributed to the fact that Suba is one of the largest administrative units of the city (also containing a part of rural land). In addition, of the four localities studied, the locality Puente Aranda presents the best conditions regarding persons per facilities, and its measure of m² of green areas per person (4,2 m²) is the same as the encountered for the whole of the

25 Space syntax is a science-based, human-focused approach that investigates relationships between spatial layout and a range of social, economic and environmental phenomena. For the purpose of this analysis it was of interest to see the connectivity relations of each area.
Renewal comuneros/veraguas
New development don Bosco/Techo
Consolidation west garces Navas
Consolidation North san José del Prado

Localidad Puente aranda
149 pp/ha

Localidad Kennedy
259 pp/ha

Engativá
231 pp/ha

Suba
162 pp/ha

Figure 73. Localities where the areas selected are located; physical analysis of urban and local scale structure. Source: author’s own with SDP GIS 2009
city; condition only improved by the locality Engativá where the area Garces Navas is located and where a considerable extension of protected land is located (with 6.2 m² of green areas per person).

The Kennedy locality where the new development area Don Bosco/ Techo is situated, presents the most deficient conditions regarding persons per facility of the four areas (with 497 persons per facility in the locality) followed by Suba with similar conditions. These two localities also present similar conditions when analysing the number of m² of green areas per person and the highest number of homes in poverty conditions of the areas studied with 11,277 and 8,141 respectively.

Overall the better conditions of the four areas are the ones to be found in the locality of Puente Aranda, where the renewal area Comuneros/Veraguas is located.

• Recognition of spatial features:

-Urban structure: In the study of the urban structure, special attention was given to observe the spatial and functional relation of the areas with higher networks of the city structure. This analysis permitted to observe the areas that are located strategically when seeing the city as a whole.

The renewal area Comuneros/Veraguas located along the ‘Avenida 30’ line of Transmilenio and nearby other two lines of this system, is the area with better connectivity conditions of the ones studied. This aspect is also influenced by the proximity of the area to one of the industrial zones of the city. In addition, this area can take advantage of the bike paths network of the city. This accessibility set up can also be evidenced in the case of the area San José del prado however; this area is only served by one line of Transmilenio, - the ‘North Highway’ line. The areas Don Bosco/ Techo and Garces Navas are served tangentially by two important roads, the Cuidad de Cali avenue and 80th street respectively, however these areas are located in the influence of the main transportation system Transmilenio being the second one served by the feeding network of this system.

-Local structure: The local structure analysis was carried around two observation perspectives: on one hand the morphological analysis of each of the analysed areas and on the other the recognition of facilities and local corridors. In the first one, it was possible to observe that the areas Comuneros/Veraguas and San José del prado have a similar block structure and less dense than the existing one in Garces Navas. In the case of Don Bosco/Techo a block pattern is not recognized but an underlying structure of greenfields and large plots.

Regarding the recognition of facilities and local corridors, two aspects have to be taken into account. First the differences in size of each of the areas, for the existence of facilities was observed inside the established perimeter and areas of lower extension like Comuneros/Veraguas can obtain negative results. Second the character of each of the areas, for it is expected that areas like Don Bosco/ Techo formed by greenfields to have none facilities in its interior. Taking these aspects into account, the analysis permitted to observe the strong local character Garces Navas posses. There, a clear structure of local corridors organized in a recognizable hierarchy was observed (corridors that also showed to be relevant in the space syntax analysis), where commercial functions and green areas locate. This structure was not visible in the areas Comuneros/Veraguas and San José del Prado, mainly due to size in the case of the first one but also due to these areas are best served by higher scale road system.

• Performance of land use and land price:

Regarding land prices performance, it was relevant to observe sudden changes in the price per m² between 2004 and 2009. Of the four areas,
6. Recognition of local corridors

According to space syntax, the land price has changed from 2004 to 2009.

- 2004: 0 - 200,000
- 2009: 200,000 - 600,000

The price per square meter (m²) in COP is as follows:

- 2004: 0 - 200,000
- 2009: 200,000 - 600,000

Figure 74. (above) Land use and land price. Source: author's own with SDP, 2011 and SDP GIS 2004

Figure 75. (middle) Land development 2005 - 2010 for the area don bosco/techo. Source: google earth modified by author.

Figure 76. (below) Land development 2002 - 2010 in the area san jose del prado. Source: google earth modified by author.
Don Bosco/ Techo and San José del Prado (of different development dynamics), were the ones with more visible and drastic changes in their land price structure.

It is of interest however to reflect on the changes experienced by these two areas. In the case of Don Bosco/Techo, a greenfield area that is meant to be developed through a local plan, the change in the land price can be attributed to the proximity this area has to recently developed areas. Moreover this rise in the price can also be understood within the pressure process this new developed areas imprint to an area that has not yet transformed into serviced land. In the case of San José del Prado similar processes are being undertaken. Zones surrounding this already consolidated area are being developed rapidly to accommodate middle income population groups over the past five years. In addition, this area is located on what Sabatini (2003) calls the ‘high rent cone’ and it is consolidating as a more commercial area; reason that can also explain the rise in the land price.

- Recognition of land development instruments applicable for the areas:

The focus of this analysis was directed to recognize existing development and financial instruments that apply for these areas with the purpose of identifying constraints for the development and allocation of social housing with emphasis in ‘priority housing’. As an evident fact, in all of the areas the land price constitutes an obstacle when assuming the current functioning of the Colombian social housing system. In addition, it was observed that renewal (of re-development) and new development areas count with a set of instruments within the framework of a local plan called ‘partial plan’. The city plan (POT) establishes the fair distribution of benefits and duties for the development of these areas, meaning that land readjustment and the associ-
Figure 78. Comparative analysis of quantitative and qualitative data about the areas studied. Source: author’s own
ated management of these areas should cover the costs of the necessary new infrastructures and facilities as well as the gains distribution of the new densities permitted.

However, for these two areas the constraints found for the development of social housing are different. In the case of renewal areas of re-development, a clear framework for the development of social housing still has not been defined. Moreover, just until recently some of these projects have been approved by the municipality, but the presence of social housing is not mentioned. In contrast, in the case of new development areas the problem lies on the social housing type developed. In these areas social housing is being developed, but the mandatory percentages of priority housing are often being transferred to ‘Metrovivienda’ (Troilo, 2011) who develops these percentages of priority housing within the location of the institution’s projects concentrating even more the supply.

Regarding consolidation areas and urban renewal areas (re-activation) the procedure for development is completely different. Densification in these areas is allowed, based on the building codes permitted by the municipality through zone planning units. In these areas, densification processes are being developed plot by plot leaving a narrow action range for the municipality for the development of affordable housing. In addition, this densification process without further control can contribute to the eviction of the population that live in those areas.

The overall and comparative analysis of these four areas permitted to conclude that the further formulation of strategies to allocate social housing needs to be carried out simultaneously with the enhancement of the existing urban space conditions in terms of functional programing, public space and infrastructure. Furthermore the city has promoted a densification process pursuing a compact city model without a simultaneous and balanced process of supply of facilities (Maldonado, 2011) or a reflection on a desired social mix in the urban space; in this analysis this aspect can be highly evidenced in the consolidated area San José del prado and the urban renewal area comuneros/veraguas.

5.2 Planning and spatial strategies for different areas of Bogotá.

In order to formulate strategies at the local level three aspects were intertwined for the final recommendations: on one hand, a selection of reference practices cases according to the studied development processes (and the constraints encountered for the development of priority housing in these ones). On the other hand the proposals developed by the different authors about residential segregation and the necessary measures to overcome the housing deficit (see section 4.1). Finally, the opportunities encountered in the realized spatial analysis of the areas were also acknowledged.

To be followed, an overview of the before mentioned aspects is presented to finally end this chapter with recommendations and guidelines for each type of area according to an integral development of priority housing.

a. The use of reference practices

For the study of reference practices, a matrix was developed on which different cases were chosen according to the three types of development studied for the case of Bogotá: urban renewal, new development and consolidated areas. The matrix separates spatial from planning strategies in order to search for differentiated interventions and planning instruments to articulate in each

26 Decree 327 / 2004
27 Based on the information displayed in the ERU Urban Renewal Company of Bogotá www.eru.gov.co
28 Maldonado (2011) explains further about it in a recent article: ‘There are 1,800 hectares selected under urban renewal without clear and stable rules and in 10,000 hectares is possible to demolish a house and develop a building without contributing in any way to the city’. Translated by author
specific context. Therefore, **under spatial strategies**, cases of specific housing projects for low income population groups were selected where spatial concepts could be recognized. In contrast, under planning strategies, specific programmes for the provision of social housing; and actor related approaches with emphasis in community involvement were selected. In addition, for the consolidated area where it was evidenced the existence of a densification process without requirements in terms of affordable housing development, the emphasis in planning strategies consisted in finding examples of land management and development instruments for the allocation of social housing.

As following the reference practices selected for each of the development processes are briefly described (the in-depth analysis can be found in the appendix of this document).

- **Urban renewal**

For the case of urban renewal, two reference experiences were selected: first the programme ‘themed housing states’ inside the subsidized social housing framework in Vienna and second the example of **inclusive development** in the historic centre of Ciudad de Panamá. Both of the examples may refer more to practices in rehabilitation or development of already built up areas rather than urban renewal. However, these practices were chosen as relevant for the case of Bogotá for it has also been recognized the areas delimited as ‘urban renewal’ in the city do not necessarily respond to standard criteria of needed transformation but to the recognition of sectors that could allocate further densification and exploitation of the profit capacities of land value (Martinez, 2012).

In the first case, ‘themed housing states’ the experience resulted relevant due to a call in the name of experimentation. Based on the acknowledgement that it would be futile to compare the experience of Vienna’s social housing with the one in developed in Bogotá, due to the radical differences in the culture and development context, what it can be recognized as a potential in this reference practice is the recognition of keep innovating and experimenting within the...
social housing sector. Some of the projects developed within this programme ‘themed housing states’ allowed considering the differences in lifestyles and spatial requirements of different society sectors, involve the community in the design process, study the facilities needed inside the states planning and overall promotes the integration between the states and the neighbourhood. Moreover, the program permitted to involve again architects and planners to keep reflecting about the spatial requirements of different social groups and what they demand from the city.

