SUR

SUSTAINABLE URBAN REGENERATION

Center for Sustainable Urban Regeneration, The University of Tokyo
東京大学・都市持続再生研究センター

29
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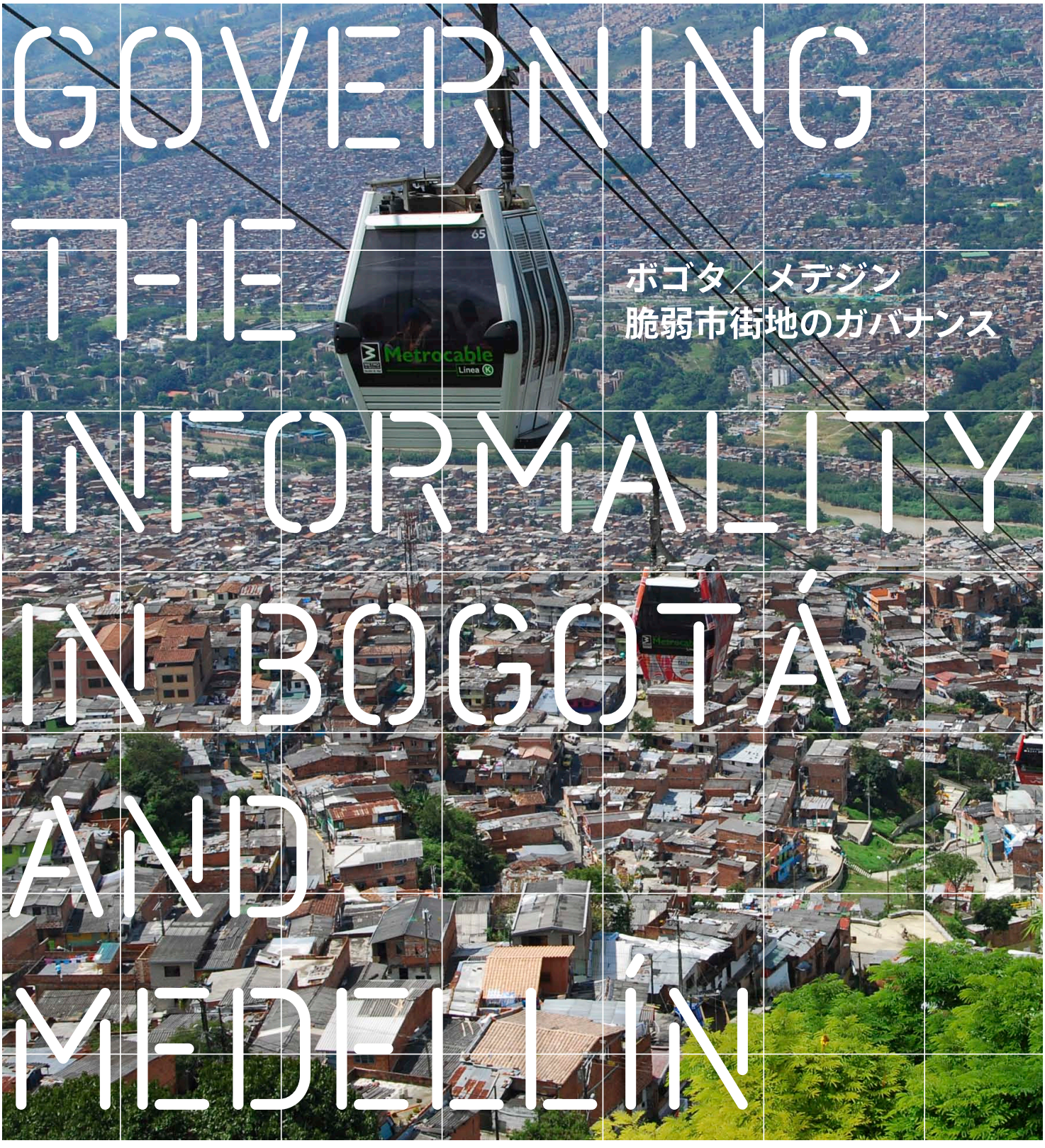

GOVERNING THE INFORMALITY IN BOGOTÁ AND MEDELLÍN

ボゴタ／メデジン
脆弱市街地のガバナンス

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Preface

The Academic Agreement signed in 2007 by The University of Tokyo and six Colombian universities (Universidad Nacional de Colombia, Piloto, Antioquia, La Salle, Pontificia Bolivariana and the University of Los Andes) has generated a number of positive outcomes that will be the base of even further advances in the years to come.

The Agreement, which was born after the enhancement of the mutual Academic Dialog in 2005, has become an innovative way to consolidate bilateral relations between Colombia and Japan, has created a more solid academic and research exchange platform, and can be understood as an excellent stage to develop ideas and projects that bring mutual benefits for both nations.

The Agreement, which was renewed in September 2012 with the support of the Embassy of Colombia in Japan, has had outstanding results and generated multiple learning and exchange opportunities for faculty members and researchers of all participant universities.

Beyond the many seminars, projects and exhibitions that have taken place under the scope of this Agreement, a very important aspect that unites all those activities is the genuine intention to develop closer ties between the nations through education.

Undoubtedly, a milestone that has helped to consolidate further the Academic Dialog and which has been seen as one of its clear results was the designing and building the Belen Library in Medellin, under the direction of professors Naito Hiroshi y Nakai Yu. This work, which has had a notorious impact in Colombia and the people of Medellin, was also an occasion for architects, researchers and professors to strengthen their ties and create a network to make possible the continuity and stability of common projects.

The Academic Agreement is precisely the arena where all these recent experiences are being planted and new opportunities to work together are created.

Although the number of activities that have taken place under the framework of this Agreement could be listed and cope some pages, what is truly relevant to mention is that each one of the projects in which professors and researches have engaged, is based on the vision of being influential and being capable to go beyond academic papers, dare for new ideas and impact people's lives.

The Agreement can have an even bigger scope if seen in a more complete context.

The Government of President Juan Manuel Santos has established as one of the priorities for Colombia's international diplomacy the country's strategy for its insertion to Asia in all possible aspects and dimensions.

Therefore, the Agreement between the University of Tokyo and six Colombian universities is, besides contributing to bilateral ties, taking a step forward the consolidation of the National Development Plan, where presence and exchange with Asia in a variety of areas are a strategic element.

The importance of this Agreement has, therefore, reached a level that goes beyond university classrooms and the Embassy of Colombia in Japan will remain committed to be of support for its further growth and success.

November 22, 2012

Ambassador of Colombia
Patricia Cárdenas

東京大学・コロンビア六大学学術交流の概要

阿部 大輔（龍谷大学）、ネルシー・エチェベリーア（ラ・サジェ大学）

1. 協定の枠組み

東京大学とコロンビア6大学間の学術交流は協定に基づき2005年から開始された。コロンビア留学推進協会ICETEXおよび在日本コロンビア大使館の協力のもと、以下の6大学と東京大学都市持続再生研究センターが学術交流を深めた。

- ボゴタ：コロンビア国立大学、ピロト大学、ロス・アンデス大学、ラ・サジェ大学（交流推進担当校）
- メデジン：アンティオキア大学、ポンティフィシア・ボリバリアーナ大学

学術交流は〔日本・コロンビア学術交流〕*Dialogo académico Japón-Colombia* と名付けられ、ICETEXの全面的な協力のもと実施されるとともに、東大チームが現地を訪問した際には公式ニュースとして大使館から配信された。交流の流れは以下に示す通りである。

- ミッションI: 2005年10月31日～11月12日。ボゴタおよびメデジンにて実施。
- ミッションII: 2006年10月16日～22日。ボゴタおよびメデジンにて実施。
- ミッションIII: 2007年12月2日～7日。東京にて実施。

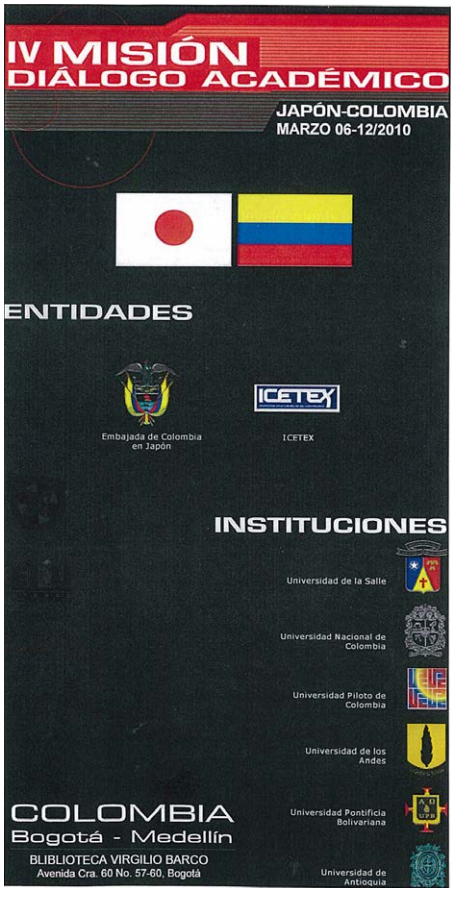

figure 1 ミッションIVのポスター

- ミッションIV: 2010年3月6日～12日。ボゴタおよびメデジンにて実施。
- ミッションV:
  - 2011年1月25日～2月2日。東京にて実施。
  - 2011年3月4日～9日。ボゴタおよびメデジンにて実施。
  - 2011年11月27日～12月4日。ボゴタおよびメデジンにて実施。
- ミッションVI: 2012年3月13日～16日。ボゴタおよびメデジンにて実施。

2. 主な活動の紹介

①2007年シンポジウム

先述のミッションIIIに該当する。協定校の内5大学から合計6人を招聘し、都市の持続的再生へ向けた取り組みの紹介や意見交換を行った。コロンビアからの参加者は以下であった。

<u>コロンビア国立大学</u>

Jaime Iván Ordóñez（土木工学科）

講演：コロンビアにおける水資源のマネジメント

<u>ピロト大学</u>

Walter López（建築学部）

講演：地域共有の上水道システム

<u>ロス・アンデス大学</u>

Juan Pablo Bocarejo（土木学部）

講演：ボゴタの大規模交通

Clemencia Escallón（建築学部）

<u>ラ・サジェ大学</u>

Liliana Giraldo Arias（建築学部）

講演：ここ50年におけるボゴタの都市発展

Nelcy Echeverría Castro（建築学部）

講演：ボゴタにおける労働者住宅

②2010年現地視察

- 日程：2010年3月6日～14日
- 訪問者：藤野陽三（社会基盤）、山本和夫（都市工学）、阿部大輔（cSUR）
- 訪問先：ボゴタ＋メデジン
- 内容：市内の視察＋現地六大学からのプレゼン＋都市再生をテーマとしたコンファレンス（両都市にて）
- 講演：
  - Issues on Infrastructure Developments in Japan and Global COE Project on Sustainable Urban Regeneration at the University of Tokyo（藤野）
  - Technologies for Urban Biomass Management(山本)
  - Estrategia de transformación urbanística para los centros históricos en Tokio y Barcelonal（阿部）

<u>ボゴタの視察</u>

ボゴタでは、ロヘリオ・サルモナの設計による集合住宅群、旧市街の黄金美術館（ロス・アンデス大学）のFernando de la Carreraが改修を担当）、TransMilenio（公共バスシステム）、Ciclo Ruta（自転車道）、エル・ティンタール図書館、市内南部の労働者地区、ヘリコプターによる上空からの市街地ならびにトゥンフエロ川の視察を行った。

Ciclo Rutaは都心部だけでなく、相対的に環境に恵まれない周縁のスラム（の一部）にまで延びている。労働者地区には、低所得者向け低廉住宅（Vivienda Social）の建設が進んでいる。スラム地区の基盤はその多くが未整備で、舗装が完了していない。敷地割りはグリッド状のところも多い。区画形状のみが決定され、上物の建設は所有者（居住者）に任されてしまう自動建設（auto-construcción）により市街化が進むメカニズムがある。

2010年3月8日にビルヒリオ・バルコ図書館（ロヘリオ・サルモナの設計）にてICETEX主催のシンポジウムが開催された。学生を中心に100人強の聴衆が集まった。講演内容は前述の通り。

滞在最終日には、Samuel Moreno ボゴタ市長（当時）を表敬訪問し、cSURの紹介とともに、現在のボゴタ市の都市計画上の問題等について意見交換した。

<u>メデジンの視察</u>

メデジンでは、MetroCable（ケーブルカーシステム）の導入により蘇りつつあるスラム（サント・ドミンゴ地区）、ベレン図書館（内藤廣・社会基盤学専攻教授（当時）の設計）を視察した。ベレン図書館は、図書館機能だけでなくイベントやセミナー、サークル活動等を行える多目的ルームを備えた総合的な文化施設である。設計理念の詳細については、2008年度のコロンビア・アクションスタディの報告書を参照されたい。ベレン図書館は地域住民に大変好評であり、地元のテレビ局ならびに新聞社に多くの取材を受けた。後日、記事が掲載された媒体を以下に示す。

- EFE News Agency
- EL TIEMPO（新聞）
- EL COLOMBIANO（新聞）
- LA REPUBLICA（新聞）
- TELEMEDELLIN（web掲載）
- GENTE（メデジン地元紙）

メデジンでもボゴタと同様にシンポジウムを開催した（Antioquia大学にて）。学生を中心に聴衆は80人程度であった。

各大学からの共同研究プロジェクトの提案

次年度以降の共同研究に向けて、協定の6大学から研究の提案がなされ、意見交換を行った。

- ロス・アンデス大学：①設計演習への参加。テーマはトゥンフエロ川の再生。②学生の交換留学。
- ラ・サジェ大学：①Utopiaキャンパス構想（ベネズエラ国境に近い貧しいエリアに今後のサステイナブルな都市整備を構想する研究機関を整備する）、②郊外スラム地区の環境改善プロジェクト。
- ピロト大学：建築熱環境研究
- コロンビア国立大学：①アマゾン沿いの村落の整備、②国内5都市のインフォーマル市街地における包括的都市再生事業のための調査研究、③小学校の建設。
- アンティオキア大学：サント・ドミンゴ地区の水質改善
- ポンティフィシア・ボリバリアーナ大学：州内の村落の保全再生プロジェクト

③両都市におけるスラム地区の現況調査ならびに国際シンポジウムへの参加

2010年10月24日～11月8日にかけてD部会特任助教（当時）の阿部が滞在し、現地の大学との連携のもと、両都市の歴史的市街地（La Candelaria）ならびにインフォーマル市街地（ボゴタのCiudad Bolívar、メデジンのSanto Domingoなど）に関する基本データ、現在の都市問題、市街地の形成史、市の再生政策、特に重要な再生事例についての基礎資料を入手するとともに、再生の実態を調査した。市ならびに開発公社の専門家、研究者へのインタビューを実施した。

滞在期間には調査だけでなく、ロス・アンデス大学ならびにラ・サジェ大学にて講演・レクチャーを行うとともに、設計演習にコメンテーターとして参加し、指導を行った。

ロス・アンデス大学では、国際シンポジウムにパネリストとして出席し、コロンビア、チリ、フランスの研究者との交流を深めた。これは同大学のClemencia Escallón教授の招きにより、2010年10月28日(木)7:30-16:30に同大学の講堂にて《首都圏の成長管理：広域整備、モビリティ、制度の挑戦》（*Foro Crecimiento de la Región Capital: Desafíos de Ordenamiento Territorial, Movilidad e Institucionalidad*）として実施された。このシンポジウムは、首都圏の将来像を議論するために、同大学の建築学科および土木学科が主催し、ボゴタ市の協力のもと、大学・行政・関連組織といった広域整備に関わるステークホルダー間の意見交換、ボゴタ大都市圏が抱える問題群の把握、研究会やシンポジウムを通じた国内外の専門家との情報交換・議論を目的とする学術会議であった。阿部はパネリストとして出席し、*Hacia una "Ciudad-Región" sostenible: Desafíos de las ciudades japonesas*（持続可能な《シティ・リージョン》へ向けて：日本諸都市の挑戦）の講演を行い、コロンビア、チリ、フランスの研究者との交流を深めた。

また、ロス・アンデス大学のFernando de la Carrera氏の設計演習3クラス、Rossi氏の設計演習、ラ・サジェ大学の設計演習にコメンテーターとして参加し、ボゴタの設計教育の状況を知るとともに、社会問題の相違やそれら社会問題への設計のアプローチの特徴等を理解することができた。参加した設計演習のテーマは総じて貧困地域の再生を問うものであっ

figure 3 現地の大学による研究提案（ピロト大学）

figure 2 訪問を伝える地元のフリーペーパー

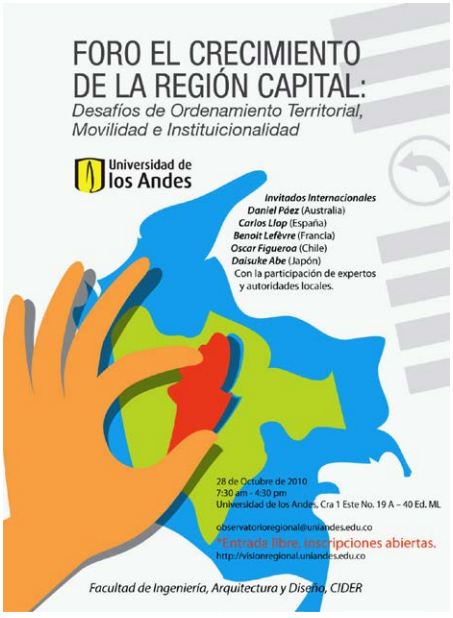

figure 4 国際シンポForo de Crecimiento de la Región Capital：他のパネリストはOscar Figueroa（チリ・カトリック大学教授）、Benoit Lefèvre（フランスのシンクタンクIDDRI研究員）、Daniel Paez（オーストラリア・メルボルン市交通局）の各氏であった。

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た。例えばスラムが多く点在するトゥンフエロ川沿いの再生をテーマとする設計演習では、ある学生は再生の核として地区センターを設計するものの、そこに出現する新たな公共空間に意味が見いだしにくかったり、一方別の学生はそもそものスラムの文脈を読まずにタブラ・ラサとして新たな市街地を設計したりと、既存コミュニティの扱いに四苦八苦している様子が見て取れた。依然として人口が増加し続け、スラム地区の拡大にも歯止めが利かないという社会情勢はわが国と大きく異なり、したがって設計のアプローチは問題発見型というよりも問題解決型となる傾向が強いという印象を受けた。