In the second case, inclusive development in Ciudad de Panamá, several aspects were recognized in this specific experience. As a main one, the assessment of the housing location and subsequently of the social capital that permitted to bring closer to low incomes population groups to the main job, cultural and touristic places of the city. In addition the recognition of an integral approach that understands social housing development requires more than a physical house to integrate vulnerable population groups to the city (Moser, 1998). In this case, the PNUD (2009) has recognized that social housing can bring foreign economic support rather than be an obstacle for it.

As a constraint it is necessary to specify the particularity of this experience developed within the context of space improvement measures for the historical centre of Ciudad de Panamá. In this particular experience, the necessity of assessing location of housing meets also with bringing closer vulnerable groups to the protection of the built heritage. In the case of Bogotá renewal areas are not located exclusively in the historical centre. In any way, more than to refer to the experience in a literal way it becomes relevant in the recognition of groups that cannot enter the formal housing financing schemes and the consideration of rental social housing publicly owned along with vocational labour training programs as an option to access the several cultural and social networks opportunities located in the main centralities of the city.

After the analysis of these reference cases some aspects were highlighted and will be stressed as well when dealing with the recommendations for each of the areas. The regeneration of existing urban space has to deal with the development of affordable housing. Moreover, other tenancy schemes have to be explored in order to bring closer eco-
nomic dependent groups to already consolidated areas. In addition, recognition of the demand could contribute to develop more concrete projects addressed to provide spatial demands of Bogotá’s already acknowledged specific social groups.

- Greenfield or new development

For the case of greenfields development, two reference experiences were selected: Aranya low cost housing progressive development and the experience of self management housing cooperatives in Rio Grande do Sul in Brazil. Both of these experiences resulted relevant due to the constraints found in the study of new development areas for the case of Bogotá. Indeed the development of these areas within a specific plan framework –partial plan- contains the adequate legal framework for the allocation of social housing, however the constraint encountered consisted in the fact that these mandatory percentages of social housing, especially ‘priority housing’ can also be transferred to other areas of the city (Salas Vanegas, 2008). Moreover, several of these plans transfer the percentages of ‘priority housing’ to the projects developed by Metrovivienda contributing to the concentration of the lowest range of social housing in the city periphery.

In the case of Aranya’s low cost housing, the relevance of this experience for the case of Bogotá is the concept used for the spatial design of the residential masterplan. The project considered the dwellers settlement patterns and spatial demands and in that regard, the proposal was derived from a detailed study of several existing slums in Indore where ‘physical environment, spaces use, plot locations, choices and families profiles were analyzed’. The extensive analysis of the population’s spatial requirements became a big step towards understanding communities’ spatial and functions configuration. In addition, the articulation of a hierarchical functional structure acknowledges the need for a transition in activities between the neighbourhood and higher spatial structures.

In the case of self management housing cooperatives in Rio Grande do Sul, the main aspect extracted from this experience and that it can be reflected for the case of Bogotá is the recognition of collective involvement in the production of space in this case the association for self managing residential environments. Moreover, it is worth to mention the recognition these cooperatives have before the formal institutions and therefore they can contribute to change their housing situation.
In the reference practices displayed for the development of greenfields, the emphasis was put on searching different programs and spatial possibilities for the development of ‘priority interest housing’. As it was said before, the municipality already counts with the planning instruments for the development of these areas where land readjustment and the establishment of a fair distribution of benefits and duties permits to develop the necessary facilities, infrastructures and public space for these land pieces. Therefore, self management and progressive development can be seen as an answer to the targeting problem these areas are facing in the development of social housing.

• Densification in the consolidated city

For the case of consolidated areas, two reference experiences were selected: The inclusive design of Quinta Monroy in Iquique and the establishment of ZEIS ‘Zonas Especiais de Interesse Social’ (Special areas of social interest) in Brazil. Both of the cases deal with upgrading existing informal settlements however from different perspectives: the first one, in the form of a spatial and particular design and the second one, in the form of a land management instrument implemented in Brazil for the development or upgrading of housing for low income population groups. In addition both of the reference practices were chosen due to the lack of regulation in the densification process carried in these consolidated areas of Bogotá.

In the case of the first one, the project Quinta Monroy, which was developed within a specific context, programme and community, was relevant for the case of consolidated areas in Bogotá due to several aspects. The project has as a challenge to set in 5,000 sqm up to 100 families who had illegally occupied the same location for approximately 30 years. As a main aspect worthwhile to mention, the project considers the flaws of the Chilean National housing policy and sets as a main goal to keep the population in their settlement location, counteracting further displacement processes and assessing the value of existing social networks. As a second aspect worth to mention, the constant work of the designers with the community created the spaces for the inhabitants to organize themselves and experimenting with the design proposal until adapting it to their own needs.

In the case of the special areas of social interest –ZEIS- the biggest potential recognized in the use of the instrument is that it recognizes
Qualification of open spaces and new ways of relate with nature

Management of risk

Use of land management instruments to the development of social housing

Consolidation of public space network

Diversification of the housing stock and tenure conditions to allow social mix

Involvement of the community in participation and education processes.

Creation of conditions for economic opportunities that have impact on incomes or expenses of the social groups

Subsidies to:
- Salaries
- Rent
- Fees
- Utilities

Articulation of land uses with public transportation

ECONOMIC

SOCIAL

SPATIAL

GOVERNANCE

ENVIRONMENT
or ties a social interest to the land use and therefore to the recognition of a differentiated urban form. Likewise, the possibility to link this land management instrument to other financing instruments in the city allows addressing the collection of surplus values obtained from densification rights in urban projects to the financing the ZEIS established by the municipality. In other words, the link between this land management instruments with surplus collection mechanisms established by the municipality is a step towards densification with a social interest perspective.

Although both of these experiences are dealing with the regularization of informal settlements, the relevance of these cases relies on the responsibility space regeneration has in finding space for the inhabitants of those areas or new ones through densification dynamics. Moreover, these examples are also valid for the chosen urban renewal area. In the case of Bogotá, these examples are relevant especially when analysing how the city is carrying out its regeneration/consolidation dynamics. Particularly in the areas chosen for this study and especially in the case of San Jose del Prado, where densification is being carried out on an area where the supply of facilities and public space is deficient.

b. Needed actions and measures to impact the local level.

So far the analysis of inner city areas of Bogotá permitted to show the physical and socioeconomic conditions of the studied areas and the constraints found for the allocation of social housing. Simultaneously, the study of reference practices showed relevant spatial interventions, social programs and land management instruments that can be used for these areas according not only to their development process but to the already mentioned constraints for the development of social housing especially the ‘priority interest housing’ in Bogotá.

The following section intends to give an overview of needed actions to impact the city’s local scale taking into account that an holistic approach is needed towards the development of social housing. Moreover, this overview is meant to be presented before the actual recommendations and establishment of combined actions for each type of area development. In the last part of the chapter the actions here specified will be implemented in diverse ways.

The recognition of an integral approach comes from understanding socioeconomic residential segregation (chapter 3) and the study of its main three elements: the home, the socioeconomic level and the space. Therefore, it has been already emphasized in the necessity of considering several actions in different dimensions other than the spatial to counteract the housing deficit and the evolution of residential segregation. Thus, in the scheme presented (see previous page) actions in the economic, social, spatial, governance and environmental dimensions are explained.

Overall and applicable to all the areas analysed, for the creation of conditions to allow social mix in the local scale, actions from the spatial planning and management spheres of the city need to converge for the development of affordable housing but primarily to permit these economic vulnerable groups to assure tenancy through the creation of conditions for endogenous economic activities, municipal aids and progressive inclusion in the participation processes of the city.

The next section recommendations for each of the areas will be presented emphasising in spatial interventions and management instruments.

Figure 86. Needed actions within an integral approach towards the development of priority interest housing in inner city areas of Bogotá. Source: author’s own with contributions from Gonzalez et al, 2007 and Arango, 2001
c. Recommendations for further development in the selected areas

• Urban renewal

As it was stated before, the regeneration of existing urban space has to deal with the development of affordable housing. In the case of the area comuneros/veraguas, it was evidenced in the analysis of local areas the favourable conditions that the area presents regarding mobility and proximity to urban scale facilities. Therefore the recommendations developed for this area are focused on two main aspects: first, the possibility of developing projects on publicly owned land linking them with differentiated social infrastructure and public space of the area. Moreover, dealing with priority interest housing projects in these urban renewal areas could be the starting point to develop social housing to rent in the city.

As it has been explained before, some renewal areas in Bogotá (of the re-development modality) are set to be developed through a ‘partial plan’ where land readjustment and the distribution of benefits and duties among developers and land owners is instituted. In the case of this particular area, due to it is characterized in the re-activation modality, densification is permitted based on the building rights established by the municipality. Moreover, the development of these last areas is similar to the consolidated areas development, where densification can be progressively undertaken in a plot by plot dynamic.

In any case, a thorough reflection about social mix and how it should take place in these areas has not been given leading towards an unclear operation framework. This discussion and further modelling of how priority housing could be built in these areas needs to take place overall when thinking about the use of instruments like expropriation\(^{29}\) for future ownership that contributes to the expulsion of local population for more profitable land uses.

In the case of comuneros/veraguas, along the 30th Avenue and Comuneros Avenue (the main urban roads surrounding the area) various industrial and commercial functions locate. Outside of this one, mainly residential functions and local facilities and public space locate. The strategies implemented in this area consist on identifying the potential the area has to allocate mix functions. In addition, the establishment of a mandatory percentage of ‘priority interest housing’ is proposed through the development of an integral plan (nowadays not existent) in this area that can be articulated with the demands of social infrastructure from people residing in the surrounding neighbourhoods and new population allocated in the new development of this area. Moreover, this development can be supported with the collection of the surplus value obtained from the new densities and functions allowed in the same area.