④大学院生による研究調査の実施

新領域創生研究科國島研究室修士課程の太田口絢子（当時）が2010年10月7日～2011年2月6日までラ・サジェ大学に客員研究員として在籍し（受け入れ先：Liliana Giraldo教授）、ボゴタのスラムにおける土地占有過程および不法土地占有に係る土地所有形態を調査し、帰国後、土地所有権を通したスラムの合法化と居住計画を分析した修士論文を提出した。また、2011年11月には、都市工学専攻都市デザイン研究室修士課程の山重徹（当時）が約4週間にわたりメデジンに滞在し（受け入れ先:アンティオキア大学Carlos Riveros教授）、貧困地区におけるエンパワーメント政策（空間再生と社会的包摂プログラム）の現況を調査し、同様に帰国後、修士論文を提出している。これらは学術協定を生かした本プロジェクトの大きな成果に位置づけられよう。本報告書には、両氏のエッセイも掲載されている。

⑤公共空間フォーラムの実施

2010年10～11月のボゴタ訪問時に、ラ・サジェ大学ならいにロス・アンデス大学と今後のより具体的な学術交流の展開について議論し、当時計画デザイン部会で実施していたスペインの大学との学術交流の経験も踏まえながら、いずれの都市にも共通する課題としての「都市再生プロセスにおける公共空間の質および市民参加の問題」をテーマとする研究プロジェクト *Public Space and Citizen Participation in Urban Regeneration Process. Learning from Bogota, Berlin, Barcelona and Tokyo*[B3＋T]を企画した。

こうした問題意識のもと、両国から第一線で活躍する研究者を招聘し、同名のフォーラムを東京大学にて2011年1月28日に実施した(fig.5)。講演者ならびに講演内容は以下の通り。

- Nelcy Echverría（ラ・サジェ大学／建築・住宅計画）：*Urban Regeneration in Bogotá: unifying divided cities*
- Fernando de la Carrera（ロス・アンデス大学／建築設計）：*Bogotá, City of opportunities: Public Space and Social Participation*
- Francesc Magrinyà（カタルーニャ工科大学／都市計画）：*Public space in Barcelona. From the squares to the new central areas*
- Ismael Blanco（バルセロナ自治大学／政治学）：*Does a 'Barcelona Model' really exist? Urban regeneration and community participation in the districts of Nou Barris and Ciutat Vella*
- クリスティアン・ディマー（先端研）：*Berlin. Urban Governance, Identity and Contested Politics of Place in a Fragmented Metropolis*
- 黒瀬武史（都市工学）：*Urban Regeneration Projects in Central Tokyo*
- 阿部大輔（cSUR・当時）：*Who owns "our" places? Controversial Public Spaces in Tokyo*

また、「公共空間フォーラム」の実施にあわせて、シンポジウムの参加者の滞在中にボゴタを題材とする公開勉強会を実施した(fig.6)。講演の概要は以下の通り。

- *"Renovation of Museo del Oro in Bogotá: Intervention to heritage"*：2011年1月31日実施。講演者はFernando de la Carrera氏。氏が担当し、ナショナル・プライズを獲得した黄金博物館の改修事例についての研究報告。文化遺産への介入手法についての議論(fig 7)。
- *"Peripheral Marginality in Bogotá: opportunities and challenges in case of Usme district*：2011年1月31日実施。講演者はNelcy Echeverría氏。ボゴタにおけるスラムの全体的な状況の解説から、具体的分析としてUsme地区の事例を取り上げ、ボゴタのスラム改善の挑戦について解説。

[阿部大輔 / Daisuke Abe] Associate professor Faculty of Policy Science, Ryukoku University

[Nelcy Echeverría Castro] Research teacher of the Facultad de Ciencias del Hábitat de la Universidad de La Salle, Bogotá.

figure 5「公共空間フォーラム」ポスター

figure 6 公開勉強会Study Session-BOGOTA

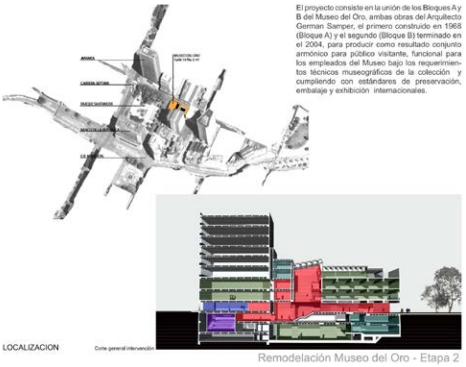

figure 7 Museo de Oroの改修プロジェクト

Academic Dialog Japan-Colombia

Daisuke Abe (Ryukoku University), Nelcy Echeverría (La Salle University)

1. General Framework

The Academic Dialog Japan-Colombia started from 2005, and has been coordinated by the ICETEX, Colombian Embassy in Japan, and the Universities in Colombia (National University of Colombia, Antioquia University, Piloto University, Los Andes University, Potificia Bolivariana University, La Salle University [coordinator of the mission]). Under this framework, six universities in Colombia and the Center for Sustainable Regeneration (cSUR) of the University of Tokyo have developed various academic and professional activities, both in Bogotá-Medellín and Tokyo. The outline of the "mission" (each exchange program) is described as follows:

MISSION I: 2005, from October to 31-November 12, in Bogotá and Medellín

MISSION II: 2006, from October 16 to 22, in Bogotá and Medellín

MISSION III: 2007, from December 2 to 7, in Tokyo

MISSION IV: 2010, from March 6 to 12, in Medellín and Bogotá

MISSION V:

- 2011, from January 25 to Febrary 2, in Tokyo
- 2011, from March 4 to 9, in Medellín and Bogotá
- 2011, from November 27 to December 4, in Bogotá and Medellín

MISSION VI: 2012, from March 13 to 16, in Bogotá and Medellin.

2. Academic Exchange Programs

① **2007 Symposium**

This international symposium was carried out within the Academic Dialog Mission III, from December 2 to 7 in Tokyo. The University of Tokyo-cSUR invited six professors from five Universities in Colombia who had already participated in Mission I-II, and subscribed the academic agreement with the University of Tokyo. The speakers and their conference topics were:

National University of Colombia

- Jaime Iván Ordóñez (Faculty of Engineering): *Water Resource Management in Colombia*

Piloto University of Colombia

- Walter López (Faculty of Architecture): *Communal Water Supply*

Los Andes University

- Juan Pablo Bocarejo (Faculty of Engineering): *Massive Transport in Bogotá*
- Clemencia Escallón (Faculty of Engineering)

La Salle University

- Liliana Giraldo Arias (Faculty of Architecture): *Urban Development in Bogotá for the last 50 years*
- Nelcy Echeverría Castro: *Popular Hosing in Bogotá*

② **2010 Symposium**

The international symposium was held in March 8th, at the Biblioteca Virgilio Barco. The skeapers and their themes were:

- Yozo Fujino: *Issues on Infrastructure Developments in Japan and Global COE project on Sustainable Urban Regeneration at the University of Tokyo*
- Kazuo Yamamoto: *MBR+ Technologies for Urban Biomass Management*
- Daisuke Abe: *Transformation Strategies for Old Quarters: Place, Culture and Urban Change in Barcelona and Tokyo.*

Conference 2010 November 4th, at the La Salle University

- Daisuke Abe: *Regeneración urbana en Tokyo*

Investigation proposal: meeting with Los Andes University, La Salle University and University of Tokyo. The main topic for future collaboration is *"Espacio Público y participación ciudadana en Bogotá, Berlín, Barcelona y Tokyo."*

③ **2011 International Forum on Public Space: B3 + T**

The internacional forum named Public Space and Citizen Participation in urban regeneration process. Learning from Bogota, Berlin, Barcelona and Tokyo was organized by cSUR, January 28th, 2011, at the University of Tokyo. The speakers and their titles were as follows:

- Nelcy Echeverria (Univesidad de La Salle), *Urban Regeneration in Bogota: Unifying divided cities*
- Fernando de la Carrera (Universidad de Los Andes), *Bogota, City of opportunities: Public space and social participation*
- Christian Dimmer (RCAST, University of Tokyo), *Berlin, Urban governance, identity and contested politics of place in a fragmented Metropolis*
- Ismael Blanco (Universitat de Pompeu Fabra), *Does a "Barcelona Model" really exist? Urban regeneration and community participation in the districts of Nou Barris and Ciutat Vella*
- Francesc Magrinya (Universitat Politecnica de Catalunya), *Public space in Barcelona. From the squares to the new central areas*
- Takefumi Kurose (University of Tokyo), *Urban Regeneration projects in Central Tokyo*
- Daisuke Abe (University of Tokyo), *Who owns "our" places? Controversial Public Spaces in Tokyo*

Lectures at the University of Tokyo, January 11th, 2011

- Nelcy Echeverria (Universidad de La Salle): *Peripheral Marginality in Bogota: Opportunities and challenges in case of Usme district*
- Fernando de la Carrera (Universidad de Los Andes): *Renovation of "museo de oro" (gold Museum).*

November 30th, 2011, at Auditorio Sociedad Colombiana de Arquitectos in Bogota, organized by Los Andes University and La Salle University: *Public Space and Citizen Participation in urban regeneration process Learning from Bogota, Berlin, Barcelona and Tokyo. B^3+T*.

The speakers and the titles were:

- Christian Dimmer: *BERLIN: Contestations of Space and social Fragmentation between Global Fantasy and Local Reality*
- Takefumi Kurose: *Public private partnership for Urban regeneration in Tokyo*
- Daisuke Abe: *Dimensión Social de la Sostenibilidad de las ciudades contemporáneas. Reflexiones sobre la Gestión del espacio Público en Barcelona, Tokio y Kioto.*

④ **Academic Exchange of Postgraduate student**

- Ayako Otaguchi, from November 2010 to February 2011, at the La Salle University, Bogotá.
- Toru Yamashige, November 2011, at the Antioquia University, Medellín

[阿部大輔 / Daisuke Abe] Associate professor Faculty of Policy Science, Ryukoku University

[Nelcy Echeverría Castro] Research teacher of the Facultad de Ciencias del Hábitat de la Universidad de La Salle, Bogotá.


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Public Space and Ecological Structure: An opportunity to create a city.
A case study from Bogotá

Mauricio Pinilla, Fernando de la Carrera, Juan García (Los Andes University)

Abstract

This article explores how a change in the aesthetics of urban planning, which is always subject to the demands of motorists in the growing cities of Latin America, can constitute an opportunity for ecological connection, increased mobility, and social and economic integration, as well as become a catalyst to international competitive potential for the city and an opportunity for local economic growth. This article discusses the prospects that are opened to the city by reconsidering the construction of a high traffic carriageway and transforming its outline into a grand-scale metropolitan park, preserving the integrity of three natural wetlands.

Key words: *Bogota, Town Planning, Ecology, Social Integration, Mobility, Compact City, Ecological Structure.*

Background

In 1961, under the premise of regulating urban growth and creating a system for the circulation of the increasing number of cars on the roads, a road plan was formulated which, with a few adjustments, still rules in Bogota. Following the classification formulated by Le Corbusier in the Master Plan that was elaborated a decade before for the city, there are two roads that run primarily from south to north, designated as V-1 longitudinal ways in the text of the Municipal Agreement and its corresponding plans. At the time, the proposal intended to connect the city with national roads to the north of the country, the Atlantic Ocean, Venezuela, the Southern and Western Colombian regions, as well as the Pacific and Ecuador. The plans of the Agreement only include the road network. They omit the wetlands, streams and gorges that cross the plateau of Bogota and constitute a vital element of its structural territorial environment. It is understandable that at the time these factors were not important to urban planners. They were viewed as obstacles that could either be eliminated or overcome through the use of canals, pipe work, levees or other engineering techniques. There was no appreciation of these elements and their roles as regulator of water levels, and much less as providers of biological diversity. At the time, the city still occupied a relatively small surface area in comparison to its territory, its population was less than 20% of its current size, and the actual urban impact on the territory was minimal compared to what it is now. Back then, there was no reason to warn against the dangers of regarding the diversity of natural life as inexhaustible.

The western-most route of these two roads, named the Longitudinal Regional Avenue (Avenida Regional Longitudinal) in the Agreement, crosses over the wetlands of La Conejera, Tibabuyes and Capellanía, and passes over the head of the Jaboque wetlands. It was a kind of bypass road, that, in letting traffic pass over the fields to the west of the city, managed to prevent the traffic coming in from other parts of the country from affecting the traffic within the city centre.

In proposing the route over the wetlands, the planners were continuing a pragmatic tradition. Since the founding of the city, its streams and creeks were seen as a way to expel waste towards the river Bogota. With population growth and industrial development, the natural ecosystem soon exhausted its capacity to take on the burden of contamination and began to die. Without stopping to think of the consequences, the city paved over the streams of water in favour of roads for cars. Even now, after a few decades where the importance of distinguishing between disposing of rain water and wastewater has been recognised, the notion of taking advantage of natural water channels to construct roads is one that still persists.

The name or the road project was changed to Longitudinal Avenue of the West (Avenida Longitudinal de Occidente), retaining its V-1 character. Its construction was delayed by decades but a trench with a width of 100 metres was reserved to accommodate it. In the mean time, the city continued to grow, extending westwards up to the point where it surpassed the belt of reserved land and many residential neighbourhoods grew on either side of it. Eventually the nature of communal living led to this space being used as connecting paths, for transient markets and informal football grounds.

In the 2011 elections for the mayor of Bogota the construction of the avenue was defended by the majority of the mayoral candidates. They argued that the growth of the motor vehicle fleet, at a disturbingly high rate, would make the road indispensible in alleviating congestion. They proposed a high speed road with electronic tolling systems and managed through a concession, enabling the cost of the road works to be funded by private investment. One of the candidates added the proposal of converting it into an axis of the city's expansion with large residential developments to the north and south of the city, oblivious of the fact that these are the flood areas of the Bogota River. The candidate who eventually won the election offered not to build the road with the justification that the wetlands that it would traverse should be protected. This captured the favour of a public which is becoming increasingly aware of environmental problems and increasingly disillusioned by the corruption often tied to large contracts in public works.

Preliminary considerations regarding social and environmental issues

The decision not to build the road is very positive for the city for a number of reasons. Among the factors of highest importance is the preservation of the wetlands, for it is unacceptable that the city should be losing any more of this ecological resource. In the early 1950s, an area of almost 50,000 hectares on the Bogota plateau consisted of wetlands; in this day and age, wetlands represent less than 700 hectares of the same territory. Nonetheless, the few remaining wetlands still play a vital role in the regional as well as the continental ecosystem, acting as shelter for several migrant avian species which visit the territories during the cold season in their own hemispheres.

It has to be taken into account that the construction of bridges with 100 metre sections for a road supposes blocking sunlight to the water's surface, even if the normal gauge for a structure such as this were to be tripled. When drawing a section of the bridge and subjecting it to a simulation of the path of the sun over the celestial sphere, it becomes evident that photosynthesis, which is indispensable for pond-life, would not be able to take place. The risk represented to the survival of the wetlands as shelters for natural life is substantial if they were to be segmented in this way.

Transforming the highway into a longitudinal park is also an opportunity to consolidate the ties that have emerged in the communities that sprung up around the borders of this area. Some of these neighbourhoods were constructed with an inadequate conception of the needs of the people in terms of public life. There are sets of residential blocks which make up a square closed off by bars with only one point of access. Their facades and commerce do not contribute to the activity in neighbouring streets. Older neighbourhoods, almost all of them to the east of the strip, developed around the street as part of the integral structure. Instead of the fence of surrounding the blocks, here we have restaurants, cafes, shops and multiple small businesses and workshops, which offer the opportunity to come into many of the products and services which the shopping mall built up by property developers, with its limited hours of operation and selection of goods, is unable to facilitate: bread, milk and eggs in the early hours of the morning, picture framing, screws and nails, electrical goods repair, bicycle repairs and many

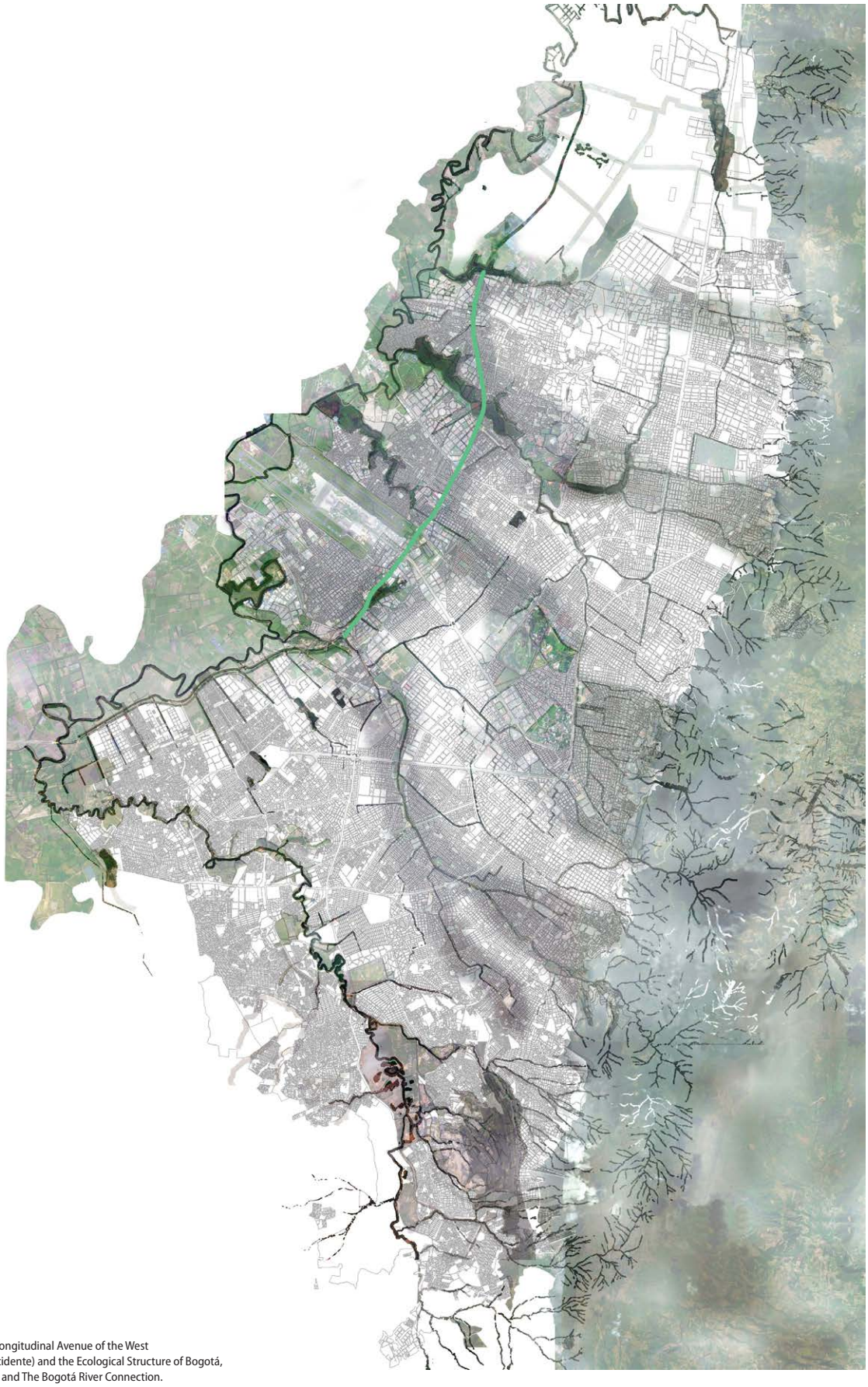


figure 1 The Longitudinal Avenue of the West
(Avenida Longitudinal de Occidente) and the Ecological Structure of Bogotá,
The Eastern Hills and The Bogotá River Connection.

other products.

The construction of large highways with tolls will require pedestrian bridges with high staircases and protracted ramps. Property tends to devalue in the areas surrounding such crossings. Also, the crossroads where the highway meets other high traffic ways create a sterile environment to communal living. They become unsafe places which are difficult to maintain and keep clean, and given the sharp social and economic inequality in Colombia, these zones soon begin to harbour settlers from the most marginalized sectors of society. What these neighborhoods, and the whole city, need is a large park as a place of integration, a space open to all citizens on a scale which makes it a metropolitan service that also conveys a powerful message.

Building the highway and destroying the wetlands, on the other hand, signifies a lack of recognition the communal work done by citizens, who have organised themselves to clean and maintain them, protect their borders. These citizen groups have also undertaken reforestation projects which have represented, in cases such as that of La Conejera, a re-emergence of local wildlife, the reconstruction of a habitat that had been poisoned by the old policies concerning the disposal of municipal wastewater and the lack of concern on the part of constructors who for years would dump building debris there.

In the Department of Architecture at the University of Los Andes we have worked for many semesters on a proposal to transform the road project into a large metropolitan park situated between the wetlands in La Conejera in the north and the Fucha River in the south. Together with our students we have been looking for arguments that would help the political decision-makers to understand the advantages of preserving the wetlands and the social ties along the fringe reserved by the municipality for the construction of the highway.

The project as an ecological connector

One of the crucial advantages of constructing a park lies in the fact that it would play a role as a ecological connector between the wetlands and the existing parks in the city. This connection would establish an enormous surface of porous land capable of creating woods and artificial drainage systems which would allow for mitigation of the impact of rainwater. At the same time, it would widen the habitat of birds and facilitate the preservation of species crucial for pollination processes, expand the distribution of seeds and nesting grounds, thus acting as a resource for the preservation of food chains in the region.

It must not be forgotten that in 2000, under the mayoralty of Enrique Peñalosa, there was a proposal for a Land Use Plan (Plan de Ordenamiento Territorial) which marked a milestone in the planning history of Bogota. For the first time ever an ecological structure of the territory was identified and was proposed as the basis and guideline for future urban development. This is something that Le Corbusier had regarded with sensitivity at the end of the 1940s and proposed in his plan but was later forgotten about entirely. With the new Land Use Plan as a tool, the mayoralty undertook a plan of reinforcing the ties between the eastern hills from which the water and the Bogota River originate, following the river channels that flow towards the west. The projects included parks and avenues with bicycle lanes.

This provides a logical and systematic framework for the park project. In essence, the park has the potential to connect the south to the Bogota River by extending it a couple of kilometres along the path of the Fucha River, up to its mouth. In the north the two rivers would meet again along the border line of the La

figure 2 The Longitudinal Avenue of the West (Avenida Longitudinal de Occidente) crossing over the wetlands "La Conejera", "Tibabuyes", "Jaboque" and "Capellania".

Conejera wetland. Considering that the Bogota River is the spinal cord of water system of the Bogota plateau, this proposal would be a resource in its defence and a contribution to the recuperation project for its waters and floodplains which the city has been very slow to take up.

At the top of 22nd street (Calle 22), there is a point at which the railway track, which enters the city from the west and runs through to its historical centre at the Estacion de la Sabana, interjects with the park. At a small distance east of this crossing, the green strip which wold host the highway receives the flow of water from the San Francisco Canal, built eighty years ago by the Bogota Aqueduct Company (Empresa de Acueducto de Bogotá) to evacuate the waters of the then recently paved San Francisco River which had been converted to Jiménez de Quezada avenue. The municipal administration has proposed building a road over these territories, following in the chain of decisions in favour of auto mobility which has led to so much damage of ecosystems and community life.

The proposal to transform the Longitudinal Avenue of the West into a park allows for a vision of converting this lane into a landscape full of life, encouraging the use of the roadway as a collective system of transport which allows a strengthening of the bonds between the city and the west of the savannah and with municipalities such as Mosquera and Facatativá.

Continuing on along the proposed path for the park towards the north we encounter the wetland of Capellanía. There is little left of it and for this reason it is of vital importance that it be preserved. The pressures of the property markets have fenced it in, leaving it confined between buildings whose facades are a mere 350 metres apart. Under these circumstances, the construction of the highway would ensure the definitive destruction of these wetlands. With the proposed park, on the other hand, it could be revived and turned into a highlight along the path of the park. In diverse and successive points along its outline, the park would have a chance to integrate green areas and systems of small parks, constituting a valuable green network for the city.

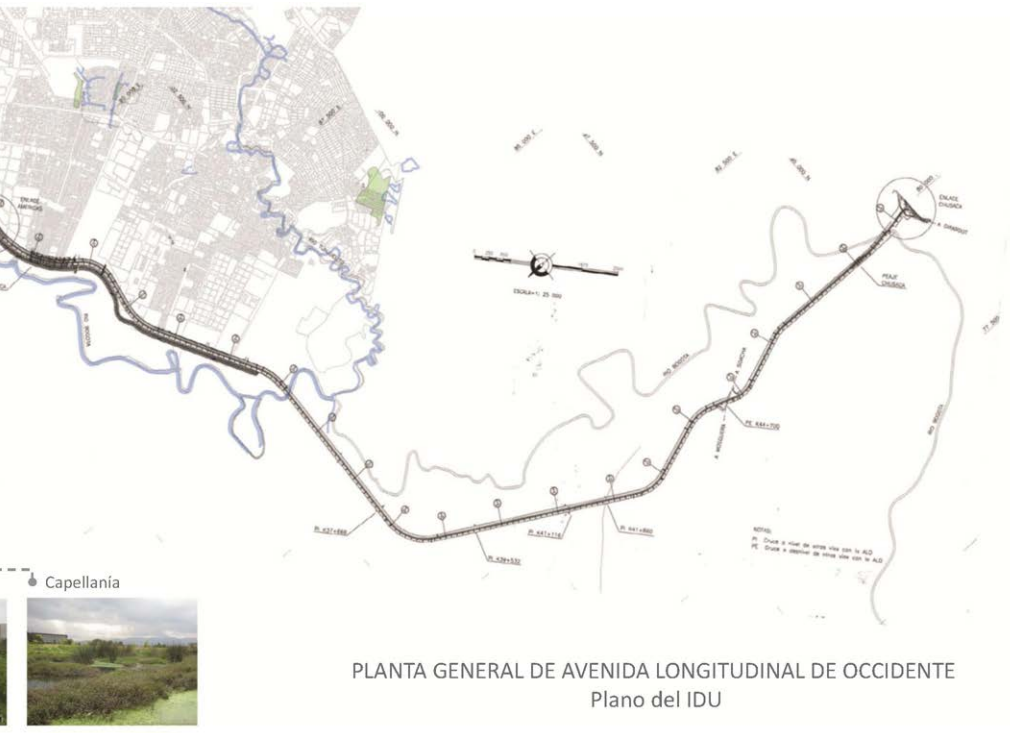
The project as a driver for competitive potential

The length of the park, including its extensions to the Bogota River to the south and the north, is over 12 kilometres. It would be impossible for any other city to have a public space of this length connecting such key points in its structure. Although this dimension surpasses places as iconic as Central Park in New York, it also has to be taken into account that its width would only be one hundred metres. But it is precisely the longitudinal aspect that allows it to have a crucial presence in the urban and social space as well as fulfil a role of integration. Keeping in mind the differences in urban history and the quality of its surrounding architecture, and referring solely to scale, the project could be compared to important longitudinal spaces in Paris or Berlin. The park set up in recently in New York on old elevated railway lines is less than two kilometres in length. The protracted nature of the park's layout brings with it the creation of a high value expanse in the form of scenery, a place for sport and group recreational activities which, if only for its scale, would become a valuable reference point for South America and increase Bogota's competitive potential in the regional economy.

In addition to this, in the investigations we carried out at the University of los Andes we have explored the possibility of taking advantage of the crossings in the road system that surround the park, and located buildings and squares which strengthen the integration of neighbourhoods and promotes this central axis as a system of services for the entire city. The explored programmes include music halls, theatres, science and art museums, libraries, sports centres and swimming pools, among others. The principal idea behind this is to identify buildings which partially coincide with the path of the park where it would be elevated over these buildings and motor vehicle crossings. With some basic provisions made to the speed of passing cars, these public intersections could be made into safe meeting places and hubs of activity that allow safe passage across the roads by day and night.

A chain of public buildings such as this would allow an enormous increase to the cultural offerings of the city, integrating in more solidly into concert and theatre tours as well as regional and global exhibitions. If we add to this the diversity in avian life and the captivating biological relationships that can be found in the wetlands, Bogota would gain increased opportunities to compete in terms of both tourism and localisation decisions for international companies.

Although it is difficult to calculate these opportunities in numbers, it is an absolute certainty that a park as a meeting point would be preferable to a highway that further segments the city. The park, when joined with investment into the service structure for citizens, would impact the quality of urban life and create social ties that oppose the chains of violence



PLANTA GENERAL DE AVENIDA LONGITUDINAL DE OCCIDENTE
Plano del IDU

that have formed in Colombia and Bogota.

A park of this scale requires a high population density which encourages the use of the public space. The presence of housing tends to guarantee a certain territoriality as well as healthy and safe communal living that is rich in daily exchanges of all kinds. If out of the 100 metre band, 15 metres are reserved for residential buildings it leaves 85 metres free. The 15 metres constitute a good width for a row of dwellings because it allows an appropriate amount of natural light and guarantees adequate ventilation for the ground floor. Moreover, in stretching from south to north, the facades along the park would receive sunlight in the morning and the afternoons, meaning they would reach suitable temperatures to accommodate the cold Bogota nights. In principle, this 15 metre section demonstrates that construction at a considerable height is possible without compromising the concept of the park, thus finding a harmonic scale to the use of open space.

Considering that this concerns a piece of land that is already property of the city, this is a magnificent opportunity to construct low cost residences and consolidate the city, avoiding the waste of time and finite resources, not to mention the injustice , of relegating citizens to the outskirts of the city where land is cheaper.

In times when the Colombian government has taken the political decision to address the constant problem of the housing deficit, this strip of land supplies the opportunity to address the issue effectively, providing a public space with undeniable potential. If we assume that the row of houses would follow the park along its entire length, in the same style as Le Corbusier imagined for Argel and Río de Janeiro in 1930, the foundations would have an approximate length of 12,000 metres. The living space per floor would be 180,000 m2. Fifteen floors would allow the construction of approximately 2, 700,000 m2. If these strips of land accommodated residences exclusively and we assumed they measured 60 m2 each in size, 45,000 of them could be built. Of course these are broad figures which would have to be adjusted to account for ventilation and corridors to access doors, but they give a sense of scale and of how much would be contributed towards a more democratic and compact city.

The land being property of the city, it would be appropriate for the buildings to rise up in columns. The headroom should be three floors high or at least 9 metres. This space could accommodate nurseries, shops, cafes, workshops and places of work, generating arcaded galleries and large staircases to link surrounding neighbourhoods to the park. At intervals there would be doors allowing access to the residences. The street will be lively and full of activity. Cyclists, pedestrians and joggers, all citizens who visit the park will have places to meet new residents and with people from nearby neighbourhoods.

If in addition to this, if we take into account the surrounding buildings dedicated to culture and sport

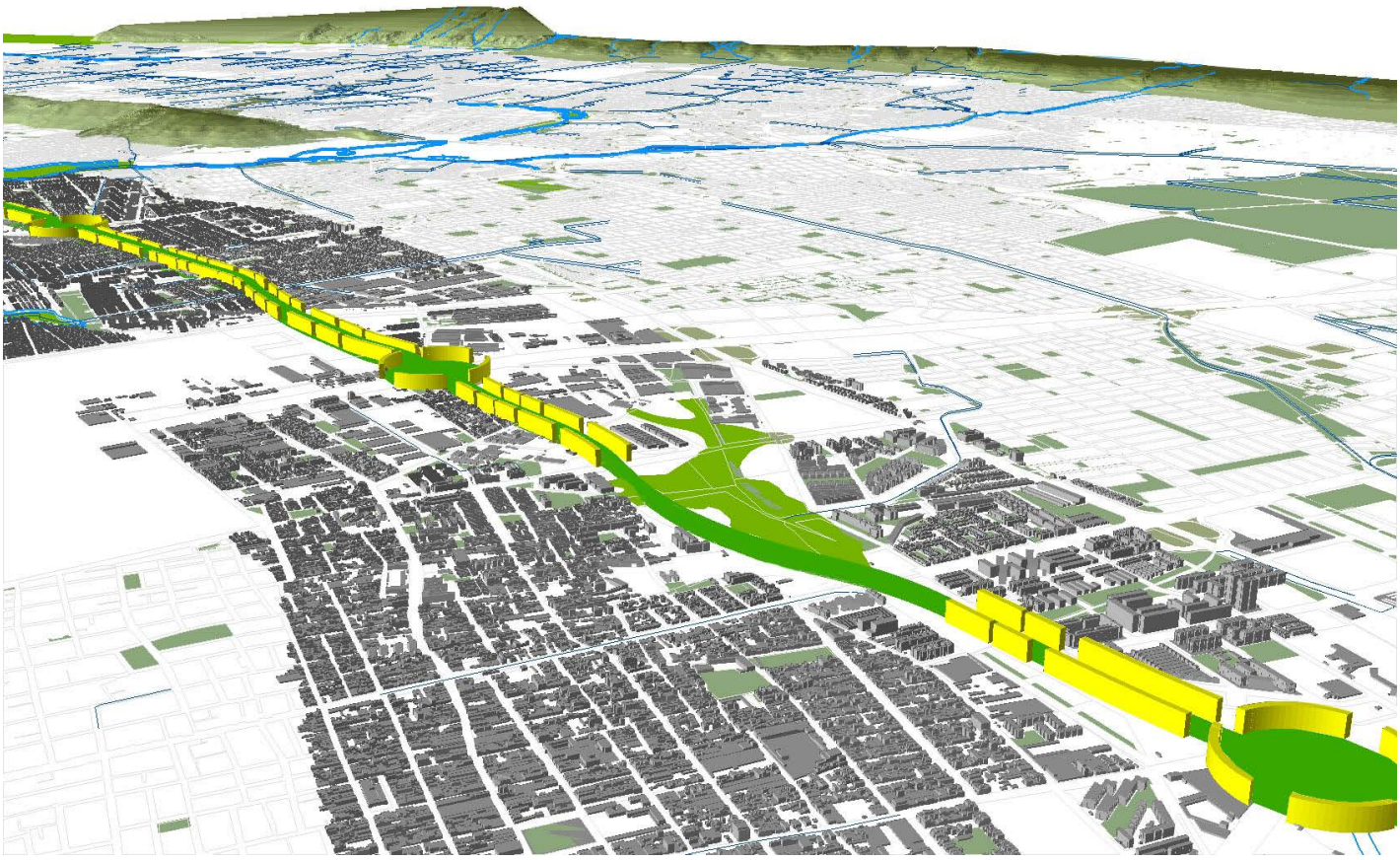


figure 3 Scheme of the Proposed Corridor.

described above and the possibility of including additional uses such as offices, hotels and business infrastructure in the junctions to large avenues, the park could be an urban project that puts Bogota in an advantageous position when it comes to competitive potential.

The project as a corridor for public transport

The proposed park coincides with various points in the existing public transport infrastructure . It could connect with the articulated urban bus network in the north with its final stop in the Suba neighbourhood. Equally it could connect to the route that travels along 80th street and at the intersection of the line that goes to the airport via 26th street. Furthermore, as was mentioned earlier, there is an intersection on 22nd street with the old railway line which travels to the centre of Bogota. Connecting these stations to each other allows for the creation of a ring of public transport for the city and supports the transport system as a whole, giving access to the proposed residences and the metropolitan services along the length of the park.

In the workshops carried out by the department of architecture at the University of los Andes a few alternative possibilities were studied. Articulated buses would have some advantages in integrating with the existing transport system, but passing over the wetlands would leave too large an environmental footprint. An above-ground railway line would disrupt the path of pedestrians across the park and endanger passers-by.

However, a suspended monorail system, on the other hand, would solve various problems: its limited height allows it to pass over the wetlands without creating a harmful obstruction of sunlight over the water, maintaining a sustainable temperature in the waters and allowing biological processes to continue unharmed. By being elevated it also avoids crossing with important avenues, thus bypassing the cost of resources usually involved in junctions with high traffic roads. In addition to this, as previously mentioned, there would be elevated sections of the park over road crossings and public service and cultural buildings. These could serve as appropriate positions to build monorail stations, allowing for improved mobility in surrounding neighbourhoods by providing spaces for bicycles, and connections for pedestrians and taxis.

Moreover, the park would also have a designated bicycle lane along its length, integrating itself with the vast existing bicycle lane network in Bogota and allowing for practical connections that could be used by the ever increasing number of citizens who choose to cycle to their places of work on a daily basis.