In addition, developing rental social housing in publicly owned land is proposed for these renewal areas can be directed to specific social groups, like in the case of ‘themed housing states’ to create the conditions for positive social cluster in the city and permit a clearer design of the facilities and spatial demands of these groups. Single mothers were taken as an example for the development of this area. In the proposal, the articulation of housing with other social infrastructure facilities could be articulated with vocational labour training programmes and productive spaces to allow this group to be progressively included in the city centre touristic and cultural dynamics as it was shown in the case of Ciudad de Panamá.

\(^{29}\) Maldonado (2011) explains about the recent process of urban renewal in Bogotá: ‘urban renewal has been understood as the process of destruction and replacement of existing spaces to promote the arrival of more profitable land uses. [...] And this is the type of urban renewal that private agents are expecting to be promoted by the public administration: higher building permits, clearer game rules to facilitate the development of projects and expropriation to favour third parties.’
**Comuneros/Veraguas**

**Constraints**
- Unclear framework for the development of social housing
- Plot by plot densification

**Potentials**
- Proximity to urban scale facilities and the traditional city centre
- Proximity to a consolidated local neighbourhood structure

**Articulation of land use with mobility corridors**
- Mandatory percentages of social housing publicly owned
- Social housing articulated with facilities and workshop places

**Densification**
- Development of a local plan consolidation of a legal framework, where the surplus value from densification rights goes to update infrastructure and buy the land for the social housing complex
- Municipality + developers + owners

**Social housing complex**
- Spaces for Comunitarian and retail activities
- Social infrastructure
- Residential environment

**Existing situation:** Industrial and commercial functions

**Figure 87. Combined strategies proposed for the area comuneros veraguas. Source: author’s own**
Constraints
- Transfer of mandatory percentages
- Development of highest range of social housing

Potentials
- Available land
- Consolidation of urban scale facilities and public space interventions in close proximity

Progressive development with spaces for impacting income i.e. typologies allow to rent rooms - Urban agriculture linked with public space system

Restriction for the transfer of social housing percentages
Recognition of collective tenure schemes

Urban scale functions articulated with transportation lines

Local roads structure

.Priority interest housing’ possible areas

Urban agriculture areas

Existing legal framework for Social housing

Progressive development with the recognition of collective associations from the government institutions

Municipality + inhabitants + owners + developers

Possible road network structure

Existing situation: green field area

Figure 88. Combined strategies proposed for the area don bosco/techo. Source: author’s own
• Greenfield or new development

In the case of new development areas, as it was explained before the constraint of developing affordable housing refers to a problem of targeting more than developing like in the case of urban renewal areas. The legal framework of these areas and the establishment of mandatory percentages of social and priority interest housing are clearly set out, however the last ones are allowed to transfer to Metrovivienda who develops priority interest housing in the city. The transfer of these percentages shows the little value location and the recognition of its potentialities has in the city’s development. Moreover, the transfer of this kind of development reinforces the ‘burden’ perspective that social housing has in the imaginary of city dwellers.

Therefore, based on the analysis made for the area don bosco/techo, for the development of ‘priority interest housing’ is recommended to consider municipal programmes to allow progressive and self development of ‘interest priority housing’ in the mandatory land percentages demanded by the city’s regulation to these areas. Moreover, the recognition of the collective association of social groups in formal institutions and professional support and further control for progressive development can be simultaneously developed by the provision of spaces for these groups to increase their incomes i.e urban agriculture and the establishment of temporary local markets. Also, guided progressive development could contemplate the appearance of other spaces to impact the incomes of this social groups i.e rooms to rent conceived in the typologies like it happened in the case of Quinta Monroy.

For instance, in the case of the area don bosco/techo, an informal settlement -Lagos de Castilla- located near the area in the wetland Techo is attempting to destroy the ecological qualities of this natural element and at the same time, struggling with keeping their right to housing (Garzón, 2011). In the development of this area, the involvement of these groups could be present to allow them organize and develop their housing in an area of the plan, assessing in that way the importance of proximity of their social networks. However, this will not be possible if the formal public and private institutions do not recognize different and collective ways of association for the solution of interest priority housing.

Also, proximity should be taken into account when allowing the possibility of transferring ‘priority interest housing’ percentages in these plans by delimited zones i.e. zone planning units or localities. In this regard, the importance these measures have to allow social mix in the urban space should be considered beyond an obligation.

• Densification in the consolidated city

As it was shown in the analysis of local areas, consolidated areas in Bogotá are areas where the city is allowing densification processes without further compensation to the city’s infrastructure and public space networks (Maldonado, 2011). Moreover, unlike the two last areas, in these areas a market driven and endogenous densification is being carried out at a rapid pace. Indeed, this development is permitted without a reflection on the necessary conditions for social mix in the urban space and urban space cohesion more than the ones resulted from the city land use plan and building codes interwined with the expectations from private developers and owners about building profit.

The creation of land management instruments are needed in order to find a place for affordable housing. Moreover, densification rights should be articulated with the simultaneous development of social housing; enhancement of space and provision of infrastructure. The reference case of Quinta Monroy, although it primarily constituted a case of informal settlement upgrading, showed how local inhabitants can be involved in shaping their residential environment. This case is relevant for consolidated areas due to the densification processes carried out in these ones, can contribute to the progressive expulsion of population
groups that cannot cope higher living costs. In this regard, the case of Quinta Monroy and the recognition of the value of location becomes a reference for the inclusion of these groups in the further development or design consolidated areas regeneration.

Therefore, the further study of the urban structure of these areas should determine the delimitation of inner sectors that can be subjected to densification according to potential corridors that need to be enhanced.

In these ones, needed infrastructures and facilities can be determined according to the new densities allowed as well as areas of social interest to be subsequently shaped or enhanced with the surplus value obtained from the densification benefits. With this management scheme, new or existing structures can be adapted for the allocation of ‘priority interest housing’ by mandatory percentages of housing units in the new built typologies or adaptation of existing residential structures.

In addition, the articulation of these interventions with public space and functional programming can allow the creation of productive spaces i.e. small commerce, or spaces to rent in the housing typology.
Constraints

- Densification plot by plot
- Narrow range for public action

Potentials

- Consolidated area near local commercial facilities
- Accessibility by the main transportation network

Definition of areas for future densification and establishment of public spaces for the densities allowed

Recognition of local corridors of mobility

Ownership or rent
Mandatory percentages in the scale of the block articulated with productive spaces in the ground floor

Needed connection in the local scale - area for further densification

Areas of social interest

Further control in the densification process

Establishment of inner sectors that can be densified.

Additional densification through certificates of construction potential that have to be invested in the same area

Municipality + population + developers + owners

Establishment of social interest areas:

Links the land with a social interest function and differentiated building codes

New social housing with productive spaces or enhancement of existing housing can be developed

Existing situation: commercial and residential functions in a former informal area

Figure 89. Combined strategies for the area San José del Prado. Source: author’s own
6. Evaluation

Two different aspects were selected for elaborating an evaluation of this graduation project. First, an evaluation of the combined strategies proposed per each area to point out paths for further research and second, the feasibility of these strategies in terms of institutional capacity were current discussions in Colombia will be pointed out. In the final part of this chapter final reflections are developed around three structural topics encountered in the development of this graduation project: The densification process in Bogotá; the provision of social housing; and strategies to integrate low income population groups.

6.1 Combined strategies

As it was explained before, the recommendations developed for each of the areas were proposed based on the constraints encountered in each, for the development of social housing; and also on the spatial potentialities recognized in these for the provision of new functions. In addition, these recommendations were directed to set spatial conditions for the development of productive spaces for low income population groups along with choosing land management instruments -existing and proposed- for making the location of social housing possible. However, restraining the areas of study to the areas established by the municipality for further densification left out other punctual possibilities worthy of further research like re-use of existing buildings.

6.2 Feasibility

The above mentioned recommendations were directed to set spatial conditions for the development of productive spaces for low income population groups along with choosing land management instruments -existing and proposed- for making the location of social housing possible.
Therefore the aim of the graduation project lies in pointing out differentiated measures combining land management instruments, spatial interventions and social programmes within a general strategy of de-concentration and diversification of the social housing supply. However, due to the time frame in which this project was developed, accurate financial modelling for each of the cases and articulation with more precise socio-economic data from each of the areas was not developed to prove their factual feasibility. Also, the past implementation in Bogotá of some of the measures proposed in this project like programs of progressive development were not analysed. In this regard, the identification of negative aspects of these experiences in the city would have contributed to improve these proposals with additional development guidelines.

In addition, during the development of this project relevant discussions in the political agenda of Colombia and Bogotá arose proving the relevance of social housing development for the case of Bogotá but overall the imminent need for searching mechanisms to articulate this type of development with the city’s urban processes. On one hand, the National government announced that according to the economic growth of the country, by the end of this presidential period 100,000 ‘priority interest’ housing units will be given for free to those social groups that cannot get access to the current social housing policy system; namely families displaced by violence, single mothers and elderly people (Dinero, 2012). Moreover, the government asks to municipalities to get the land to execute this housing programme. On the other hand, the municipal government of Bogotá has promoted in its development plan the allocation of 70,000 ‘priority interest’ housing units in the extended centre of the city, actually in stage of definition and selection of these areas in the city (El Tiempo, 2012).

These statements are showing primarily the already mentioned dissociation between these levels of governance and the approach they have towards the counteraction of the housing deficit. In addition, they can be seen as temporary programmes established by current political circumstances which effect on the city is yet to see. However, there is the need of highlighting two main aspects. First, the existent financial capacity the National government could have on contributing to the qualitative deficit of housing and additionally the need for the official mechanisms for making this de-concentration of the supply feasible on the long term.

6.3 Final reflections

a. The densification process carried out in Bogotá

The study of different densification processes in Bogotá showed that in consolidated areas and part of the renewal areas established by the municipality, densification is allowed without taking into account the updating of infrastructure and facilities to cope with the new densities allowed. Moreover, this densification carried ‘plot by plot’ is supported by the normative framework the municipality establishes, and makes difficult to develop coherent and integral residential projects. In this regard, the transformation of consolidated areas is supporting an exclusive dynamic where neither social housing nor a reflection regarding social mix in the urban space are set as a priority in the regeneration of space.