With this densely populated stretch of residences, services and workplaces interconnected with the city's public transport network as well as its own monorail system, it would generate a strip of economic activity to rival the one on the eastern border of the city. It is there, against the eastern hills where most places of work and study are currently located in Bogota, causing a great deal of congestion and progressive reduction in general mobility due to the fact that most of the population has to travel into that sector of the city on a daily basis.

The project as an economic opportunity

The proposed residences, as has been explained above, could represent the construction of slightly over 2,700,000 m2. This figure would then be combined with those of the community centres, theatres, museums and other cultural metropolitan services as well as business infrastructure, hotels and other services. In total this could represent a construction volume of above three-million square metres, which, when applying the average exchange rate from 2012 and assuming a construction cost per square metre of 1,000 dollars, would result in economic activity with a value of three thousand trillion dollars, generating direct employment for a vast amount of people for a number of years and stimulate the construction industry and its related professions.

Surely then, proposing the construction of a highway in order to exploit it privately for two or three decades and having it for the future without paying for the works involved, but having paid for the land, can't be considered a good deal for the city of Bogota nor its citizens when compared with the possibility of making this a pivotal urban project for the city. One of the benefits of a project of this scale would be gained through the funding needed to implement the park project, which would certainly cost less than a highway with bridges over the wetlands and inconvenient crossings at various levels where the highway meets the avenues. It is precisely at these points that the city has reserved spaces of 350 metres of diameter in order to ensure there is enough space to facilitate interchanges and bridges.

These spaces would again present an opportunity to construct housing with a width of 15 metres, but this time formed in a circle. With this radius, the ring-shaped foundations would have an axis of approximately 900 metres, which would equal a floor space of 14,500 m2 per floor. If the building were 10 floors high, this would generate 290,000 m2 of construction to house hotels, company headquarters, businesses and even institutional premises. The perfectly round interior would have a diameter of around 300 metres. It could be heavily vegetated as the avenue below would be forked, going around the outside of the building allowing the area to stay filled with soil to host plant life and absorb rainwater. It would be a grand cylindrical plaza, with large gateways multiple stories high allowing access from the park, capable of hosting various events such as Sunday markets, flower shows, exhibitions and other urban activities. These plazas could also be used to host various sporting events as the large space would be able to hold any sports field. The form and shape of these spaces would make them reference points within the city and would accentuate the overall value of the park.

The most valuable asset that Bogota stands to gain from the project is the ability to exemplify a way in which public space and the ecological structure of a territory can be integrated to create a city.

Reference

1) Agreement 38 of August 11, 1961, issued by the Council of Bogota under the mayoralty of Jorge Gaitán Cortés.
2) Agreement 38 of August 11, 1961. Agreement Glossary: "The name V-1 is given to regional connection paths whose characteristics allow the transit of a high percentage of commercial vehicles; these generally limit the circuits of district sectorization."

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Peripheral Marginality in Bogotá:
Opportunities and Challenges in case of Usme District

Nelcy Echeverria Castro (La Salle University)

Migration to urban centers in Colombia is determined, among other factors, by displacement due to the armed conflict. From 1997 to 2009, it has displaced 2'935 .832 people approximately. Another circumstance that generates this migration is the tendency to overpopulation in urban centers which has caused loss of rural population in Colombia. Around 1951, 61,2% of all domestic inhabitants concentrated in rural areas and only a 38,8% in urban areas. By 2001, this phenomenon changed drastically: the rural population decreased to a 29,0% and the urban population increased to 71,0%. The main reason why people have moved to urban areas relies on improving not only their living standard but their quality of life. This search for opportunities is also one of the key factors that favor migrations to urban centers.

Informal settlements arising from the internal migrations are generated spontaneously in the periphery of cities under precarious conditions because of several reasons. First, in these places the land is cheaper. Second, the scarcity of building areas and the high cost of the urban soil in the central areas of the cities make people informally settle in hazardous locations.

Bogotá had 7,467,804 inhabitants in 2011. (source: documento de bases para el plan de desarrollo – Bogotá Humana). The population of this city represents approximately 16% of the domestic population of the country. Similarly, it is the biggest receiver of the population's migratory flow displaced by violence. This means a 23% of the population that has been forced to abandon their places of origin. This migratory flow has generated a total of 1.374 dwellings of illegal origin, in which a population of 1´372.436 inhabitants takes refuge (Departamento Administrativo de Planeación Distirtal- D.A.P.D., 2002). As a consequence, 22% of the urban population lodges illegally in roughly 21% of the whole development area in Bogotá which extends approximately 6.400 hectares (D.A.P.D., 2000 to: 158)

The occupation of the territory carried out by people with low income and mostly displaced by the armed conflict, takes place in empty lands of the periphery. They are located in isolated railroads zones, abandoned quarries, environmentally preserved areas surrounding rivers, creeks, swamps, etc.

That is why these areas are likely to have landslides and floods. Under these circumstances "the cities are producing a dangerous social uncertainty associated to the unavoidable environmental decline. Most of this underprivileged population lives in the most sordid environments, exposed to the limit of the conditions of habitability and perpetuating the erosion cycle and contamination of the soil. The cities are destined to shelter a growing number of poor populations and it should not surprise anybody that societies that lack the most elementary equality, suffer social erosion and also emphasizes environmental precariousness, which are intertwined factors.(Rogers, Richard.2000. Page: 7)

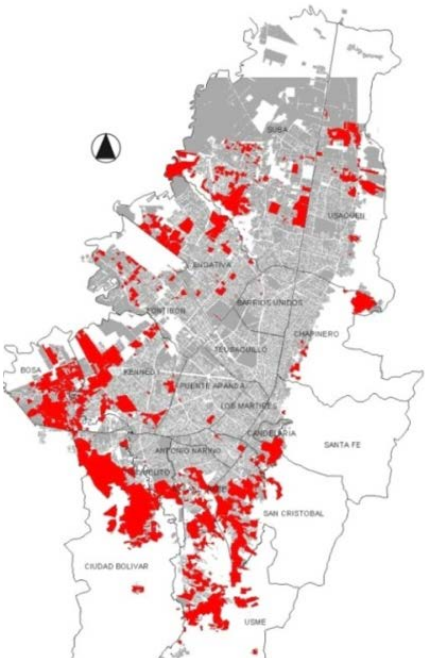


figure 1 Settlements of illegal origin in Bogatá 2001. Source: D.A.P.D.

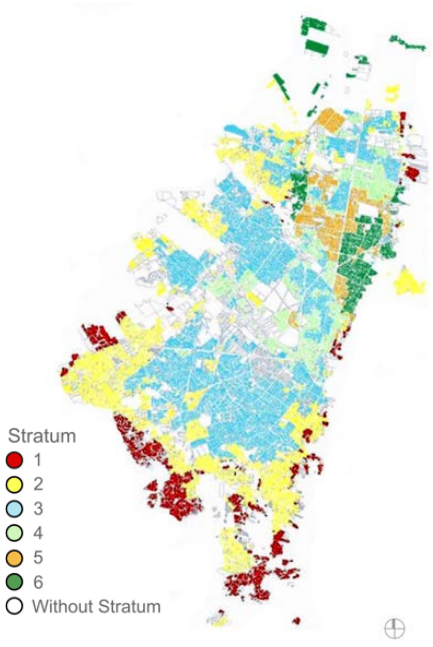


figure 2 Socio Economical Stratification and location in Bogotá
Source: Decreto 289 (8 julio de 2002)

In the case of Bogotá, the situation described above can be appreciated in the outlying areas of the city where there are settlements of illegal origin. By 2011, the city had 641.221 homes in areas with a high landslide risk (in unstable ground) and 344.269 homes with a high flood risk (Source: SDP.BDG DPAE). All these establishments are located on the periphery of the city which worsens the marginalization problem and the spatial segregation.

Bogotá city presents a geographical distribution of its inhabitants with a very high social stratification where the stratums 1, 2, 3 represent 84% of the population. Out of this percentage, 50% belongs to stratums 1 and 2 which mean a high level of poverty and inequality. This coincides with the GINI coefficient for Bogotá, 0.542 for the year 2011, which represents a high grade of inequity. This issue is reflected in the city with the localization of the lowest strata with the biggest Indexes of Multidimensional Poverty (IMP) e.g. the District of Usme with a multidimensional poverty index of 23.8 and the District of Ciudad Bolívar with an index of 23.4. These figures are compared with the IMP of Bogotá that is in 12.8 (source: DANE?SDP. ECV 2003; ECV 2007; EMB 2011. Calculations: SDP. DEM) .

Bogotá presents very high contrasts in its outlying and central areas as well as within its territorial conformation. While in the Northern periphery, the inhabitants with more purchasing power are located; the poorest population has settled in the south west. Both areas are homogeneous on their own and there is neither greater diversity nor contrasting characteristics within them. On the contrary, the central areas, more specifically La Candelaria District, not only gathers an interesting array of institutions: from governmental, educational, cultural to financial ones, but it provides housing to heterogeneous kinds of inhabitants with well differentiated economic income. Thus, La Candelaria becomes one of the neighborhoods that generates more inclusion of its citizens.

Methodological framework and research questions

The research of the outlying marginal areas is supported by the type concept and typology and it makes part of the same reflection carried out by Roberto de Rubertis (professor of The Sapienza University in Rome author of "Architecture vulgaris" Popular Architecture).

According to this author, the research questions arise and should be answered through the theoretical positions of the established methodology and its

figure 3 Bogotá map with (unite planing zone) UPZ 58 Comuneros and UPZ Alfonso López Source: P.O.T. Alcaldía Mayor de Bogotá

application in a territory, in this specific case, the southern area of Bogotá. Therefore, the research questions suppose to identify and to understand the urban phenomenon presented in these informal places which are also loaded with differences and common tendencies. By means of a typological analysis, the aim of this research project is first to understand the logics or the constant of the social and spatial growth in the peripheral areas and second, to formulate effective criteria to intervene those construction logics in informal settlements.

PARTICIPANTS

For the development of this Research project on Marginality of the periphery of Bogotá, the selected place of study is specifically the district # 5 of Usme in the Units of Zonal Planning, Comuneros UPZ 58, Alfonso López UPZ 59.

These areas are located in the East-Southern border of the city of Bogotá. Among their borders, there are El Piojo creek and the town of Usme on the south, Tunjuelito river on the west , Entre nubes hill on the east and Yomasa creek and the highway to the East Plains on the north.

These units of zonal planning are located in a "privileged" area of the city because they work as a bond between the city and the surrounding region, besides they become transition spaces between the rural and the urban area.

Usme presents a heterogeneous landscape in natural and artificial ways "... the space is formed by two components that interact continually. The first one is the territorial configuration, that is to say, the natural data set, more or less modified by the action aware of man, through successive "engineering systems". The second is the social dynamics or the group of relationships that they define a society in certain moment." (Santos, Milton.1996,p.105.) These two components are fundamental to identify the essential elements and the values that are inherent in this territory. By understanding the social dynamics with its underlying values that take place in those territories, it is possible to generate alternative, creative proposals that give way to sustainable, developmental urban solutions for these under-privileged communities.

Some of the most outstanding characteristics in the informal settlements are the lack of access public services as drinking water, electricity, gas, sewer

UPZ 58 Comuneros	UPZ 59 Alfonso López
1 - 2 Estratificación	1 Estratificación
55 Barrios	25 Barrios
0.99 Sistema de Equipamientos por cada 100.00 hab	
2 m2/persona Equipamientos educación y bienestar social	2 m2/persona Equipamientos educación y biene
51 Parques	22 Parques
394.018,88 m2 Total área Parques	45.601,40 m2 Total área parques
6,34 m2 M2 parque por habitantes	2,39 m2 M2 parque por habitantes
6,5 m2 M2 parque por habitantes Distrito (meta)	

figure 4 Configuration of Usme.
Source: Estudiantes U.L.S.A. electiva Tipología del hábitat popular

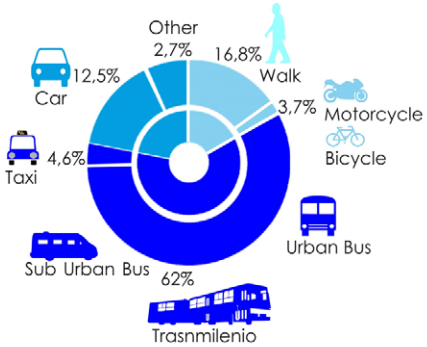


figure 5 Use of Transport In Bogotá
Source: Alcaldía Mayor de Bogotá, Nelcy Echeverría

system, garbage collection. Another issue is the complete separation with the formal city and, also, the absence of direct and clear connections within specific environments. In the case of the studied territory, there are two important avenues: Caracas Avenue and the freeway to the East Plains. Although they connect this community with the city because they are part of the main street system, the local roads in Usme present discontinuity with the topography, e.g. the narrow width of the roads makes it almost impossible for the buses of public transportation to circulate safely on these roads. All these circumstances hinder the vehicular and pedestrian relationship among subsectors.

Added to the above, the absence of adequate coverage in the provision of public transport generates delays in travel times and also overpricing in bus fares. This affects mostly the displaced inhabitants who work mostly in the central areas of the city. Despite the fact that mobility could be one of the key elements to generate the articulation between Usme District and Bogotá, the commuting times, and costs and the quality of the journeys between the Usme and the central areas in Bogotá are not being improved by the new transportation system called Transmilenio. The Transmilenio feeding routes do not possess enough capacity to cover balancedly the two UPZ (Unidad

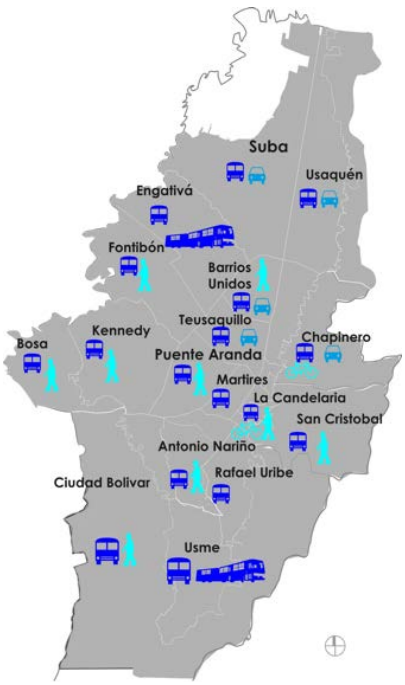


figure 6 Use of Transport In Bogotá
Source: Alcaldía Mayor de Bogotá

figure 7 Chuniza Creek Source: Nelcy Echeverría

de Planeación Zonal): Comuneros and Alfonso Lopez. Comuneros UPZ has a better coverage because the two principal Transmilenio stations (Usme and Tunal) are located nearer.

The use of different means of transport in Bogotá has different trends according to the area. For example, in the central areas of Bogotá, a 62% uses Transmilenio and public transport and city buses, a 12.5% uses private cars, and a very small percentage use alternative transport such as bicycles or motorcycles. But in the outlying sectors of Bogotá there is a an different trend: while in the western south periphery most of the people commute with public transportation, or by foot; in the north-eastern periphery the use of private transportation car is higher because these areas are occupied by inhabitants that possess a better income.

An essential aspect of Usme District is its environmental system. It lays inside the main ecological structure of the city with the eastern hills, the river basin Tunjuelito and its park Entre Nubes, the Yomasa creek, Chuniza Cano, the zonal parks El Piojo Usme San Jose, Famaco, Villa Alemania and El Virrey. All of them are part of the National Ecological Network in UPZ Comuneros and Alfonso Lopez.

Paradoxically, although one of the most valuable elements in Usme district is its natural surroundings, this area has serious problems which are detrimental to their preservation. The first one is construction of homes in very close areas to creeks, rivers, and water sources. Since these homes are built illegally, the local governments ignore the construction of on these sites, which by law are non-authorized for building up residential houses. Added to this, the pollution caused by the landfill and raw sewage is causing severe deterioration of the natural environment in Usme.

The public space also presents big inequities among the two analyzed UPZ. Whereas the UPZ Comuneros has 6,34m2 of green area per inhabitant, the UPZ Alfonso López has only 2,39 m2. The parks do not have the appropriate parameters in terms of mobility, accessibility, and security. The park Villa Alemania and San José of Usme are fenced and totally disarticulated with the immediate context and with the net of parks and public spaces in Bogotá.

In general, the system of public space is precarious. In some places there are no sidewalks, in some other places they exist, but, due to the topography of the land, they present problems of continuity, strong changes of level and accessibility. The sidewalks become an extension of the housing constructions. This appropriation of the public space is evidenced in the texture and the color of the sidewalk. In the case of commercial premises, the sidewalk becomes an integral platform of the establishment. The faulty offer of public space is latent and in case there is some spare public space, it does not have appropriate furniture or physical infrastructure that guarantees the free interaction of citizens.

Besides, there is also a lack facilities, for either educational or cultural purposes or activities related to sports, health, or social welfare. There is an average of 2,4 facilities per 10.000 inhabitants which means the average is below 0,99. Places like La Candelaria district possesses 134 facilities per 10.000 inhabitants opposed to Districts like Ciudad Bolívar with 19 and Usme with 22 facilities per 10.000 inhabitants. The scaling of the existing facilities in the two UPZ(Zonal Planning Unit), Comuneros and Usme does not provide enough coverage to their needs since they are far too small and too few to impact these populated communities.

Source: SDP, Dirección de Planes Maestros y Complementarios, Planes Maestros de Equipamientos, Bogotá D. C, 2006 –2008. Inventarios previos de equipamientos de culto, administración y educación superior, Bogotá D. C., 2009. SDP,Dirección de Ambiente y Ruralidad, equipamientos de Sumapaz, Bogotá D. C., 2008. DANE - SDP, Proyecciones de p

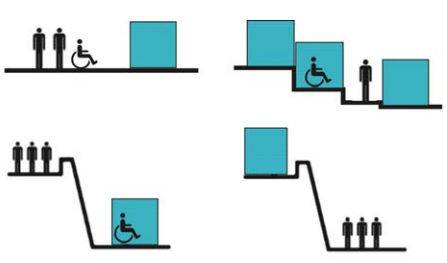


figure 8 Housing accessibility Source: Nelcy Echeverría

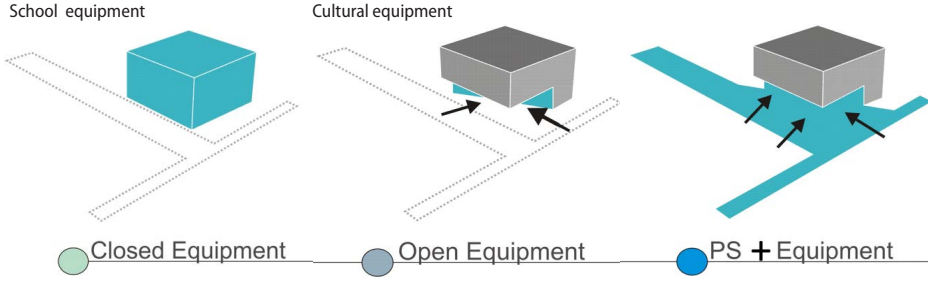


figure 9 Equipments Source: Nelcy Echeverría

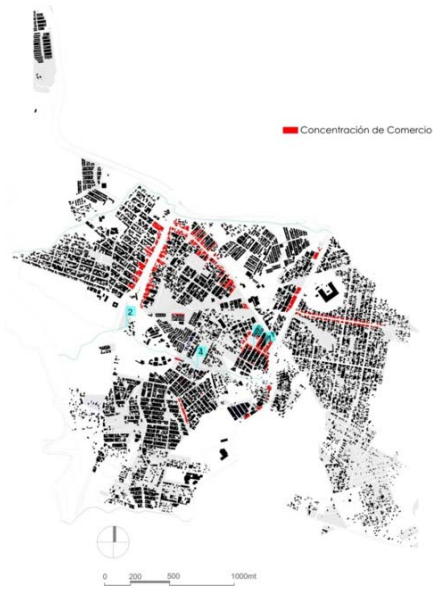


figure 10 Commerce concentration, UPZ 58 Comuneros and UPZ Alfonso López Source: Nelcy Echeverría

Among the main economic activities that are generated in these areas, I can mention trading of goods, community services and small enterprises located in the main streets of the UPZ and in most of the cases in the ground floor of houses.

FINDINGS

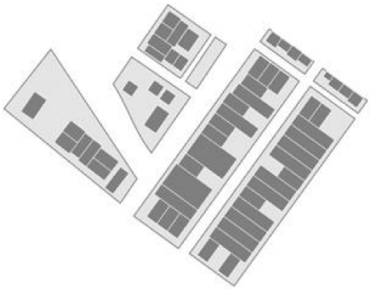
From the typological study of the mentioned marginal areas in the city of Bogotá, I have found out a constant in these popular environments. In these settlements it is possible to identify complex "self-generated structures" which work under different logics regarding the appropriation of the territory. Opposed to these dynamics, the planned new solutions offered by the Government are so regular, standardized and homogeneous, that they just provide open spaces and housing without taking into account the self-generated logics of the lie of the land or its social dynamics. Although at first glance the morphological structures found in the popular habitat look different, they follow underlying logics and not-regulating patterns. These logics can be seen in their proportions and size, which are evidently integrated to the topography and the environmental characteristics of the place, which in turn become into a "... supporting structure for sequential events ...". ...". Some of the present constants in Usme, which are part of the informal repertoire of unofficial popular habitat construction, will be presented below:

1. Imitation

The first constant has to do with the permanence of patterns. The tradition and imitative stimuli present in these locations can go from how to locate houses, to situations of "figurative similarities, uniformity of materials or keeping the rhythm or repetition of patterns". This permanence of patterns can also be evident in the housing distribution, the appearance of the facades, the way houses are built or even the internal functional distribution of housing.

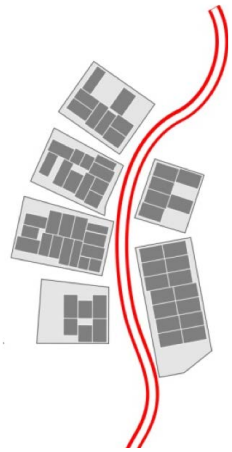
2. Different patterns interweaving

The second constant is about the power of attraction of different patterns. In informal territories, the conflict is appreciated among heterogeneous patterns. As professor Rubertis calls them, these accumulation spots present a tendency to reinforce consecutive episodes of modification and change.



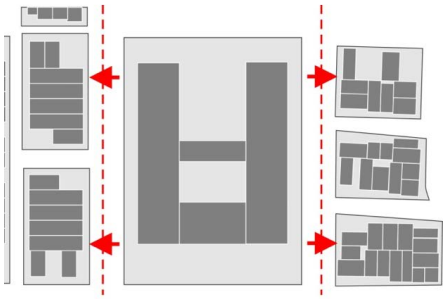
3. Ruptures (creeks).

The third Constant has to do with the reinforcement of the points of accumulation. The creeks and the topography generate some ruptures inside the conformation of the territory. These limits don't allow the continuity and the articulation among sectors. As previously mentioned, these water structures have become open sewers, garbage dumps and unsafe places. That is why these elements fracture the lie of the land in these territories.



4. Loss of symmetry

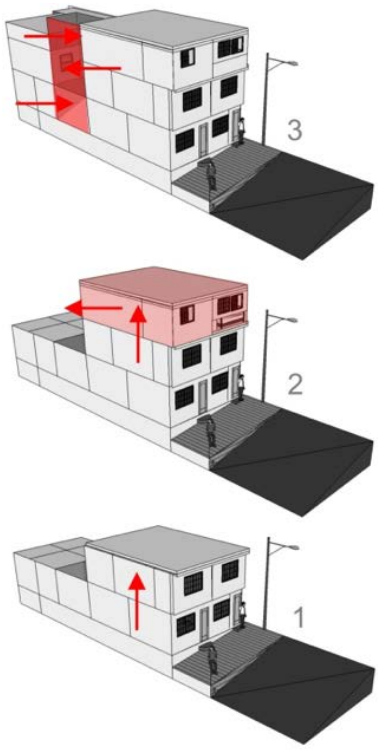
One of the most appreciated characteristics in these contexts is the non-homogenization of the habitat conformation. Unlike the planned housing distribution, the one in popular areas like Usme depends on the needs of the inhabitants and therefore it breaks any symmetry values in its design and construction. That loss of symmetry becomes an outstanding value for popular architecture. Along asymmetry and variety, there is another phenomenon that also takes place, that is fragmentation. This happens when facilities like schools, or planned housing solutions are built without taking into account the immediate context in which the settlement is carried out.



5. Progression

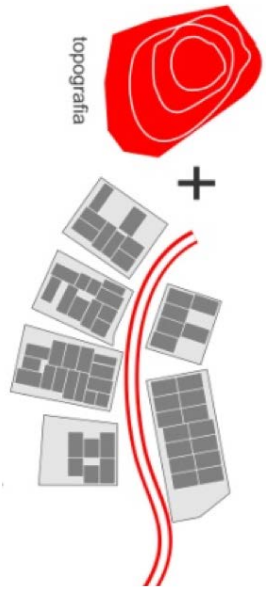
The fifth constant has to do with the loss of borders. The constant progression that popular housing possesses is a sample of its continuous transformation. These organizing approaches are self-generated. The notion of borders or limits doesn't exist. The fact that they can build and transform their houses according to their possibilities and necessities has become a highly

appreciated value amongst the inhabitants of these territories.



6. Maximum advantages Minimum Effort

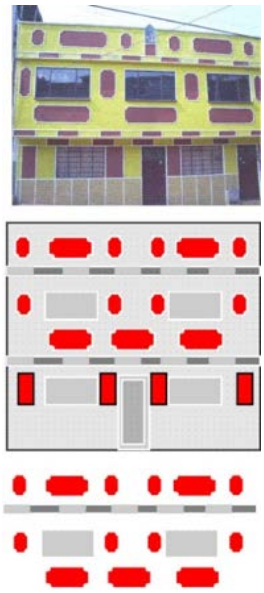
The way in which communities of low income generate their own habitat and especially how they intervene their own construction site or land follows the same physical and morphological conditions that these territories have. These interventions imply an understanding of the topography so that the layouts follow the geographical natural shapes in order to produce the maximum advantages with the minimum effort or using the residents' creativity and inventiveness. The use of simple or recycled materials and traditional construction systems become quick functional solutions that provide shelter to its inhabitants.



7. Creative search

The seventh constant is called lack of inhibition to explore

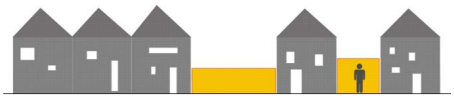
The constant and spontaneous urban mutations of houses and buildings reflect a continuous search for a creative, innovating and individual character. That is why these places are loaded with a transforming capacity inherited from the resilience of its inhabitants and informal territories...



8. Social Interaction. The eighth constant recognizes

The street as a place for social interaction. In Alfonso Lopez and Comuneros, the street itself becomes an element of integration and cohesion for the community. This is an opposite value to the dynamics presented in the city where the proliferation of business centers, malls and the closed spaces satisfy our private consumer expenditure and autonomy and in that sense, shopping malls are very effective. On the contrary, the open spaces contribute to something in common: they contain different parts of society and they feed a sense of tolerance, awareness, identity and mutual respect." (Rogers, Richard.2000.)

Informal Trade in the Streets



Source: Nelcy Echeverria

Small scale trade promotes a better relationship with people

Malls relations

Source: Nelcy Echeverria

The description of the previous constant and other reflections carried out under this investigation allows to identify, analyze and understand some of the essential elements and values that conform these marginal territories. . It is necessary to show the main characteristics of spontaneous interventions of the city. It's also necessary to start from the laws that have not been entirely kept in mind when projecting solutions for the outlying marginal areas of the city. In the following segment, some basic criterion for intervention are briefly presented:

1) Permanence:

Understanding and valuing buildings as structures of continuous and uniform articulation that don't compete and that on the contrary, they bring an implicit balance of the space and also a geographical harmony that integrates and connects different patterns in a "continuum."

2) Project modesty:

It consists of putting off personal interests in favor of the communities' needs and interests. For example, it would be necessary to question the interests of a new mayor who wants get a Guinness record for his personal CV by building the biggest coliseum in a small colonial district disregarding the urgent need of a Health care center and the architectural patterns created by the community. If this mayor followed the project modesty principle, he would research first in order NOT carry out imposing and not-contextualised interventions that respond to personal interests.

The proposals that usually intervene these informal territories like Alfonso Lopez and Comuneros, and the solutions offered in the city don't contemplate this approach. On the contrary they usually become

forced solutions, decontextualized and alien to the meanings and essential characteristics of the places to be intervened.

3) Respect for existing values:

Given the fact that these peripheral areas in Bogota are sensitive, fragile and discrete territories, the urban solutions must take into account their identity and all positive aspects that already exist there. Thus it is possible to generate social, cultural, economic and environmental development. This is a key criteria that would help develop proposals from the values of the territories and the communities located in the periphery. In the case of Usme, one of these values is the environmental system. It is an important component that should be treated as a development opportunity. The environmental recovery and the structuring of the urban landscape should integrate the urban and the rural conditions that were already present in this marginal territory of the south of Bogotá.

4) Civic identity:

This criteria is fundamental when intervening marginal areas because if there is not civic identity, there's no appropriation and this is reflected in the actions carried out by the community in public spaces. Regarding to this Richard Rogers concurs that "… An active citizenship and a vibrant urban life are essential components of a good city and their civic identity. In order to recover civic identity where it had been lost, it is necessary to involve the citizens in the development of their own means: they should feel that the public space belongs to them and it is their responsibility..." (Rogers, Richard 2.000 pág. 16)

5) Public participation in urban development processes

Added to politics, and the interests of real estate developers, the public participation in urban development processes can generate more participative and appropriate processes in the social construction of the habitat. This criteria might well ensure that processes are effective and pertinent. Without this civic participation, any intervention can become a failure as many examples can be found today in Bogotá.

6) Public Space as a learning scenario:

It is important to adopt this criteria within the intervention processes in the marginal territories because that is how proposals can be implemented to fulfill an educational or cultural goal or to become a means of social cohesion.

figure 13 Children from Usme location Source: Nelcy Echeverria

7) Motivating the economic activity and the Productivity:

The poverty of these marginal places requires alternative solutions, creative and innovative ways to generate a model of long-term economic development where equity in the distribution of natural and material resources is a must.

Building sustainable territories starting from creativity and the self-management of the communities are big challenges for the marginal territories. There, the presence of a social knowledge of popular models that preserve the tradition is evident.

Finally, the interventions on the marginal territories should offer integrated diverse, inclusive spaces that favor the social mixture of uses, biodiversity, and habitability that promotes the strengthening of cultural identity and a decent life for its inhabitants.

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The Problem of the Tunjeulo River in Bogota: A Challenge for the City

Fernando de la Carrera, Mauricio Pinilla (Los Andes University)

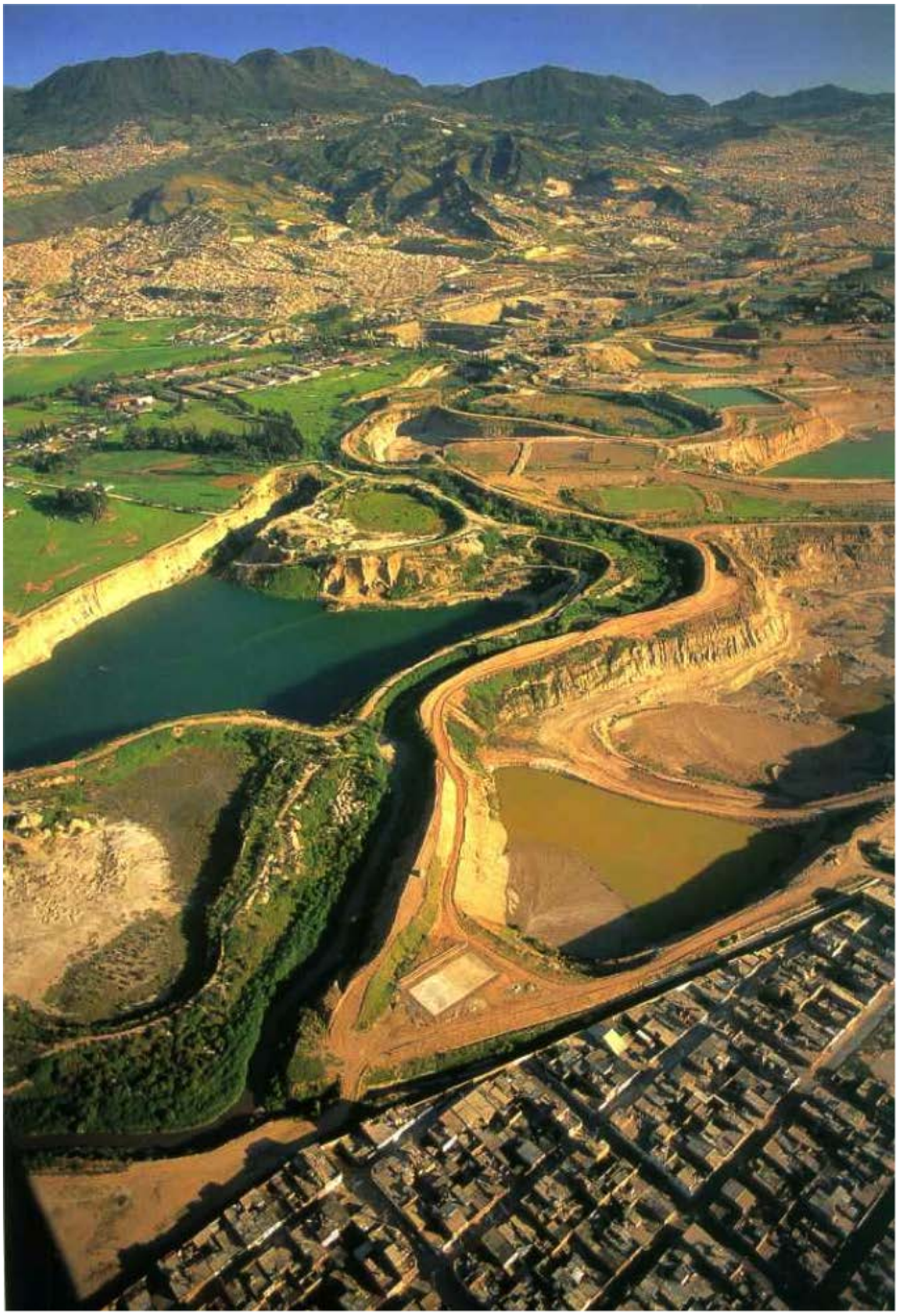

figure 1 Aggregate mining in the Tunjuelo River "Bogota from the air" Villegas Editors 2004

Abstract

The impoverished condition of the Tunjuelo River basin is the product of an unfortunate chain of decisions and omissions by different actors and powerful stakeholders in this area during the urbanization process, particularly in the second half of the 20th century. The consequences and effects, as well as the practices that have led to the deterioration, persist to this day. The river is now a clear example of cultural patterns in a society that has turned its back on water, mostly because it is so abundant.

Key words: Bogotá, Tunjuelo River, Urban Regeneration, ecology, ecological structure.

The Tunjuelo River is the main tributary of the Bogota River, which runs through the eponymous city. The history of urbanization of the Tunjuelo River, which flows through the south of Bogota, has been a history of the collusion between different actors, who, by action or omission, have contributed to its degradation. The river crosses through a significant portion of the city's urban area, nearly 15%. About two of the seven million inhabitants of the city live in the vicinity of the Tunjuelo River Basin and they represent a significant percentage of the poorest sectors of the population.

Settlement patterns in this area of the city have been characteristically very intense since the second half of the 20th century, when the whole country witnessed an acceleration of the urbanization process. In the case of the Tunjuelo River basin, urban settlements were created without any state intervention. The process was effected mostly through developers, who parcelled out large estates and by members of the Bogota elite who inherited land in that area. They were responding to an increasing demand for low-cost housing. These developments were laid out without any urban planning considerations, provisions for public space, public services, or prevention measures in flood areas.[1]

These shanty towns should be redesigned and landscaped on the basis of a functional relationship between the present layout and the riverbed. It is also important to free enough space for the creation of recreational facilities. The latter nowadays stand on a proportion of less than two square meters (21.5 square feet) of public space per inhabitant, far below the minimum standard of ten square meters (approximately 108 square feet) which the city has set.