Moreover, the most visible physical interventions Bogotá has undertaken to counteract this exclusive dynamic are consistent with the improvement of peripheral space and de-concentration of public facilities. However, the concentration of job places remains high in the extended centre of the city entailing longer distances and higher commuting times for poorer groups that live in isolated areas of the city and surrounding municipalities. Moreover, being away from job net-
Petro presentó las prioridades de su plan de desarrollo para Bogotá

Por: REDACCIÓN BOGOTÁ | 10:16 p.m. | 23 de febrero del 2012

De izquierda a derecha: Angelina Durán y Peter Grosch, de la CCI, y el alcalde Petro.

Ahora todos metidos en las 100.000 viviendas gratis

Disminución en precios del cemento será del 25% por tonelada; en PVC, del 12%, y en acero, los descuentos varían dependiendo del producto. Los descuentos impactarán en 10% el precio final de una vivienda de interés prioritario.

El ministro de Vivienda, Germán Vargas Lleras, el Superintendente de Industria y Comercio, José Miguel de la Calle, y los representantes sectoriales del cemento, el acero y el PVC, suscribieron tres acuerdos de precios para garantizar suministros y precios estables con el propósito de abaratar los costos de las viviendas de interés prioritaria, VIP, que se construirán para 100 mil familias que no tienen nada.
works and difficulties in affording transportation fees is also a problem for these groups.

b. Regarding the provision of affordable social housing in Bogotá

As it was explained when analysing the provision of social housing in Bogotá the model of development promoted by the different governance levels –Municipal and National- diverge in their conception from a compact to an expansive land development model. Moreover, this ongoing disperse urban development in the metropolitan scale is supported by city developers and Bogotá’s surrounding municipalities expecting future infrastructures and facilities interventions in these areas. In addition, the strictly sectorial National policy formulated for the development of social housing (especially in the case of ‘priority interest housing’) in combination with the land price dynamics of the city, promotes the concentration and standardization of the supply contributing to the increase of the scale of the segregation pattern.

Therefore, the necessity of articulating social housing development to the ongoing development processes of the city –the regeneration of the existing city and the development of new areas- lies in the need for de-concentrating and diversifying this supply. In this regard, as exposed by Arango (2001) the recognition of the demand and the differentiation of spatial demands of diverse social groups is imperative to start contributing towards the counteraction of the qualitative housing deficit in the long term.

c. Regarding the integration of low income population groups

The urbanization trends and evolution of the segregation pattern showed by Sabatini (2001) and Salas Vanegas (2008) for the case of Bogotá evidenced the importance of considering the metropolitan scale where this pattern is increasing. However, the consideration of this scale as a whole in the decision making processes of Bogotá is just starting. Moreover, management and distribution mechanisms in this territory available for the development of affordable housing are nonexistent.

Furthermore, the differentiation of scales and negative effects in the study of residential segregation and spatial fragmentation showed that it is necessary an integral and multiscalar approach towards the integration of low income population groups into the city. In the case of Bogotá and including its neighbour municipalities, it is necessary to keep reflecting in adequate instruments for the allocation of social housing in articulation with the densification processes of the city to create the conditions for residential mobility and counteract the larger scale of residential segregation. Yet, additionally, the creation of the necessary conditions in the local or neighbourhood scales to integrate these poorer groups into the urban dynamics is also needed in order to create the conditions for assuring tenancy and hierarchical functional programming.

d. Regarding the studio and the graduation process

The registration of this project within the Complex Cities graduation studio permitted to set a context for the development of social housing in relation to the urbanization trends of Bogotá and its surrounding region. In this regard, a dynamic and integral analysis of the phenomenon permitted to consider multiple variables for the formulation of differentiated measures for counteracting residential segregation and spatial fragmentation in different areas of the city.

Following my personal experience during this graduation year I believe that the strict division
between semesters led to time wasting. The studio dedicates one semester for the formulation of the project and the second semester for the development. Moreover, second mentors join approximately in the final part of the first semester when the research proposal should be at its highest point of consolidation. In my opinion, it would have been more profitable to start developing the graduation project after P1 along with the work of both mentors to be able to shape it according to both their inputs and in that sense start the consolidation of this report much earlier in P2. I think an earlier delivery of a tangible product such as a preliminary version of the report -in the case of my project- would have led to more precise comments from mentors for its further consolidation and improvement.


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7. Appendices

7.1 Theory paper ‘urban planning in the fragmented city’

7.2 Analysis developed for local areas of Bogotá

7.3 Analytical study of reference practices
Urban planning in the fragmented city
A review on spatial fragmentation and segregation in Latin American cities.

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Abstract - Urban fragmentation is commonly accepted when understanding the spatial organization of cities from developing countries (Balbo and Navez Bouchanine, 1995). Contrasts between the planned city, illegal settlements and slum areas confirm the fragmented state of their space (Balbo, 1993). Although urban fragmentation in that context has been defined according to different approaches, several authors associate it with social dynamics and the evident differences among social strata of these countries’ societies. Moreover, social marginalization and exclusion of social groups is referred to be related to this fragmented condition of space (Coy, 2006; Janoschka and Borsdorf, 2006). Two streams were identified in the relation between urban fragmentation and social dynamics. On one hand, fragmentation understood as the sum of fragments that may imply different social and morphological characteristics and different uses of the city (Balbo 1993;  Balbo and Navez Bouchanine 1995). On the other hand, fragmentation related to segregation processes in the city induced by gated residential projects (Coy, 2006; Janoschka and Borsdorf, 2006).

The main objective of this paper is to reflect on urban fragmentation in cities of developing countries specifically large Latin American cities, and the relation that this fragmented state of space has with segregation processes. Key questions addressed in this paper are: How is fragmentation understood? What are the spatial features? What are the causes behind it? How is related with segregation? And what kind of measures can be implemented in order to cope with it? By the means of literature review, this paper is aiming to clarify some concepts like spatial fragmentation and socio-spatial segregation (Sabatini, 2003; Sabatini and Brain, 2008; Jaramillo, 1999; Marcuse, 2005).

The paper concludes stating that further detailed spatial conceptualization of fragmentation and clarification of its relation with segregation needs to be done in order to identify segregated population groups and city areas that need special attention for the development of planning policies and strategies. The conclusions extracted from this paper are meant to provide a theoretical framework on how to approach fragmentation and social integration in Latin American cities.

Key words - Latin American cities; urban fragmentation; socio-spatial segregation; social integration.

1. Introduction: Latin American cities and the challenge of dealing with the new and the old.

It is undeniable the importance of comprehending urban processes of cities today, especially the ones of cities in developing economies. It is well known that these cities deal, like Castells puts it for the case of Latin America, with ‘old and new problems at the same time’ (2000: p. 51). Along with the process of consolidating economic competitive scenarios, Latin American cities still struggle with spatial issues originated in the last century namely lack of infrastructure, housing shortage, uneven urban development (including both formal and informal) and poverty (Balbo and Navez Bouchanine, 1995; Castells, 2000; Gilbert, 1995). Even so, the setting of those ‘last century problems’ in a new and global context makes them emerge somehow as new problems (Castells, 2000: p. 51). Dealing with ‘the old and the new’ (ibidem) simultaneously comes as a challenge when setting out appropriate policies for the improvement of these cities urban environment. Therefore the importance of comprehending urban processes in specific contexts like Latin America relies on the responsibility of politicians, urban planning professionals and academics, of understanding their context and its dynamics in order to respond in an adequate way.

The stated above becomes relevant in the study of spatial fragmentation and the relation this one has with segregation processes in Latin American cities. In the current academic and professional spheres, it is not contradicted that the urban space of Latin
American cities has developed in a fragmented way (Balbo, 1993; Balbo and Navez Bouchanine, 1995; Coy, 2006, Jaramillo, 1999). Indeed contrasts between the planned city, illegal settlements and slum areas confirm the fragmented state of these cities urban space (Balbo, 1993). Moreover, this fragmented condition is often related with social exclusion and segregation processes (Coy, 2006; Janoschka and Borsdorf, 2006). However, diverse definitions and uses of fragmentation created confusion in understanding the link this one has with social issues and consequently with the proper measures to tackle it.

The following questions arise: How is the fragmentation understood? What are the spatial features of this phenomenon? What are the causes behind it? How is related to segregation? And what kind of measures can be implemented in the urban planning sphere (strategies, policies, projects) to cope with it?

This paper is aiming to answer these questions by studying two theoretical streams on urban fragmentation. On one hand, fragmentation understood as the sum of fragments that may imply different social and morphological characteristics and different uses of the city (Balbo, 1993; Balbo and Navez Bouchanine, 1995). On the other hand, fragmentation related to segregation processes in the city induced by gated residential projects (Coy, 2006; Borsdorf, 2003). Further, the postulates extracted from these authors will be challenged according to the studies made by Sabatini (2003; 2008) and Jaramillo (1999) on socio-spatial segregation in Latin American cities and the clarification of concepts proposed by Marcuse (2005) on segregation.

In the development of this paper the above mentioned variables: spatial features, causes, relation with segregation, and measures or solutions will be used in order to expose what has been proposed by the authors. Further in the conclusions, these same notions are considered to end with recommendations on how to approach fragmentation and segregation in Latin American cities.

2. Urban fragmentation: not conceived as a unitary concept.

2.1. Urban fragmentation according to morphology: the whole as a sum of fragments.

Balbo (1993) recognizes urban fragmentation from a spatial perspective. For Balbo and Navez Bouchane (1995), urban space fragmentation can be recognized in the ‘distinctive spatial patterns’ (1995: p. 571) displayed in cities from developing countries. That is how, the planned districts, illegal settlements and slums areas appear as different morphological entities: ‘An aerial view of the city shows a spatial structure made of many different pieces drawn together in a rather accidental way’ (Balbo, 1993: p. 24). The author’s hypothesis is based on the study of different fragments in relation with different ways of living or experiencing the city: ‘Each fragment appears to live and function autonomously’ (ibidem: p. 25).