Ironically, this location began to attract developments when a road was built to transport aggregate materials quarried from midstream for the construction works of La Regadera dam, the first formal aqueduct for the city, back in the 1940s.[2]

Since then, that part of the river has turned into a site of aggregate mining supplying the city with large amounts of gravel and construction materials. The mines now belong to large multinational companies that continue to extract materials from an area of about three hundred and fifty hectares. At that mid-point, the river has been squeezed into a deep and narrow ditch enclosed by huge pits. These companies have shown some willingness to repair the damage caused by their activities, but a complicated legal situation with the city administration, involving complaints and cross complaints, has so far prevented the resolution of the conflicts. The future of these areas and their

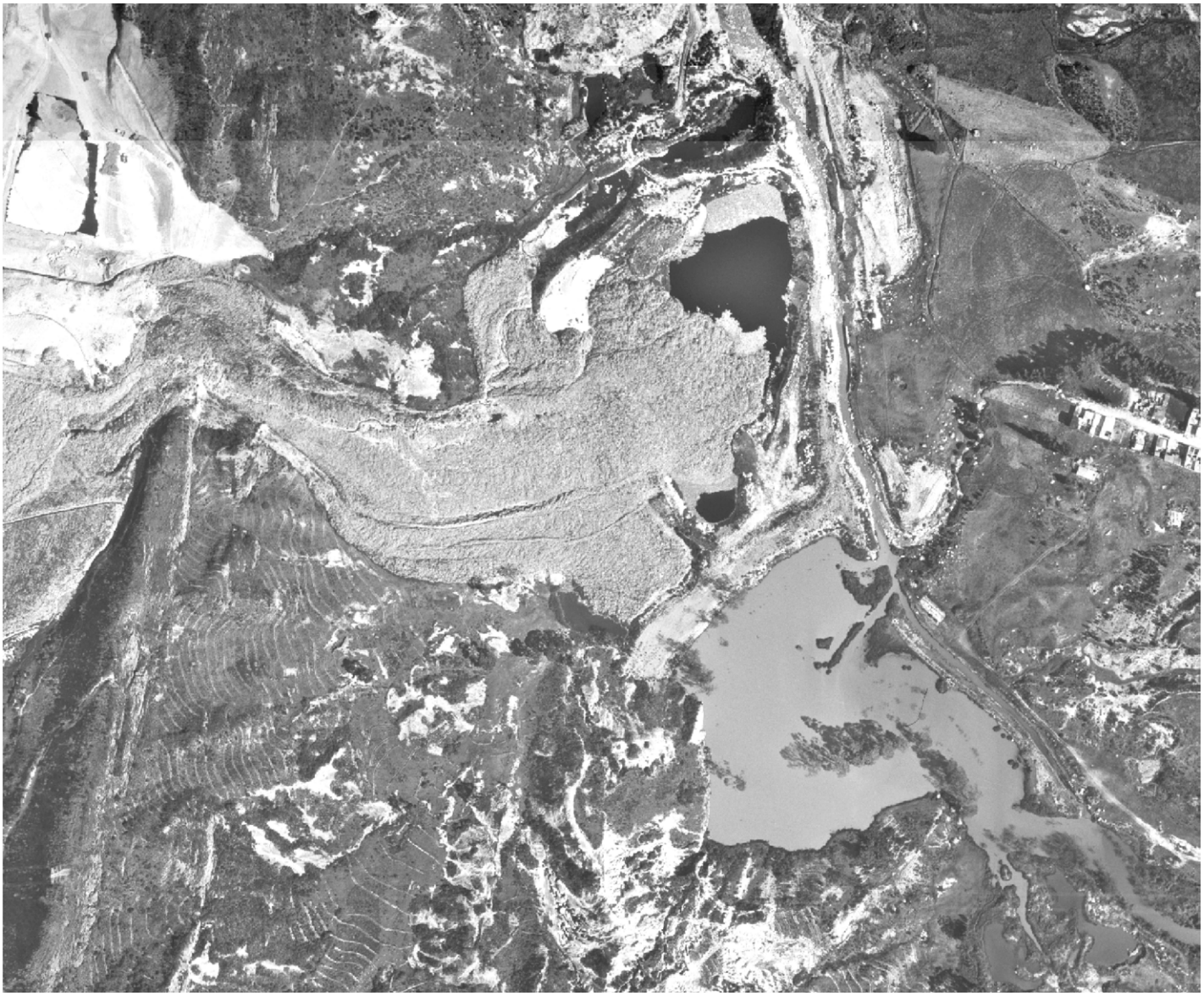

figure 2 The Doña Juana Land Fill constrains the River Flow, 1997

figure 3 River Floods in the Tunjuelo River, April 3 1949

figure 4 River Floods in the Tunjuelo River, April 2 2009

figure 5 Dysfunctional relationship with the river

morphological recuperation depends to a great extent on political will, the intervention of civil society, the support of academics and non-governmental organizations, and the willingness of the extracting companies to reach agreements and contribute to supply recreational areas and improve the basin's environment. [3]

Close to these mines, on the left side of the river towards the west, the city allocated a significant area for the Doña Juana landfill. The site has caused a good number of problems to the river, especially when it collapsed in 1997 and garbage constrained the flow. The landfill has now normalized its operations. Apparently, these lands are planned to become a park sometime in the future, once the landfill ceases to exist.

Towards the north end, where the pit mounts recede, in the San Benito district, several families from the municipality of Villapinzón have settled and set up small artisan tanneries. The runoff of the tanning activity, such as heavy metals, is discharged into the river. The community lives in the same place where it carries out its industrial and commercial activities. The coexistence of this highly polluting industry with housing provides for a very insalubrious environment. Although there have been statements about the intention to repair the environmental damage produced by this industry, so far it is only on paper. To date, the results of the agreed commitments are not visible.[4]

The lower portion of the Tunjuelo River flows downwards from San Benito. A defining feature of this part is the flood areas. From this point, the river flows on a slope where it develops winding meanders. With the growth of the city since the 1950s, the increasing demand for housing was translated into intense parcelling out of flood-prone lands. The typical occupation of this kind of territory was enabled by the construction of artificial earthen levees, which have constrained the river's capacity. The barrier has constrained the riverbed, which has become so narrow that the water rises beyond its natural level. The river has lost all the available natural spaces to cope with rising waters. At the same time, Bogota's water and sewerage company has developed a costly repertory of hydraulic devices that pretend to domesticate nature, further deteriorating the already impoverished environmental and public space situation of the area.

In this context, we find several shanty towns with similar characteristics, of which some illustrative examples are Isla del Sol, one of the sectors that has a clearly illegal origin as it started off by taking hold of some vacant lots by a meander of the river, and Guadalupe, the settlement of workers of the meatpacking plant that bears the same name. Like San Benito, the coexistence of housing and industrial facilities generates seriously insalubrious conditions, at the same time that meat residues are being discharged into the river.

Conclusion (Challenges for the future)

The settlement process of the Tunjuelo river basin in Bogota followed its own course, without integration into the formalized growth of the city. The settlers were largely from the poorest sectors of society, and today they account for almost two thirds of the city's population. The precarious economic condition of the

figure 6 Tangeries in San Benito

locals has led them to engage in activities that have seriously compromised the river and the ecological structure.

The increasing demand for social housing and the municipal policies to address the housing deficit do not contribute in any way to revert the damage.

Once the high pits produced by the quarrying have been cleared, the soil that would become available (approximately 350 hectares) will offer a great opportunity for ecological restoration and urban regeneration. This should incorporate social inclusion, economic development thanks to the provision of public services and the availability of quality public space for the southern part of the city.

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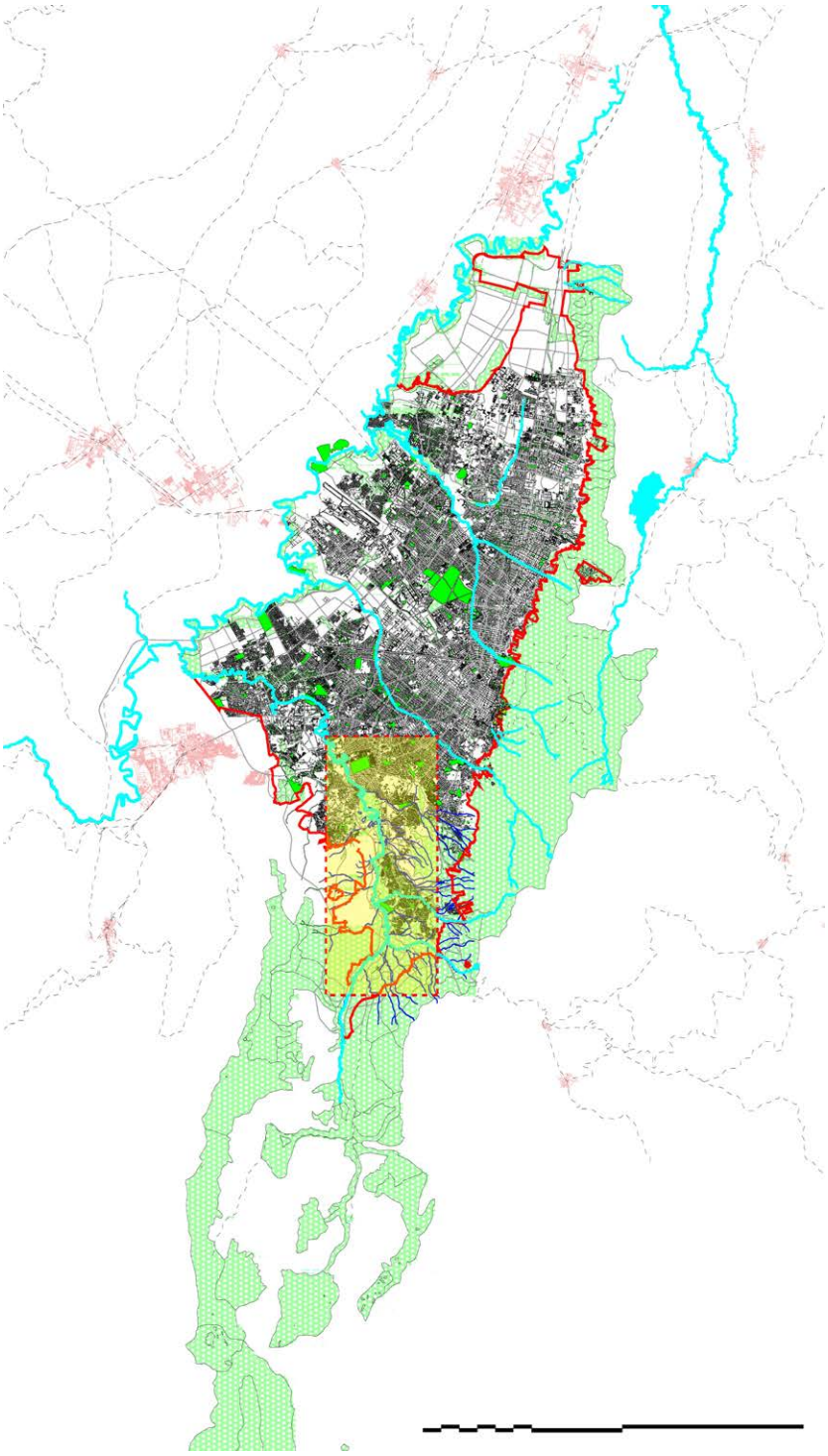

figure 7 Bogotá and the Tunjuelo River Basin

[Fernando de la Carrera, Mauricio Pinilla]
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Quality in Habitat from Equity and Justice

Liliana Giraldo (La Salle University)

The quality of life is "the perception that an individual has of his place of existence, in the context of his culture and of the system of values in those that he lives and in connection with his objectives, his expectations, his norms, and his interests. It is a very wide concept that is influenced in a complex way by the fellow's physical health, his psychological condition, his level of independence, his social relationships, as well as his relationship with the essential elements of the environment" (according to the World Organization of the Health)

In accordance to those concepts here outlined, the quality cannot be a concept or an idea, but a reality in which we all are committed, citizens, government, academy, productive sector. From our practices and knowledge we are promoters and agents of stocks so that people have covered, at least, all the fundamental necessities. In this way, we will be generating peaceful, fraternal relationships and hope for a fair and inhabitable world.

In Colombia, the Gini coefficient that measures the inequality of revenues, in 2011 was of 0,55 (http://iresearch.worldbank.org/PovcalNet/index.htm) where 0 represent the perfect equity, while 1 the total inequity, classifying Colombia as one of the countries of the world with highest inequality. From this inequity perspective and of the complexity of the aspects that it generates, it is imperative to approach the reflection about the quality of life and inhabiting from an integral vision of their dimensions, where so much the material and concrete factors as the spiritual and intangible, can be recognized and incorporated in the human entirety. But it is not enough with which we are aware of the existence of transcendental dimensions, but rather we should prepare them appropriately to supplement other aspects and in this way to reach harmony and well-being.

It is with this vision that the topic of the "quality" is approached in the Faculty of Habitat Sciences, from the assumption that people are shaped by the environment and circumstances. Where we have to ensure the arrangement of parts for all, where both natural and built environments contribute to human welfare and thus generate better quality of life with respect for the dignity of people.

The dimensions of quality in the habitat

Starting from the previous position, the quality in the habitat is present in people's different dimensions, especially, in those that refer to personal aspects as the spiritual, cultural, social and religious respects. Seen this way, people possess an identity and their own reality, some patterns and innate beliefs that are developed and that transcend in dialogue with the environment. In such a sense the habitat is the scenario of the culture, the values, and the expressions, where the man is recognized, looks for new meanings and creates works that transcend the material to the spiritual and end in beauty. These dimensions refer to the personal and singular way of each human being where there are features that provide harmony and wellbeing, such issues relate to spirituality, values, knowledge, beliefs, the skills, beliefs and attitudes that consistently allow people to realize the quality of people and the possibility of life.

This individual dimension widens in interaction with others when favorable opportunities for dialogue develop and inspires confidence to other human beings and by such relationships strengthens their own beliefs, practices and behaviors that reveal its uniqueness, but at the same time, belonging to a human group where multiple subjectivities converge towards a common goal. When this collective dimension achieves harmony there is quality of life from FRATERNITY and SOLIDARITY

As for the human habitat, fraternity and solidarity are necessary values for dignifying the human habitat, to define combined actions for the improvement of the conditions of life of millions of residents living in precarious and marginal human establishments, for those without roof, without land, the owner poor, those displaced by war and natural disasters, those evicted and those that don't have opportunities, of urban or rural means.

The quality of the habitat from the integral education

There are many factors that impact and determine the levels of QUALITY of people's LIFE. In and of itself, it is necessary to investigate on these aspects to identify the effect, causes, consequences, potentialities and from such knowledge, to intervene in some forms of contributing to achieve superior levels of human quality.

With this purpose one proceeds to assume the relationship of the QUALITY and the HABITAT, just as the harmonic disposition of all the external, internal and supernatural elements that provide the human being a situation and hopeful ambient, comfortable,

figure 1 Bogota Localidad de Usme vivienda informal photo: Nelcy Echeverría

figure 2 Bogota asentamientos informales en zonas de riesgo photo : Nelcy Echeverría

healthy, respectful, inclusive; where certainties and opportunities of life are provided with the fundamental resources to guarantee the survival under conditions of happiness, well-being, equity and justice.

This elements refer to the inhabitable forms (those built and unbuilt) the natural resources, the geographical location, the public services, access to health, education, recreation, work and shares in the taking of decisions for the improvement of the quality of their life.

In coherence with the Educational Project of the Universidad de La Salle, the Faculty of Habitat Sciences with its undergraduate programs in Architecture and Urbanism, the Master in Habitat Sciences and the Urban Observatory, contributes to the transformation of social and productive systems, in order to contribute to a fair, equalitarian country and of peace, with the formation of integral professionals with technical, scientific and practical knowledge, with high social sensibility, strong values and sense of ownership for its homeland that contribute with the construction of a worthy habitat, cultural promotion and the protection of the natural goods.

To build a quality habitat it is required knowledge, projection and intervention on the living forms constructed on the physical and cultural territory. This knowledge is generated from the natural and the social sciences, from these fundamental concepts the human being can plan, design and build his habitat in accordance with the physical and cultural aspects. Regarding the physical environment, geography is studied, natural and environmental features that are available as cities and other livable settlements, and in relation to the cultural content are studied social, aesthetic, economic, political and historical groups that inhabit it.

Conclusion

In conclusion, the construction of the Quality of Life and Dignified Habitat, the professional must face various challenges to find solutions, which together with other professionals, addressing in an inter- and transdisciplinary problems rebuilding habitat as a consequence of the destruction of military operations, political violence, war, forced evictions, natural disasters; the improvement of housing spaces, recreation and work which unworthy quality is the result of the politicians governed by the interest of the market and the prevalence of private interests over the public and collective interest; the leadership for the empowering of the community and of the less favored inhabitants that impacts in the transformation of the classification policies of the law and territorial development in the regulation of the use of the soil, the minimum standards of good housing, and the provision of public services; the protection and valuation of the natural and cultural resources starting from the construction with clean and traditionally appropriate technologies; everything in keeping with the perspectives of the social and sustainable development of the population, especially the most vulnerable and excluded.