The most recognizable reason to spatially define the fragment according to Balbo is to be found in the built environment (1993). Each fragment of the city displays a different pattern, based more in terms of morphology (Balbo and Navez Bouchanne, 1995). To name a few: the ‘modern’ centre, the historic city, the planned districts, the various types of illegal settlements and the slum areas’ (Balbo, 1993: p. 26). Moreover there are different conditions of services and infrastructure among fragments linked often with the level of legality of each of them. In that way, aspects like tenure are, according to the author, drivers for new spatial patterns and therefore new fragments.

For Balbo (1993; 1995), a direct and main cause for urban fragmentation was the spatial organization developed in the colonial period of developing countries. Two cities had to be developed according to ideological and political arguments in that time: one for the incoming population and one for the natives. Although this ‘dualistic’ development was the reflex of a ‘dualistic’ (1993: p. 27) society, the author also mentions that it is more difficult to establish a direct relation between the current urban society and spatial fragmentation.

Nonetheless, Balbo defines four other causes (1993: p. 27-29) namely: ‘(a) the extremely rapid urban population growth’ and the demand of services and facilities that neither the public nor private sectors managed to provide in adequate conditions. As a consequence, substitute (or informal) mechanisms participated in the supply of these facilities, contributing to spatial fragmentation.

‘(b) the functioning of the urban economy’, where he stresses how little attention and further study has received the impact of informal activities in the spatial distribution of the city. For the author ‘fragmentation could be a response to the organizational needs of informal activities, not simply the consequence of an informal housing and land market’ (1993: p. 28).
Access to the city for everyone.

‘(c) the ideology of urban planning’ that based on the European conception of the city as an homogenous object, denies unique and incomplete modernization processes of cities in developing countries.

‘(d) the role of the state’ and the limited acting capacity of this one to cope with the development and provision of services in the city, but still pretending to control and produce everything.

As it was said before, Balbo (1993) explains segregation or (social fragmentation according to him) is not directly involved in the fragmentation of space or vice versa. As an example, in the case study of spatial fragments in Rabat Salé (Africa), Balbo and Navez Bouchanine (1995) discover that different and opposing urban spaces coexist without necessarily causing societal conflicts. These conflicts can be related more to household, social and economic conditions. Moreover, it was observed that ‘the past social cohesion brought about by the concentration of analogous populations, has evolved into a different type of homogeneity’ (1995: p. 580) leading towards the concentration of population groups that seek some degree of residential segregation.

The approach of Balbo (1993; 1995) questions the current role of urban planning in developing countries. According to the author, ‘the notion that the ideal city should be an integrated, well-balanced space’ should be re-examined (Balbo and Navez Bouchanine, 1995: p. 573). In that sense, shaping appropriate urban policies comes from understanding ‘to what extent the fragmented city of the developing world is the accidental outcome of conflicting forces, the result of a lack of planning, or the way the urban society and economy copes with the constraints of underdevelopment’ (ibidem: p.574). Although no concrete spatial strategies or policies are proposed by these authors, they emphasize for deeper knowledge of informal dynamics due to fragmentation could be a way of balancing uneven distribution in these societies.

2.2. Urban fragmentation according to geography: islands of wealth.

Coy, in his article Gated communities and urban fragmentation in Latin America: the Brazilian experience (2006), does not refer specifically to urban fragmentation. He refers to a particular manifestation of it, gated housing areas developed mainly from the 70s until today. According to him, these gated residential developments ‘have to be seen as an essential part of far reaching socioeconomic changes and the resulting socio spatial differentiation of the Latin American city which can be described as a process of increasing urban fragmentation’ (2006: p. 121).

Gated residential areas or gated communities as Coy calls them are one of the many existing fragments of Latin American cities urban development (2006: p. 122) (See Illustration 1). The author makes a radical distinction among fragments. Ones are occupied and used by wealthy social groups as shopping and entertainment centres; ‘islands of wealth’, and
Planning and spatial strategies to counteract residential segregation in Bogotá

others by low incomes population like places of informal activity and low-cost housing projects; ‘Oceans of poverty’. Coy specifies this social and spatial structure, ‘islands of wealth in oceans of poverty’ (ibidem), is not new as Latin American societies have always been characterized by social inequality.

For Janoschka and Borsdorf (2006) urban fragmentation and the development of gated communities are seen from an historical perspective. (See Illustration 2), urban fragmentation is linked with the actual stage of the Latin American city structure. In addition, Borsdorf (2003; 2006) mentions how gated residential projects, were aimed commonly to be occupied by high middle incomes groups but later other residential projects occupied by lower social classes were enclosed as well.

The main spatial expression of fragmentation to Coy (2006), Janoschka and Borsdorf (2006), is embedded in the privatization of communal space and declining of public one. Coy explains how gated communities ‘follow the principles of privacy and exclusivity’ (2006: p.122) and in that way, they become the ‘extreme opposite to public accessibility, which constitutes an important element of the sociocultural qualities of urban life at least in the conventional perception of the city’ (ibidem). Although this approach is not entirely spatial, the author explains how gated communities are helping to develop cities of walls through the development of ‘new extraterritorial spaces beyond public management and control’ (ibidem), permitting ‘self-segregation’ (ibidem) of privileged groups.

The main cause for fragmentation is to be found in the reduction of State intervention in socio-economic and space development (Coy, 2006; Janoschka and Borsdorf, 2006). Policies oriented towards deregulation, flexibility and privatization, permitted the entrance of private capital interests and in that way, private developers and real estate companies gained more power in urban development. Also the increasing fear of criminality and ‘globalized’ (Coy, 2006: p. 122; Janoschka and Borsdorf, 2006: p. 94) wealthy and exclusive lifestyles were seen by these stakeholders as an opportunity for innovative real estate products. Simultaneously, the development of these residential projects was supported by the construction of new car-based mobility infrastructure (ibidem).

According to Coy (2006) these islands of wealth, where ‘no-entrance areas’ and ‘no-go areas’ are established, permit to link different fragments in the city and its surroundings as a network of residential and entertainment places, used exclusively by the wealthy population (2006: p. 123.). For Janoschka and Borsdorf (2006), social exclusion is not seen strictly in the construction of walls, but in terms of accessibility. Closed spaces or ‘islands of consume and leisure’ only have access by car and exclude the ones that cannot participate in private transport (2006: p. 96).

In terms of solutions or approaches the authors do

![Illustration 2. The Model of the actual Latin American city structure. (Janoschka and Borsdorf, 2006: p. 95)](image_url)

Source: Borsdorf, Bähr and Janoschka 2002; adapted.
not take a strong position on planning programs or policies addressed to cope with fragmentation. Nevertheless, Coy (2006) defines three scenarios for urban development. The first one -the fragmented city- constitutes a scenario where private market takes control and public authorities are powerless regarding urban development. The second one -the correcting city- is a scenario where authorities become more aware and create solutions attempted to integrate and regulate the informal city and renewal processes. The third one -the (re-) integrating city- is based on principles of solidarity and respect with emphasis in participatory strategies of enablement and empowerment and aims towards social integration. However, the author specifies the last one depends on good urban governance conditions and it is according to him almost a utopian vision.


A different academic stream is taken in the study of social and spatial segregation processes. In this one, residential segregation is studied as a phenomenon. In the following paragraphs the work of Sabatini (2003) who studies residential segregation for Latin American cities will be presented, and complemented with definitions developed by Marcuse (2005) who has studied it for North American cities.

Sabatini (2003) defines social segregation of urban space or residential segregation as a changing spatial phenomenon related in a complex way with social inequalities. Social inequalities can be grounded on racial, migration or economic aspects although in the Latin American context the studies conducted so far have been focused on the last kind (ibidem). In addition, the author explains residential segregation study is related to the scale where it is analyzed. For instance in large Latin American cities, segregation is high on the city scale. On the contrary, on high rent neighbourhoods scale, segregation is low due to the existence of diverse middle and high incomes social groups residing in these neighbourhoods.

The general definition of the phenomenon defined by the author is "clustering of families of the same social condition" (2003: p. 7). Three dimensions of this general definition are also stated by Sabatini, in order to develop a specific definition: 1) the degree of the social groups’ spatial concentration; 2) the degree of social homogeneity of one group accommodated in certain areas of the city; and 3) the prestige or lack of prestige those areas (ibidem).

Moreover, Sabatini (2003) specifies residential segregation has positive as well as negative effects according to the predominance of the above mentioned dimensions. The positive effects are mainly associated with families that cluster to strengthen social identities (the first dimension). The negative ones are associated with lesser interaction in the urban space among diverse social groups and the involuntary cluster of low incomes population groups in less-served city areas (a transition from the first to the second dimension). In addition, the relevance of the third dimension (of subjective character) defined by Sabatini is crucial to understand the negative effects of residential segregation. Lack of prestige or negative stigmas constructed collectively for some areas of the city strengthens spatial exclusion of groups that live in those areas. In that way, ‘the isolation of discriminated and poor population groups and the perception they have on their own condition is what favours social disintegration’ (2003: p. 9).

Marcuse (2005), defines clustering and segregation as separate concepts. Clustering is understood as ‘the concentration of a population group in space’ and constitutes the ‘generic term for the formation of any area of spatial concentration’ (2005: p.16). And segregation is understood as ‘the process by which a population group, treated as inferior (generally because of race), is forced, that is, involuntary, to cluster in a defined area, that is in a ghetto. Segregation is the process of formation and maintenance of a ghetto’ (ibidem). Marcuse (2005) defines two types of segregation: one based on racial and other based on real estate market grounds. Due to the differentiation Marcuse (2005) elaborates between segregation and clustering, notions like the one of ‘self-segregation’ (used often by Coy) are considered to be contradictory to him.

The differentiation between clustering and segregation made by Marcuse (2005) can be roughly assimilated with the differentiation Sabatini (2003) makes among the negative and positive effects of segregation. In any way, the authors’ definitions both entail positive and negative aspects of social clustering in space, mainly based on the voluntary or involuntary properties of this one.

Looking into the causes of residential segregation, Sabatini defines as the main cause the land market dynamics and its relation with segregation (2003). First, due to land prices are determined by land use contributing to the exclusion of specific functions in inner city areas like social housing. And second, due to city developers -public, private and informal-operate according to this land prices structure. This
means that the families who cannot pay for privileged conditions in the city are forced to locate in poor developed areas where the access to facilities and centralities is limited and the population is ‘socially homogeneous’, (Sabatini and Brain, 2008). In that way, Sabatini (2003; 2008) recognizes the role of the public sector in increasing or diminishing socio-spatial segregation, aspect also recognized by Marcuse (2005).

As a response to these segregation negative effects and after recognizing the role the State has had in increasing these ones, Sabatini (2003) proposes the development of a public policy where social integration becomes the main objective. In that way, key goals of that policy would be first a more physical interaction among different population groups; second a higher access of the poorer groups to the city; and third the weakening of negative stigmas developed for city areas. The author specifies this policy should aim to shorten the distance between low and high incomes population groups through the transfer of poor families into other areas of the city, mandatory percentages of social housing in real estate projects and upgrading of peripheral informal areas. In addition, special attention has to be made to the importance of land management and public transportation strategies.

4. Conclusions: Understanding the social and spatial aspects of fragmentation.

After reviewing different approaches on urban fragmentation, divergent and convergent aspects of what the authors have established will be pointed out. In addition, special attention will be put on the relation of fragmentation with socio-spatial segregation. Relating the different theories is a complex task due to all the authors seem to talk about different aspects of two main issues displayed in large Latin American cities. First the existence of diverse forms of space production and second, social inequalities in these societies and what that means for vulnerable population groups in terms of access to certain opportunities.

It needs to be said firstly that on the study of urban fragmentation, there are several approaches (more than the ones presented in this paper). Moreover, already some authors have underlined the lack of precision in the conceptualization of the fragmentation concept leading towards confusion with social and spatial phenomena (Michelutti, 2010). ‘Thus, fragmentation has become part of a “liquid” lexicon (in the Zygmund Baumann’s meaning of the word) that includes the words “dualism”, “segregation”, “segmentation”, etc. without enhancing a precise definition’ (ibidem: p. 1).

Equally important the diverse approaches on the definition of urban fragmentation, leads towards vagueness when spatially defining a fragment. For Balbo (1993; 1995) the reasons to define the fragment seem to be found in urban morphology differentiation and possible disconnection from services and facilities. In the case of Coy (2006) and Borsdorf (2003), urban fragmentation is a given fact and they concentrate in the further analysis of one of those fragments: gated communities. For those last authors, the fragment is mainly defined in spatial terms by the walls or enclosure of gated complexes and their link to car-based mobility, aspects imported from North American models.

When it comes to defining the causes of urban fragmentation, the authors establish as definitive the role of the State, aspect also very relevant in the work of Sabatini (2003) and Marcuse (2005) about socio-spatial segregation. The authors mention two main aspects of public intervention: for Balbo (1993; 1995), the capacity of the State to provide services and facilities and for Balbo (1993; 1995), Borsdorf (2003) and Coy (2006), the capacity of the State to control informal processes and private development.

In addition, social dynamics are related to the fragmented state of space but there is no specific consensus in this matter. Balbo (1993; 1995) refers initially to the dualistic configuration of the colonial society and how fragmentation originated as a direct cause of this divided society. In addition, he stresses on the functioning of urban economy and how informal dynamics could be related to the fragmented distribution of space, aspect not studied in depth. Coy (2006) establishes urban fragmentation as a consequence of Latin American societies ‘disparities’ (2006, p: 122), but overall is very vague in specifying the link between this two aspects.

Leaving aside the multiple interpretations of the phenomenon, on the matter of spatial fragmentation and the relation that this one could have with social conflicts no direct relation is proved. As Balbo and Navez Bouchanine (1995) realized in the study case of Rabat Salé (Africa), social conflicts are more likely to appear when the existence of social or economic differences, more than the existence of urban fragments. Moreover, behaviour or mobility within the city does not necessarily vary from one fragment to the other. Although segregation and exclusion are mentioned by Balbo (1993; 1995) and Coy (2006) as cause and sometimes as consequence, aspects analyzed by Sabatini (2003; 2008) in the study of socio-spatial segregation for Latin American cities were barely or not at all taken into account by these authors. Those aspects would be dealt briefly in the following two paragraphs: first the land market dynamics and second the
importance of studying segregation in different territory scales.

As it was mentioned before, according to Sabatini (2003; 2008) land prices formation according to land use and the actions of urban development stakeholders (public, informal and private) according to this structure of prices is what is causing higher segregation on the scale of the city. Also, other authors like Samuel Jaramillo (1999) who has studied land market and the relation of this one with Latin American cities spatial configuration, states the importance of land market role in the development of different kinds of built space production. To Jaramillo, the accentuated fragmentation of space is to be found in the different forms of space production and in the relatively weakness of the State to provide infrastructure and control urban processes what contributes to the speculation with land prices (1999: p. 112).

Also, according to Sabatini (2003) the territory scale determines the degree of segregation in the study of Latin American cities. While in the scale of the city the distance between low and high incomes population is increasing, in the scale of the high rent neighbourhoods diverse middle incomes and high incomes population inhabit. Moreover, the emphasis of Sabatini’s (2003) policy proposal stresses the fundamental role that the location of social housing fulfills in the access to opportunities for the low incomes population groups. In that sense, the presence of walls in gated residential complexes and increasing fragmentation is to this author an expression of exclusion on a lower scale, but a way to reduce the distance between diverse social groups, aspect treated superficially by Balbo (1993: p. 33).

5. Recommendations: Towards social integration.

When social inclusion or integration is set as the goal of planning strategies and design projects, no discussion arises from spectators. However, it becomes necessary to understand how this social inclusion can be achieved and this is only possible through deeper understanding of processes like urban fragmentation and socio-spatial segregation. Moreover, understanding causality and correlation of spatial and social dynamics of these phenomena is fundamental to respond in an adequate way.

For further urban fragmentation studies, detailed spatial conceptualization and clarification of its relation with segregation needs to be done. This can be realized through the superimposition of different spatial environments, organization of population groups and the causes and conditions of facilities and infrastructure distribution at different city scales. The study in depth of these variables relies on identifying segregated population groups and city areas that need special attention for the development of planning policies and strategies.

List of references


Access to the city for everyone.

1. General Information of the areas

   Location: Av. 30th with 6th street
   Comuneros Avenue
   Area: 8.38 hectares
   Localidad: Puente Aranda
   Zonal planning unit: Ciudad montes comuneros,
   Urbanización los comuneros, Urbanización veraguas,
   Estación texaco.

2. Context:

   a. Male - female population
   b. Homes and households
   c. Persons per dwelling
   d. Homes in poverty conditions
   e. Homes in destitution

3. Socio-economic data of the areas

   a. Male - female population
   b. Homes and households
   c. Persons per dwelling

4. Regional parks were not included in this analysis

5. Supply of parks

   m2 of green areas
   per person in (xx)
   Bogotá average (4.3 m2)

   Socio-economic data of the areas

   a. Male - female population
   b. Homes and households
   c. Persons per dwelling
   d. Homes in poverty conditions
   e. Homes in destitution

6. Access to the city for everyone.
Planning and spatial strategies to counteract residential segregation in Bogotá

### 4. Recognition of spatial features:

#### a. Urban structure

- **Los Comuneros / Veraguas**
  - Clear proximity to the main road network and city scale infrastructure. Location’s characteristics due to the proximity of one of the main industrial areas of the city ‘Puente Aranda’.

- **Don Bosco / Techo**
  - Tangential relation with the Ciudad de Cali Avenue. Medium flooding risk area in the area of study.

- **Garcés Navas**
  - Tangential relation Av. 50 and the same as Don Bosco Tech in the influence area of the main transportation system. Although these two areas have different local qualities.

- **San José del Prado**
  - Tangential relation with the north highway where the access to the main transportation system is located. Main local relations in a north-south direction.

#### b. Local structure (inside the boundaries of each area)

- **Block morphology**
  - **Los Comuneros / Veraguas**: 8.38 hectares. Block structure where some continuity can be observed from the surrounding block pattern.
  - **Don Bosco / Techo**: 34 hectares. Completely different structure. Large plot divisions that evidence ownership limits and greenfield appearance. Surrounded by dense urban neighbourhoods, arranged in a fragmented way.
  - **Garcés Navas**: 64 hectares. Dense urban tissue where a local open space structure can be recognized. Originally developed by ICT progressive development programme.
  - **San José del Prado**: 30.8 hectares. Block structure where north-south continuity can be observed. Originally part of informal development.

#### c. Facilities and local corridors

<table>
<thead>
<tr>
<th>Relevant data local scale in relation to city structure</th>
<th>LOS COMUNEROS / VERAGUAS</th>
<th>DON BOSCO / TECNO</th>
<th>GARCÉS NAVAS</th>
<th>SAN JOSÉ DEL PRADO</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Time to work places</td>
<td>0.63 - 0.77</td>
<td>0.63 - 0.77</td>
<td>0.63 - 0.77</td>
<td>0.78 - 0.93</td>
</tr>
<tr>
<td>b. Time to study places</td>
<td>0.66 - 0.76</td>
<td>0.77 - 0.99</td>
<td>0.57 - 0.65</td>
<td>0.66 - 0.76</td>
</tr>
<tr>
<td>c. Distance to health network</td>
<td>2001 - 3000</td>
<td>2001 - 3000</td>
<td>19 - 1000</td>
<td>1001 - 2000</td>
</tr>
<tr>
<td>d. Distance to public administration buildings</td>
<td>1001 - 3000</td>
<td>3001 - 6000</td>
<td>3001 - 6000</td>
<td>3001 - 6000</td>
</tr>
<tr>
<td>e. Distance to immediate attention centers</td>
<td>10 - 1000</td>
<td>10 - 1000</td>
<td>10 - 1000</td>
<td>10 - 1000</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Relevant data urban scale in relation to city structure</th>
<th>LOS COMUNEROS / VERAGUAS</th>
<th>DON BOSCO / TECNO</th>
<th>GARCÉS NAVAS</th>
<th>SAN JOSÉ DEL PRADO</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. m² of green areas</td>
<td>3062.56</td>
<td>0</td>
<td>64307</td>
<td>3611.11</td>
</tr>
<tr>
<td>b. Supply of education facilities</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>c. Supply of cultural facilities</td>
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<td>0</td>
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<td>1</td>
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<td>d. Supply of health facilities</td>
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<td>0</td>
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<tr>
<td>e. Supply of social welfare facilities</td>
<td>0</td>
<td>0</td>
<td>34</td>
<td>1</td>
</tr>
</tbody>
</table>
Access to the city for everyone.