[Liliana Giraldo Arias]

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コロンビアの都市と階層構造

Heirarchical urban structure in Colombian cities

太田口 絢子 / Ayako Otaguchi

コロンビアの都市が、都市内の不均衡な発展によって特徴づけられていることは、これまでにも多く言われてきた。主な要因として、無秩序な開発と住宅不足が挙げられてきたが、本稿では、都市に階層構造を形成している社会経済階層制度（Estratificación）と不法居住区に着目して考察したい。

コロンビアの都市は、都市制度が適用される合法的居住区と、公的に要求される許可や権利を持たない不法居住区に分類できる。

社会経済階層制度は、合法的居住区のすべての区画を、建物及び住環境を基準に6段階の階層「エストラト（Estrato）」に分類している。この階層を基に、公共料金の決定、コミュニティの状況と所得に応じた課税率の決定、税金の分配、住宅税の統一とその徴収、及び建物・区画管理に係る決定、階層の設定による所得層の明確化等が行われる。以前は、各公共サービス会社がそれぞれ独自の公共料金を設定していたが、1991年より全国で統一されることになった。

エストラト別の住民所得の目安はTable 1で示す通りである。エストラト1には所得が法定最低賃金の1ヶ月分以下の住民が多く、エストラト6の住民とは最低でも16倍の差があることが分かる。

ボゴタ市における各エストラトの土地利用はFig 1で示す通りである。上位エストラトは住宅用途が大部分を占めているが、中位エストラトは商業地区及び新規開発地区が多く、低位のエストラトになると公共サービスのない開発地区や風俗、荒廃した地区が割り当てられている。エストラト6の住民は税金を多く払うことにより住環境が良好に保たれるが、エストラト1では住民の税負担が少ないため、都市・交通インフラが整っていない。インフラ整備の遅れは、住民の経済活動にも大きく影響する。またFig 2から、エストラト1は面積においてエストラト6と同程度であるが、街区数が7倍程度あり、1区画の面積に大きな差が生じている。

Table 1. Income and tax rate in each Estrato in Bogotá
各エストラトの住民所得及び税負担率（ボゴタ市）

		Legal minimum wage 法定最低賃金（566.700ペソ/1ヶ月）	Tax rate 課税率
low	Estrato 1	< 1 month	0.50
	Estrato 2	1-3 months	0.60
Medium	Estrato 3	3-5 months	0.85
	Estrato 4	5-8 months	1.00
High	Estrato 5	8-16 months	1.20
	Estrato 6	>16 months	1.20

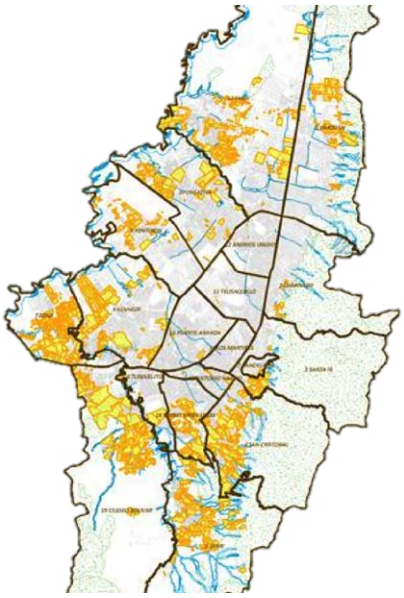

figure 3 Legalized areas in Bogotá
合法化された地区（ボゴタ市）

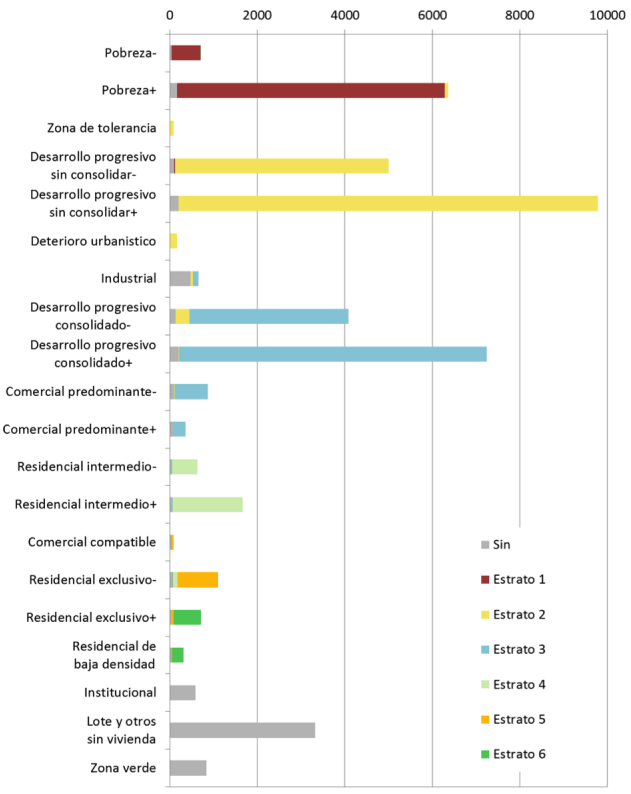

figure 1 Stratified Land Use in Bogotá
エストラト別土地利用（ボゴタ市）

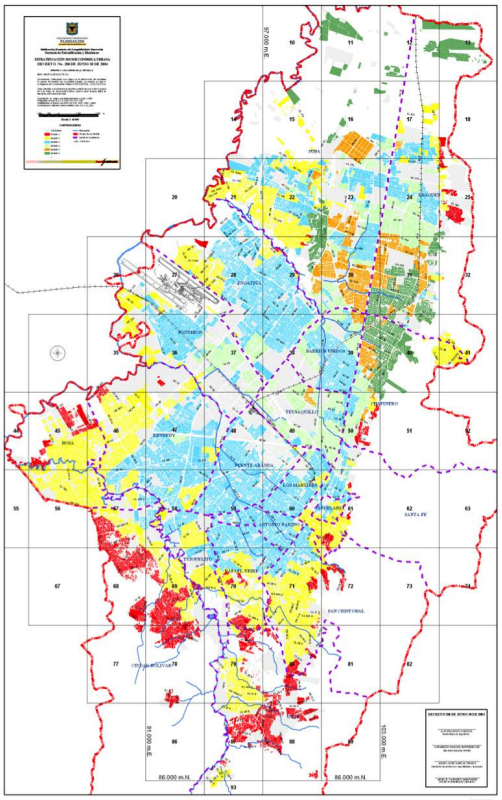

figure 2 Map of Stratification in Bogotá
エストラト区分（ボゴタ市）

合法的居住区は、このようにエストラトによって階層構造が形成されているが、都市周縁部にはエストラトに区分されていない不法居住区も存在する。

1950年代から都市部には、内戦により多くの国内避難民が逃れてきた。経済的に都市内の住居を持つことのできないこれら避難民は、入手可能だが立地の悪い土地を不法土地分譲者から買い、安価な材料で自ら住居を建て、違法に接続した電気や水を使用し生活している。ボゴタ市を例にみると、避難民は南側に位置する土砂崩れの危険がある山の斜面や、洪水の起こりやすい西側の川付近を占拠してきた。ボゴタ市の人口の約3割が不法居住区に住み、多くが最貧困層の世帯である。1991年からは、税の納付如何にかかわらず公共サービスの提供が定められたが、実施されている割合は低い。居住環境が悪いにも関わらず、この地区に広がる自助建設住居は、経済活動及び家族構成を反映したものが多く、公共住宅へ移転するよりも利便性が高いことも多い。

このような状況に対し、ボゴタ市では主に住宅局（Secretaría Distrital del Hábitat）と計画局（Secretaría Distrital de Planeación）が主導し合法化政策を実施している。

合法化プロセスは、住民参加で行われ、建築基準の指導や今後の開発についての合意を得ることに加え、区画の状況把握、土地所有権の確認、税の徴収、都市計画の実施が行える。他方、不法居住区は低位エストラトに分類されるため住民は低い税率で公共サービスの利用が可能になるほか、住宅ライセンス及び建設許可を得るための必要条件の取得、ローンや補助金の需給、地区の改善などを得ることができる。1960年以降、1,546件（7230.9ha）が合法化された（Fig 3）。

不法居住区を合法化することは、住宅政策や経済政策では補いきれない、最貧困層の生活環境を改善するための施策となっている。

このように、コロンビアでは合法的居住区を社会経済階層により分類することで税率の面では有効に機能しているが、居住環境としては、むしろ大きな差を生んでいることが明らかとなった。

コロンビアの都市が今後も成長を続けていくためには、都市内の居住環境の格差をこれ以上広げないことが必要である。居住区の交通インフラは住民の経済活動にも影響を与えるため、都市の大半を占める低位エストラト層の物的・人的資本の有効活用を図ることにより、さらなる発展が期待できるだろう。

It has been said that the cities in Colombia are characterized by their unequal growth. The main problems have been identified as unregulated development and lack of housing. However, in this article, I will discuss this situation by focusing on the socio-economic stratification and illegal settlements which forms part of the hierarchical structure of cities in Colombia.

Settlements in cities in Colombia are divided into two groups: legal and illegal settlements. Inhabitants of illegal settlements have no official recognition or right to build/modify their own house.

Socio-ecoonomic stratification classifies each legal city block into one of six categories (Estrato) based on the building and living conditions. From this category, the public utility charges, tax rate, housing tax, responsibility for maintenance of buildings and blocks, and income group can all be determined. Before this system was introduced nationwide in 1991, every public service authority had its own utility charge system.

Table 1 shows the average income of each Estrato. Inhabitants in Estrato 6 earn at least 16 times more than inhabitants in Estrato 1.

Fig 1 shows the land use by each estrato. Estratos 5-6 are characterized by residential use, estratos 3-4 are used for commercial and new development, and estratos 1-2 are assigned to development without public service, adult-entertainment business and dilapidated blocks. As inhabitants in Estrato 6 pay more tax, they receive more support from city government, leading to a better living environment. In contrast, the living environment in Estrato 1 settlements is of poor quality and access to e.g. public transportation is limited, which often influences their level of economic activity. In addition, fig 2 shows that the total size of Estrato 1 is almost the same as Estrato 6, but the number of blocks in Estrato 1 is 7 times greater than Estrato 6, which means there is a large difference between the size of blocks.

Whilst living conditions in legal settlements differ in each category, informal settlements are not included in any estratos.

From the 1950s, because of the internal conflict, many internally displaced persons (IDP) moved into the cities. Those people could not rent or buy houses in the city but could find illegal land, which was affordable but in a bad location, from “pirate” developers. IDPs made their houses using cheap materials and connected water and electricity illegally. In Bogota for example, IDPs have occupied the mountainside in the southern part of the city which often causes landslides, as well as the riverside in the western side of the city where flooding happens. 30% of the population of Bogota live in illegal settlements and most of them are in extreme poverty. Despite the bad living conditions, the houses they build often reflect their family configuration and economic activity and is more convenient than social housing.

To improve this situation, housing administration and planning administration in Bogota implemented a legalization programme.

The legalization process explicitly included inhabitant participation. Administrators give instructions for building standards and get agreements for future development. In addition, the administration can get information about their living situation, verification of land ownership, tax collection and operation of urban planning. On the other hand, because formerly illegal settlements are normally classified into low estratos, inhabitants can get public services at a low tax rate. They also can get permission to apply for housing, loans and subsidies, and neighbourhood upgrading programmes. Since 1960, 1,546 cases, covering a range of settlement sizes, (7230.9ha) have been legalized.

Legalizing the settlements can reduce the extreme conditions of poverty which housing and economic policy failed to improve. The use of a rigidly hierarchical urban classification system works effectively in terms of equitable taxation, but it creates huge differences in living environments. However, large differences in socio-economic conditions, provision of services, and prospects for mobility, leads to societal tension and particularly prevents the full capacity of individuals in low estratos from being utilised. Changing this system is key to further, and more equal, growth in Colombian cities.

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in Bogotá and Medellín

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Part II

Medellín
メデジン

BUILDING HOMES OR BUILDING CITIES

Habitat Quality – flaws in the housing policies approach in Colombia.

Juan Ricardo Mejía B. (Pontifical Bolivarian University)

The urge to offer quantitative solutions to housing has understated the real meaning of the whole housing and habitat dimension needs in Colombia. The huge project in which 1´000.000 new homes will be built in a 4 year period (2010-2014) as one of the standards for the development of the country proposed by the current government is a contradiction to the current goals, fails to improve the quality of life in human settlements and only focuses on a specific number as a priority.

Despite of the fact that housing macro-projects have become a quick and immediate solution to national disasters, allowing for the utilization of new areas for urban development, and becoming an instrument for approving and carrying out big housing development projects. There are very high cost consequences:

Firstly it alters the municipal planning for instance with the lack of coherence with the proper planning zoning regulations, it refuses to comply with the constitutional law on the decentralization of territorial entities, integrated risk management, the creation of contingency plans and the environmental and regional agreements, even disregarding environmental and metropolitan planning instruments, modifies the classification of the land and its uses, promoting the development of rural land. Therefore, promoting a disperse development, uncontrolled growth in the cities, denying the opportunity of a responsible and sustainable territory planning. All of the above happens inside a total frame of disregard for the policies and instruments of land management established in the 388 law of 1997.

There are many examples such as the project "Ciudad Bicentenario" in Cartagena where 30.000 new homes were proposed to be built, clearly disregarding aspects such as public space, equipment, and employment which are not included in the project. In the same manner, it will greatly increase the population in most towns in Colombia, for instance, the Metropolitan Area of Valle de Aburrá, with towns such as Girardota (1.1891 population) or Caldas (18.024 population), where the population will double or even triple if a Project this big with future consequences were to be carry out.

Simultaneously, if there was a review of the subsidies system at a national level, we will quickly discovered inconsistencies between the allocation criteria, defined amounts and the population objective; it will exclude the most vulnerable population.

In Colombia the traditional subsidies chart for new housing in effect for 2012 was between 4 and 22 minimum current legal monthly wages (SMMLV), whereas a home classified as a low income home for families (VIP) is valued at 70 SMMLV, which means that the government does not provide the new owners with a least 31.4% of its value. So considering that most of these low income families don't earn more than 1 SMMLV, and that the closing cost requires state and town support which rarely happens because they don't have the necessary Budget to meet these demands, is evident that it becomes almost impossible for minorities to find and complete the closing process of a property.

Making an effort to carry out their Project, the government has set aside 4 billion Colombian pesos to build 100.000 free homes for families with less than 1,7 SMMLV household income identified as beneficiaries in the UNIDOS network which has registered 1´500.000 families. The first priority is extreme poverty areas, displaced habitants, weather disasters relocation, and people who live in risky areas. As warranty among other controls, selected families are required not to sell the homes in a span of less than 10 years and the property is not liable to any debts.

Moving from a subsidiary scheme which is far from the real price of the home to complete free housing, always reinforcing the policy concept of quantity that at the regional level in identifiable cases such as Chile and Brazil, have proven a total failure. In addition, when a family is assigned a free home without making a contribution that represent an effort to the acquisition of the property, it automatically leads to a lack of appropriation and ownership by the inhabitants. Not to mention that just as in the macro projects case, the use of the land is still unclear in these projects.

Basic urban or architectural design concepts, which improve the quality of life, are far different from general criteria dominated by the financing of the largest number of possible solutions. Unlike urban social models, the subsidy is conceived as an incentive to the participation of the construction companies, rather than focused on the activation of the economy from a market point of view. The perception of insecurity, crime and drugs present in this type of project, shows the present difficulties of coexistence and limit the quality of life.

Mass production of mostly very small homes (36-45 m2) often isolated from the urban area, promote urban disintegration, isolation and the emergence of large homogeneous concentrations in peripheral or expansion sectors without adequate quality public space supply, facilities and roads. In other words, it creates poverty concentrations areas that generate social territorial segregation.

Inadequate subsidies due to the increase in the value of low income housing projects by the higher value of the land, reveals the failure and lack of political will to implement the wide range of current planning, funding and managing instruments described in Colombian law

As soon as clear decisions are made regardless of political consequences in order to find the land for the VIP (low income home projects) and implement innovative financial mechanisms; (e.g. alternative forms of subsidy, residential lease, leases consistent with the type of employment and sub employment in the country, among others); to improve the conditions of affordability, always linking social, and community processes, we will begin to see adequate solutions.

Our informal human settlements appear as a recognizable alternative, of urban morphology, which must not be destroyed but improved to avoid exclusion and to promote the integration.

Urban planning rights should be given priority over individual accommodations, applying strategies such as "R": Re-urbanize, Regularize, Re-qualify, Renew and Revitalize. Providing public services, equipment, accessibility systems, and building a collective identity through associations that promote with pride their status as residents of a neighborhood and ensure the preservation of its social fabric.

The key to success lies mostly in having a broad range of practices that take into account the characteristics of each site, so all the interventions preserve spatial, cultural and economic values.

The challenge is align the needs with the policies to respond adequately and in a sustainable timely manner.

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UNDERSTANDING THE TERRITORY THROUGH THE URBAN INTEGRAL PROJECT (PUI) IN MEDELLÍN, COLOMBIA. A diagnostics methodology and instrument of urban intervention.

Patricia Schnitter (Pontifical Bolivarian University)

Over the last twenty years the city of Medellin has lived an important process of urban regeneration, spatial transformations with a high level of social content, in pursue of a better quality of life. This process can be dated back to the 90s when intervention gained relevance as a means of the recovery of public space in the urban development plans of Medellín, and other Colombian cities. However, over the next decade architecture and urbanism have become increasingly important as a reference of social vindication. The actions undertaken in Medellín had earned for the city national and international recognition, as a place for social planning and a scenario for civic transformation.

The determinant role of the Urban Integral Projects (PUI, in Spanish) may be highlighted from the urban regeneration perspective. Since 2004, when the PUI were first established, they have been an essential instrument of social change in Medellín. This model, developed by the local government and the Urban Development Enterprise (EDU in Spanish), has been used as an intervention methodology to act on a territory where the absence of the State was evident through social inequality.

The PUIs represent the political commitment of the two previous administrations (2004-2007 and 2008-2011) that have lead to the betterment of quality of life and have been highlighted as a model for transformation, an instrument for urban regeneration, social inclusion and community involvement. This recognition has contributed to change the image of violence and drug traffic the city has had for years, for an image of social and urban transformation.

The PUI intervention model began as an instrument designed for the renewal and regeneration of areas with a high level or urban decay in the city. In 2004 it was first put into practice in the Northeastern Zone of Medellin, specifically in Communes 1 and 2. This was done with the intention of replicating the model in other areas of the city. The integration of the recently created public transportation system, Metro-cable, which connected these areas with the rest of the city, was the opportunity for the implementation of the PUI model.

The PUI model was extended to other areas of the city that shared the same characteristic absence of State intervention. After the actions done in the Northeastern Zone, the model was implemented in the Commune 13, within the Central-West Zone, area where the Metro-cable system was also built. Likewise, the PUIs were implemented in Communes 8 and 9, Central-East Zone; Communes 5 and 6, Northwestern Zone, and in a near future in La Iguaná sector.

According to the EDU, the main goal of the Integral Urban Projects is "to positively transform a particular territory, from social, physical and institutional components, simultaneously incorporating all of the elements of development through public infrastructure works that meet with the highest standards of quality, in the light of sustainability and community participation" .

Each Zone's PUI and the Master Plans that comprise them, represent a model of intervention that defines and structures a transformation methodology that seeks to "dignify" public spaces for the betterment of the population's quality of life. This is a methodology based on the relationship between the inseparable physical and social components and is materialized through the development of the Urban Projects. Each PUI, defined by physical intervention, interinstitutional management and the promotion of social involvement, offers effective responses contextualized in the area of operation.