5. Land use and land price (2004 and 2009 in COP - Colombian pesos)

- Land price: (2004) 200,000 - 400,000 (2009) 200,000 - 600,000
- Land price: (2004) 0 - 200,000 (2009) 200,000 - 600,000
- Land price: (2004) 200,000 - 400,000 (2009) 600,000 - 1,000,000

6. Recognition of local corridors according to space syntax (local integration)
Themed housing states

Subsidized social housing, Vienna (Austria)

Housing states located in the map
b. Frauen-werk-stadt I 1993-1997
c. Compact City 1993-2001
d. Sargfabrik - Wohnheim Matznergasse 1993-1996
e. Integratives wohnen 2002-2004

a. General information of the projects: Vienna has a vast tradition in the development of social housing. Vienna's social housing originated with a reform programme in the 1920s and it has been developed for more than eighty years. ( Förster, n.d). 'The general understanding that housing should not be fully left to the free market has formed the basis for reconstruction, new housing, industrialized housing production and last but not least 'soft', i.e. residents oriented urban renewal' (ibidem: p.1). Experimental housing building under 'theme oriented settlements' has created the adequate environment to set incentives in the ecological, social and technological fields.

b. Background of the programme and projects: The city of Vienna recognized in the 1990s that housing developments were facing new challenges with 'the increasing heterogeneity and plurality of life styles'. Therefore experimental projects under the heading 'Themed housing' were developed on experimental basis. Under the framework of subsidized housing, several examples were developed. 'Ideas like ecological housing states, traffic free housing states, gender mainstreaming in planning, new forms of living and working and integrative projects' (Förster, n.d), were pre-determined by the city in order to achieve progress in the technological and environmental aspects of housing. To be followed, a brief description of the different projects is provided:

The project Autofreie Mustersiedlung was conceived under a car-free housing concept. The Vienna Garage legislation was suspended for this development and the savings made by this could be used in the development of communal facilities and additional play areas according to the residents' wishes. The development has its own car-sharing system for the residents of the complex.

The project Frauen-werk-stadt I initiated by the Women's Office of the City of Vienna is tailor made entirely to meet the everyday needs of women. 'The complex comprises 360 apartments, a kindergarten, integrated disabled apartments, a communications centre, six integrated old person's apartments as well as retail units along Donaufelder Strasse.’ (Viehhauser, 2008)

In the project Compact city, workspaces were combined with living ones as an attempt to counteract the negative effects of monofunctional housing areas. By far the most radical of these projects is the case of Sargfabrik which was built in a densely built up district. The project, located in a former coffin factory land and coordinated by the Association for Integrated Lifestyles, is conceived as a 'village in the city' where facilities as a kindergarden, events hall, seminar room, bathing house, restaurant, playground, communal gardens, library among others,
Access to the city for everyone.

were developed to serve not only the complex inhabitants but also the neighbourhood community.

Finally integratives wohnen project addressed the issue of integrated living for immigrants from diverse countries. ‘with a mix of 50% native Austrian and 50% immigrant residents as part of a special integrative housing programme’ (ibidem)

c. Potential or constraints of the experience: Based on the acknowledgement that it would be futile to compare the experience of Vienna’s social housing with the one in developed in Bogotá, due to the radical differences in the culture and development context, what it can be recognized as a potential in this reference practice is the recognition of keep innovating and experimenting within the social housing sector. Some of the projects developed within themed housing states allow considering the differences in lifestyles and spatial requirements of different society sectors, involve the community in the design process, study the facilities needed inside the states planning and promote more sustainable practices like car sharing.

Sources:
FÖRSTER, W., n.d. 80 years of social housing in Vienna, [online] available in: www.wien.gv.at.
Information about the Sargfabrik project in: www.sargfabrik.at
Inclusive development

Inclusive development in the historic centre of ciudad de Panamá (Panamá)

a. Location and city information: Ciudad de Panamá, the capital city of the country is located in the coast of the Pacific Ocean in the entrance of the Panama Canal. The capital district has an extension of 2,011.9 sqkm. On the other hand, its metropolitan region includes the San Miguelito, Arraiján and La Chorrera districts. This metropolitan region of approximately 1,400,000 inhabitants is the most populated of the country.

b. Background of the programme: The historic centre of Ciudad de Panamá with a surface of approximately 44 hectares had its most important period between 1850 and 1920 when the railway and isthmus interventions took place. It was declared historical monument in 1976 and world heritage site in 1997 by UNESCO. In the second half of the twentieth century diverse regeneration plans were developed after the area decay and mainly low incomes population groups inhabited the neighbourhood. These plans were mainly oriented to boost tourism and several public spaces and monuments were renovated. In addition in the 1990s the private sector developed several renewal projects mainly luxury residential complexes with commercial units. However, several buildings remained abandoned (in 2004 one building in six was closed and dilapidated) (Ariel Espino, 2008).

Two aspects preceded the new social policy implementation and benefited the improvement of the city centre. First, the real state bonanza boosted by the tourism and the international retired persons market. Second, the government sanctions imposed to abandoned buildings. The new social policy has been oriented in two main programmes: affordable housing and labour training. So far, four buildings owned by the government have been rehabilitated and they are being rented to low incomes population groups that do not have access to the financial system by OCA (Oficina del Casco Antiguo). Other three buildings are being rehabilitated and other five in the planning stage. The buildings are being rented in the long term and beyond housing the restored buildings count with commercial units that are rented to existing local business that were in evicting risk (ibidem).

c. Planning framework: This specific experience has changed the work line of the OCA, a National level institution, that passed from an institution in charge of rehabilitating buildings and improving existing infrastructure to be part of the new ‘inclusive development’ vision (Ariel Espino, 2008: p. 497). Financing the first buildings constituted a joint effort of the Housing Ministry MIVI, the Andalucía Board and advisory capacity of the OCA. In addition, as a possibility the BID economic support addressed to the improvement of housing conditions could be involved in the slow rehabilitation process.

d. Potential or constraints aspects of the experience: several aspects can be recognized in this specific practice. As a main one, the asses of the housing location and subsequently of the social capital brings closer to low incomes population to the main job, cultural and touristic places. In addition the recognition of an integral approach that understands social
housing development requires more than a physical house to integrate vulnerable population to the city. In this case, the PNUD (2009) has recognized that social housing can bring foreign economic support rather than be an obstacle for it.

As a constraint it is necessary to specify the particularity of this experience developed within the context of the space improvement of the historical centre and structure of Ciudad de Panamá. Therefore, the necessity of assess location of the housing meets also with bringing closer vulnerable groups to the protection of the built heritage. In the case of Bogotá renewal areas are not located exclusively in the historical centre, therefore this becoming also a constraint especially in terms of financing. However, what becomes relevant is the recognition of groups that cannot enter the formal housing financing schemes and the consideration of rental social housing as an option to access the several opportunities in the city.

Sources:
-Municipal government webpage: http://www.municipio.gob.pa/
-Ministry of Housing, Panamá Republic webpage: http://www.mivi.gob.pa/urbanismo/4URBANISMO/urbanismo/inicio.html
-OCA webpage: www.cascoantiguo.gob.pa
-Evaluation version of the document ‘Acuerdo de colaboración entre la oficina del Casco Antiguo y el Programa de las Naciones Unidas para el Desarrollo: Lineamientos apra la consolidación de la integralidad e inclusión social en la implementación del Plan Maestro del Casco Antiguo de la Ciudad de Panamá’ (2009) found in: erc.undp.org/evaluationadmin/downloaddocument.html?docid=4799

The Boyacá house project, counts with 26 apartments each one equipped to meet the actual programme of a social housing for a four persons’ home. The buildings’ rehabilitation was conceived as an alternative space where the residence, local cohabitation, communal organization and social participation take place. Its main goal was to develop affordable housing in the core of the touristic centre of the city.
Planning and spatial strategies to counteract residential segregation in Bogotá

Progressive development

Aranya, Indore (India)

General information of the project:
Architects: Balkrishna Doshi
Client: Indore Development Authority
Time: 1989 (Awarded with the Aga Khan Award for Architecture)
Site Area: 862,400 sqm
Total ground floor area: 598,200 sqm (marketable area - Almost 60 percent of the total plot area)

a. Location and city information: The project Aranya low-cost housing is located in the periphery of Indore and it was conceived from the beginning as a new township development in order to accommodate low incomes population groups in the city. Indore is the largest city of the Madhya Pradesh state located in the centre of the country. According to the city census Indore has a population of 1,960,631 and a surface of 3,898 square kilometres.

b. Background of the programme and project: The Madhya Pradesh and the Indore Development Authority are the two government agencies involved in the housing functions of the State. The Vastu Shilpa Foundation for Studies and Research in Environmental Design was entrusted, in 1983 with the task of preparing a master plan for the township. The project considered the dwellers settlement patterns and needs. In that sense, the proposal was derived from a detailed study of several existing slums in Indore where 'physical environment, spaces use, plot locations, choices and families profiles were analyzed'.

The master plan was developed with a clear hierarchical organization of roads and facilities and a set of rules was designed to establish the development possibilities of the housing units. Although the majority of housing units was developed for low incomes population groups (65 percent of the total housing units), social mix was considered through a cross subsidisation scheme. To motivate the physical transformation and housing form variations, eighty houses were fully built as a pilot demonstration. This permitted to generate a visual collage of forms to inspire the rest of the plot dwellers. In addition, it helped them to experiment with their housing configuration. The road network and pedestrian paths are arranged within a hierarchy where facilities and infrastructure are thought regarding walk distances and communal use facilities.
c. Planning framework: The project was developed within a cooperation framework between the funding agency HUDCO (Housing and Urban Development Co-operative) and the World Bank, whose conditions included that a minimum of the 65 percent of the plots could be affordable by low incomes population groups without any external subsidies.

d. Potential or constraints aspects of the experience: Indore’s design concept becomes the main potential of the overall experience. The study of informal settlements patterns and population spatial requirements on which the project is based became a big step towards understanding communities’ spatial and functions configuration. In addition, the articulation of a hierarchical structure acknowledges the need for a transition between the local and urban spatial structures.

Sources:
- Provisional population totals, census of India found at: censusindia.gov.in/2011-prov-results/paper2/data_files/India2/Table_2_PR_Cities_1Lakh_and_Above.xls
- Statistics about the city: http://www.indore.nic.in/statistics.htm
- Project’s report found in: http://www.akdn.org/architecture/pdf/1242_Ind.pdf
- Post-occupancy study of Aranya Housing project: http://www.mcgill.ca/mchg/pastproject/aranya
Community associations

Self-management housing cooperatives in Rio Grande do Sul (Brazil)

a. Location and city information: Acknowledged as good practice by UN-Habitat in 2006, this is the experience of how the community organization in the Rio Grande do Sul State in Brazil specifically in the Bento Gonçalves city, led to changes in their housing situation. Bento Gonçalves, is a town of 108,490 inhabitants with a surface of 382,5 sqkm located at 124 km to the north of the State’s capital, Porto Alegre.

b. Background of the programme: The economic growth in Bento Gonçalves brought a generalized rise in the land prices that made difficult for low incomes population groups to acquire land for housing development. Several families along with social agents groups decided to organize cooperatives with the objective assure the access to affordable housing. Through the establishment of priorities, the pioneer formed associated with several professionals like lawyers, architects and social workers. Among the activities developed, a collective savings account was created to acquire the land to build.

The leadership of several persons among the group led to the recognition of the public and community sectors. This recognition helped the cooperatives to receive further resources and benefit from social assistance programmes.

c. Planning framework: The creation of the Cooperative forum helped to boost this initiative not only in Bento Gonçalves, but also in other cities of the Rio Grande do Sul State. The initiative’s main goal is to give incentives and support new housing cooperatives creation, mobilize the interested population into collective self-built and mutual help principles. Through the job of the community legal recognition was granted by the government by the adaptation of the Law 567/71 developed for cooperatives but emphasizing in the social objectives of promoting affordable housing.

d. Potential or constraints aspects of the experience: The main aspect extracted from this experience and that it can be reflected for the case of Bogotá is the recognition of collective involvement in the production of space in this case the collective association for self managing residential environments. Although in this particular case the cooperatives are aiming to be integrated by population earning from three to five minimum wages, and in the case of Bogotá is needed to promote housing for the people below two minimum wages, it is worth to mention the recognition this cooperatives have for the formal institutions and therefore they can contribute to change their housing situation.

Sources:
- Bento Gonçalves city webpage (general data about the city) found in: http://www.bentogoncalves.rs.gov.br
- Data base of good practices Universidad Politécnica de Madrid found in: http://habitat.aq.upm.es/bpal/onu06/bp1291.html
- Best practices of local management: http://www.caixamelhorespraticas.com.br/praticas/cooperserrana/
Participative design

Quinta Monroy, Iquique (Chile)

General information of the project:
Architects: Elemental
Client: Tarapacá Regional government / Chile-Barrio programme
Time frame: 2003 – 2004
Site Area: 5000 sqm
Constructed Area: 3500 sqm

a. Location and city information: The residential complex is located on the influence area of the city centre to approximately 1 kilometre from the coast. Iquique has a surface of 2853,3 km² (according to the 2002 population census) and a population of 216,419 inhabitants. It is expected that by 2012 population of its metropolitan area known as 'Gran Iquique' (including Alto Hospicio) would be of approximately 300,000 inhabitants.

b. Background of the programme and project: The project Quinta Monroy was made under the Chile Barrio programme of the Chilean National government. The challenge consisted in settling in 5,000 sqm to 100 families who had illegally occupied the same location for approximately 30 years. The central government destined a 7,500 US$ subsidy which needed to cover the costs of the land, the infrastructure and architecture. According to the values considered by the Chilean building industry, the subsidy amount could only cover 30 sqm of built space and the cost of the land by sqm was twice more expensive of what social housing construction could afford.

The families of the settlement were asked with the option of getting new houses in the periphery of the city, in Alto Hospicio. They refused due to the strong social links they developed in the area where they were located for 30 years. In that sense, the main goal of the project became not to displace the population towards the periphery and to achieve ‘densification without overcrowding’ in the same location. In addition, the architecture team was aware the housing to be developed needed to become an asset for the population and in that sense the final product and the initial subsidy investment had to articulate to add value over time.

Therefore the project consisted in the development of a residential complex where the units were developed up to their 50 percent volume.
The remaining 50 percent of the housing unit was left to the dwellers to build according to their families’ necessities and economic capacity evolution. ‘The initial building must therefore provide a supporting, (rather than a constraining) framework in order to avoid any negative effects of self-construction on the urban environment over time, but also to facilitate the expansion process.’ However, instead of designing a fixed 30 sqm housing unit, a final scenario of 72 sqm unit was projected taking into consideration its evolution in time.

The housing units were arranged around four different courtyards, what implied the organization of the resident community in four smaller groups they choose based on who they wanted to live with. In addition, several workshops were developed to inform the community about the project expansion possibilities and rules and afterwards follow up was implemented to lookout for the coherence of the residential ensemble.

c. Planning framework: The programme Chile Barrio was created in 1996 by the Programa Nacional de Superación de Pobreza with the purpose of solving the situation lived by inhabitants in informal settlements. The actions developed within this programme are not oriented to solve particularly the housing situation but to improve significantly the live conditions of population in poverty conditions.

The programme functions with the articulated work of three different levels: National, Regional and Local. The latter two are in charge of setting in operation the programme within the reality of each context being the local the main articulator of the programmes mission and the goals of the local plans.

d. Potential or constraint aspects of the experience: The project Quinta Monroy was developed within a specific context, programme and community what becomes the biggest constraints in adaptability to Bogotá’s case. However, there are some aspects of the overall experience that can be reflected for the case of Bogotá taking into account that Colombia’s housing policy model has been developed after the Chilean case. As a main aspect worthwhile to mention, the project considers the flaws of the National housing policy and sets as a main goal to keep the population in their settlement location, counteracting further displacement process and assessing the value of existing social networks.

As a second aspect, the work developed with the community created the spaces for the inhabitants to organize themselves, experiment with the design proposal and adapted it to their own needs.

Sources:
- All pictures belong to Elemental: http://www.elementalchile.cl/viviendas/quinta-monroy/quinta-monroy/
- Documentary of the Quinta Monroy case available in: http://vimeo.com/794950
- Information about the project found in: http://www.archdaily.com/10775/quinta-monroy-elemental/
- General information about Iquique found in the Instituto Nacional de estadísticas Chile: http://www.ine.cl/canales/chile_estadistico/censos_poblacion_vivienda/censo2002/mapa_interactivo/mapa_interactivo.htm
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Zones of social interest

Delimitation of special areas of social interest (Brazil)

a. Location and general information: The ZEIS ‘Zonas Especiais de Interesse Social’ (Special areas of social interest) acknowledged best practice by UN Habitat were incorporated into the federal law of Brazil No 9785/99 that modifies the former public interest land subdivision established in the law 6766/79. The following summary will refer to general features of the instrument therefore no specific location of this practice is established.

b. Background of the instrument: These zones are linked to housing plans and programmes by the Municipal governments. When the law 10.257/01, the City Statute of Brazil was implemented, new norms were created concerning this instrument. The City Statute defines the creation of ZEIS as urban areas that present a special quality and for that reason deserve a differentiated treatment like special urbanization codes. Different types of ZEIS have been established like public or private areas occupied by informal settlements and where low income families inhabit. Also, empty or underused areas adequate for the development of social interest housing are constituted as ZEIS for the further development of social housing (SNH, 2009).

c. Planning framework: The establishment of these areas has permitted to link land to a use of social interest housing (Fernandes, 2011) and subsequently to the establishment of differentiated building guidelines. In addition, linking these areas to other plans allows the creation of mechanisms for financing the housing projects. For instance, in Sao Paulo the city plan defines that within the ‘operaciones consorciadas’ (large urban projects) ZEIS may be delimited and establishes that the resources obtained from these urban operations (development transfer rights, Certificates of Additional Construction Potential, association among owners and private developers) have to be directed to the production of social housing in those ZEIS (Clichevsky, N.). The urbanization plan developed for each ZEIS has to be established by the municipal executive power and its managing council has to be composed by the population addressed for these areas and owners and the municipality (ibidem)

d. Potential or constraints aspects of the experience: The biggest potential of the ZEIS is that recognizes or ties a social interest to the land use and therefore to the recognition of differentiated urban form. Likewise, the possibility to link this land management instrument to other financing instruments in the city allows addressing the collection of surplus values obtained from densification rights in urban projects to the financing the ZEIS established by the municipality.

Sources:
-Zonas especiales de interés social in Recife. Best practice database Universidad Politécnica de Madrid found in: ttp://habitat.ag.upm.es/bp/ou00/bp414.html
-Fernandes, E. Causas jurídicas de la producción informal del espacio urbano y los programas de regularización de asentamientos informales. Lecture developed in the specialization programme of Markets and land policies in Latin America. National University of Colombia October, 2011
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