The formulation of each urban Master Plan is conditioned by the physiographical features of the Zone and the Commune where it is implemented. Medellin is located in the central portion of the Valley of Aburra, surrounded by an irregular and inclined topography. The urbanized areas of the city are located both in the lower, flat areas of the valley and on the hillsides that range from 1.500 to 1.800 meters above sea level. The Medellin River runs through the lowest part of the valley, dividing the city in half and receiving 57 direct affluent streams, constituting a considerably dense hydrographic network. The Medellin River is the valley's main structuring element and also comprises Medellin's main corridor. The urban area is divided in 6 geographical Zones, which are in turn divided into 16 Communes. Each of these Zones and Communes has particular physiographical features of their own, according to their location. Each PUI's intervention is established in specific Communes of different Zones.

The main zones of influence of the PUIs correspond to peripheral areas with informal urban development processes. An urban territory where planning strategies did not foresee the social and economical problems of the marginal processes, accelerated by urban migration, and more recently by the impact of drug trafficking and violence, which is a common condition of some Latin-American cities; condition that has been reinforced in Colombia in the last 60 years. Nevertheless the PUIs also act on zones that have had state planning processes which in time present low quality and deficits in formal housing, poor conditions, and an inarticulate State intervention with low standards in public space and high deterioration of the natural environment.

The Master Plan of the PUI of the Northwestern

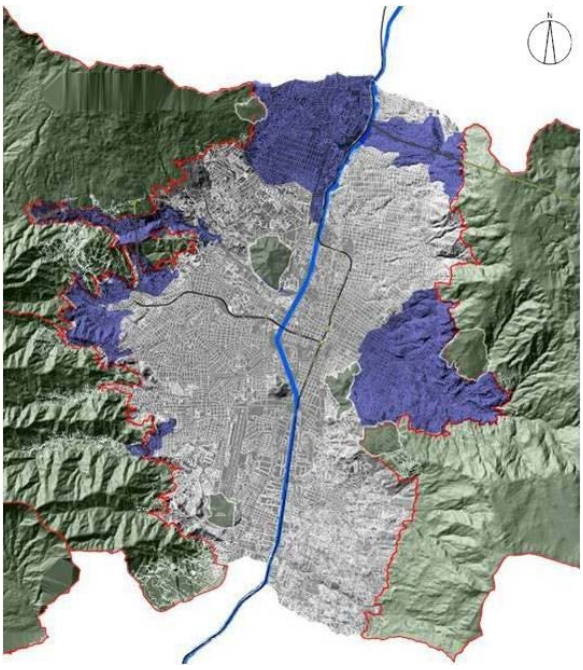

figure 1 PUIs Location in Medellín. Source: EDU
Purple colored areas represent PUI interventions.

Zone is particularly significant in view of the previous description. In relation to the other Zones, its intervention evidences the importance of the existing residential fabric as a contribution to the proposal in the development of comprehensions of the territory.

For each PUI, and especially in the case of the Northwestern Zone, the Master Plan is formulated by analyzing the territory through an approaching sequence of different planning scales that allows the definition of the area of intervention and the delimitation of the plan of action. The articulation of the different scales of the planning process underlies the formulation of the Master Plan and ranges from the context of the city, Land Use Plan (POT in Spanish), Public Space Plan and Facilities (PEEP in Spanish), to the analysis of the zonal context.

Likewise, it was necessary to articulate the structural projects of the Municipal Development Plan (2008-2011), in this case in the areas of Social Welfare and Habitat and Environment for the people. Both reinforce the PUI condition as an urban intervention instrument in search for a greater territorial balance towards the betterment of the quality of life of the citizens, in accordance with the political commitment for the future of the Development Plan. It is in this process of articulation where the political commitment for the future coexists with the instruments of transformation, establishing a coherent relationship with an integral city planning and expressing interinstitutional coordination.

The proposed Master Plan of the Northwestern zone for the communes 5 and 6, turns into an intermediate instrument of urban intervention that promotes territorial recomposition. Based on a diagnostics methodology, the Master Plan empowers the construction of territorial understandings for its formulation, steering actions that give rise to a process of integral transformation. The actions of the Master Plan produce reactive effects that advance urban renovation.

Following a diagnostics methodology, the recognition of the physical component in the Northwestern Zone offers elements to read the different urbanistic processes that have conditioned the occupation of that sector during the XX century. Through time, urban development bestows the urban fabric with morphological diversity. We can observe a regular layout derived from the informal occupation. Also a layout derived from a state planning with the largest housing project of the Institute of Social Housing (Instituto de Crédito Territorial) in Medellín between the 60's and 70's. The state intervention becomes apparent in an organic layout in accord with the topographical features, also generating mixed

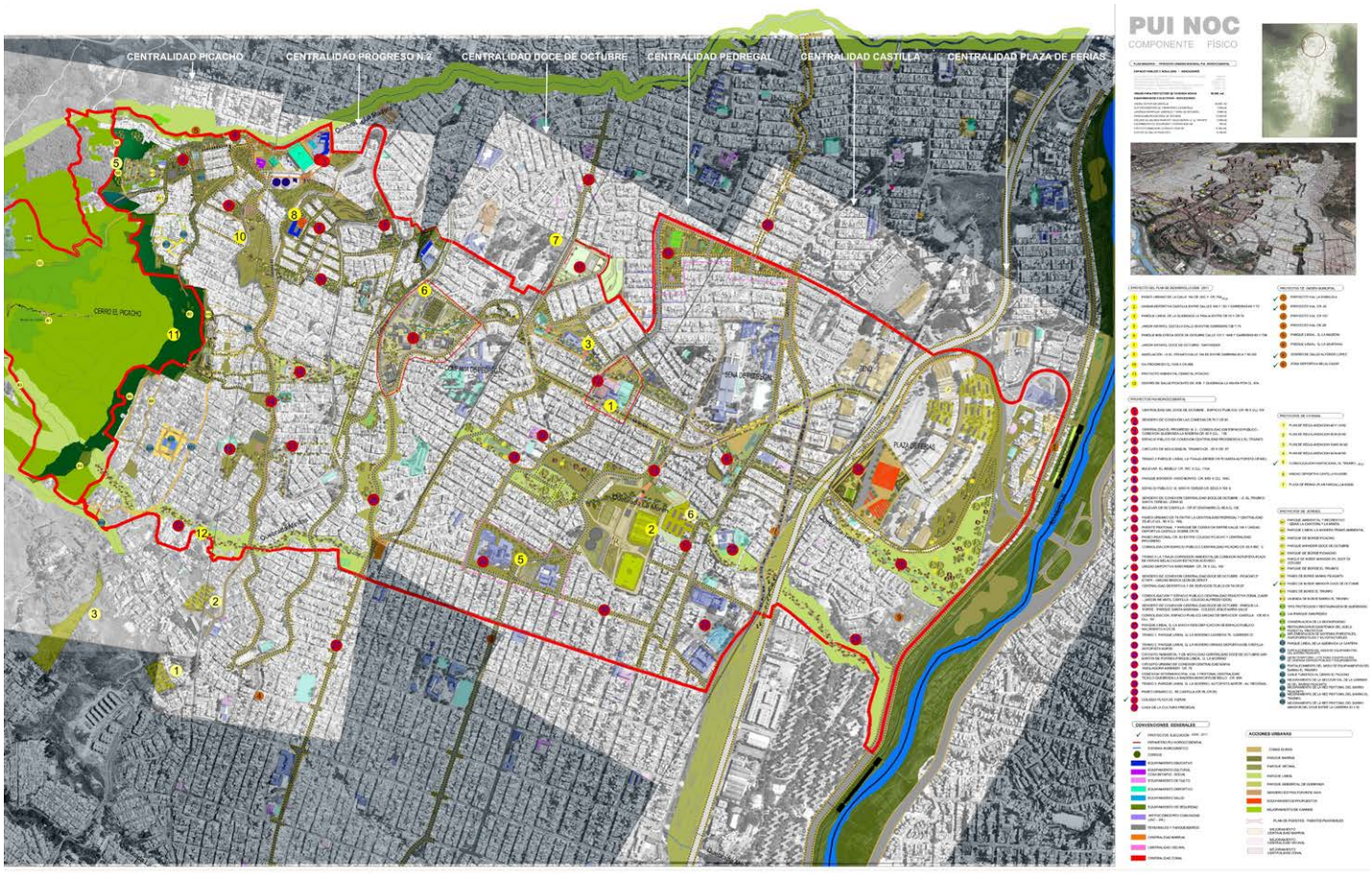

figure 2 Master Plan Northwestern Zone. Physical component. Source: EDU
Shown are 32 proposed projects. Up to date 13 have been prioritized with the community in the period 2008-2011.
The projects address environmental recuperation, public space improvement and mobility, and adaptation of facilities.

layouts. Additionally a significant invasion settlement occupation is observed, that was progressively developing in a disperse manner, discontinuous insofar as it was unplanned. Later, towards the 80's the settlements would occupy the stream's recess and the free spaces in the slopes of El Picacho hill. In short, the occupation processes of the communes 5 and 6 are characterized by a heterogeneous condition of the urban form that influences in a determining way the formulation of the project intervention strategies.

In the same way as with the recognition of the morphological component, the natural component in the diagnosis is fundamental. The plan consists in recovering the natural systems as public space that may articulate the inarticulate territory caused by unplanned growth. It is also the opportunity to integrate the natural condition of the Valley of Aburra, the hydrographic and orographic structure that characterizes the territory into the physical and spatial plans in a particular manner. The significant contribution of the Master Plan of the PUI is the structuring role around the environmental component as a central axis of the actions, increasing the potential of the streams in its territory and the preservation of the different strategic ecosystems for the city.

Once again, in this case of the PUI´s Master Plan for the Northwestern Zone, the articulation from the physical and natural components is evident in the formulation of projects that allow a new gaze of the actions on the territory, where articulation, recognition of the existing and the social participation as elements of urban regeneration predominate.

Finally, the purpose of this article is to highlight the PUI as a model that allows for transformation as its main category, and as a secondary category, an instrument for a more specific level of action, that enables renovation and recovery dynamics in a territorial balance for a betterment of life quality.

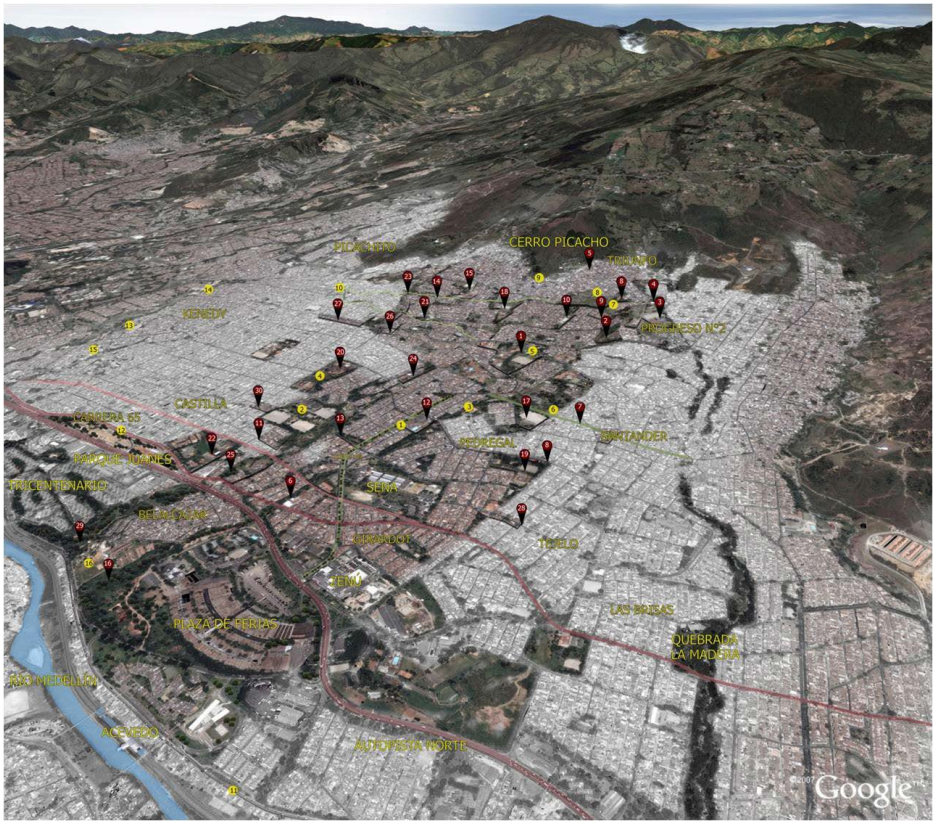

figure 4 Overview from El Picacho hill of Northwestern Zone. Source: EDU

Also, stands out as a tool for urban intervention with a diagnostic methodology, based in the construction of territorial understandings.

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Pontifical Bolivarian University, Medellín

figure 3 PUI Northwestern Zone. Source: EDU

広場がもたらす建築の多主体性

The multi-identities that open spaces bring to architecture

川添 善行(東京大学) / Yoshiyuki Kawazoe (University of Tokyo)

東京大学の21世紀COEプログラムの活動の一部として私たちが設計を行った、コロンビア・メディジン市におけるベレン公園図書館は、毎日3000人もの人が訪れる、市域の拠点となっています。これは、当時のセルジオ・ファハルド市長が推進した5つの公園図書館計画の1つであり、市内の中でも社会的・公共的サービスの低かった場所に、地域再生の拠点を形成してゆこうとするものでした。私たちの担当したベレン地区は、他の場所と比べて地形は緩やかで住宅地が密集しているエリアです。のちに図書館が建つことになる敷地は、もともと警察署と留置所があり、地域にとってはネガティブなイメージのある場所でした。この場所を新しい未来へと接続するために、私たちは図書館そのもののデザインではなく、3つの広場を作ることをプロジェクトの根本的なコンセプトとしました。その結果が、最初に述べたように毎日多くの人がこの場所を訪れる要因になっていると思います。

このプロジェクトが始まった2005年当時、私はまだ20代半ばでした。建築家というものへの漠然とした憧れと、凝り固まった建築家像のイメージの中に埋没し、建築を設計するという行為と、自分という人格とをきちんと結びつけることができずにいたように思います。あたかも建築という行為を、自分の創造性を発露し、ある種の自己実現の延長にあるもののように考えていたのです。20代半ばの青年にとって、このプロジェクトのオファーは、身にあまる名誉というよりも、自身の実現欲の投影対象としてしか見ていなかったのかもしれません。自分が思いつく限りのアイディアや、誰も見たことがない形態を実現すること。そうしたことが建築家の使命であり、「よい建築」なのだと勘違いしていたのです。プロジェクトが始まり、コロンビアを訪れるようになると、この気持ちが少しずつ確かに変容してゆくのを、自分自身で気がつくようになります。様々な社会的障壁を持ちつつも、明るい表情で話しかけてくれるまちの人々。深い教養と建築への静かな信頼を持ったコロンビアの建築家達。そうしたコロンビアの人々との交流を通して、私は建築を小さな個人の自己実現の対象とすることに違和感を感じるようになりました。そして、そうした建築への態度こそが3つの広場をコンセプトとすることに繋がったのだと思います。

時々散見される言説として、建築家は自分自身と深く向き合い、その主体性の中に作品性を発見し、それを確立するのが仕事である、という種のものがあります。建築家は、その生涯において、ある種のテーマを持ち続け、それを作品に反映させる。それが建築家に必要な作家性である、というものです。しかしながら、私は、これは大きな間違いだと思います。場所の力を顕現させるための努力は間違いなく必要です。それだって非常に難しいハードルでしょう。できるだけ正確に敷地の状態を理解し、地域のことを学び、それにふ

figure 1 The Parque Biblioteca (Park Library) Belen

さわしい場所を作り出すこと。その場所が残り続ける未来に対して責任を持つこと。しかし、それ以上の不必要な個人的願望の押しつけは、都市再生に何らの寄与も果たしません。ベレン公園図書館のプロジェクトでも、たいへん多くの図面を描きました。図書館の構造架構から、照明器具のデザインまで、数えればキリがありません。しかし、私はそのいずれにも自分自身の自己顕示欲のようなものが紛れ込まないように細心の注意を払ったつもりです。そして、だからこそ、日々多くの人が訪れるという幸運な結果に遭遇できたのだと思います。

自分の主体性を押し付けるのではなく、コロンビアの地域の方々の気持ちと自己とを同調させること。富める人も貧しい人も、海外の帰国子女から識字教育を受けてない人まで、その場所に訪れるコロンビアの一人一人を想像しながら、棋譜を読むように逆算式に設計を進めました。それは、広場がもたらした建築の多主体性の獲得といえるのかもしれません。 広場は個人の力では設計できません。広場の舗装や植栽の位置はデザインできても、本当に魅力的な広場は設計者の手を離れた時にはじめて実現されるのです。こう言い換えることができるでしょう。つまり、広場をプロジェクトの根幹としたときから、設計者の小さな主体性は昇華される運命にあったと。そのことを私は今でも考えます。そして、それは広場だけではなく、そして、コロンビアという恵まれた場所だから実現されたものではなく、日本の都市の中の狭隘なプロジェクトであっても、同じように達成されなくてはなりません。私たちは建築の多主体性という問題と、常に向き合い続けているのです。

The Parque Biblioteca (Park Library) Belen in Medellin, Columbia that we designed as part of the University of Tokyo's 21st century COE program has become a base for the city area, hosting around 3,000 people a day. This is one of the five park library plans promoted by the former mayor, Sergio Fajardo, which aimed to establish a base of regional regeneration in places which benefited the least from social and public services. The Belen area of which we were in charge is a dense residential area situated on slopes which are relatively gentler than many other places. A police station and jail were formerly built on the site for the library, and that cast a negative impression over the place in the community. In order to lead the place on to a new future, we made the construction of three open spaces the core of the project concept, more so than the design of the library itself. The result seems to be a factor in why such a large number of people visit this place every day.

At the beginning of the project in 2005, I was still in my mid-twenties. Lost in indeterminate admiration of being an architect and with a firmly fixed image of architecture, I believe I was yet to clearly link the act of architectural design and my own personality. I used to perceive the act of architectural design as if it were a manifestation of my own creativity, and an extension of a kind of self-realization. For a young man in his mid-twenties, having been offered this project I might have looked upon it as an object for projecting my own desire for self-realization rather than an overwhelming honor. To achieve the realization of ideas that only I could ever think of and a form that nobody had ever seen before. I mistook those things as the mission of an architect and 'good architecture'. As the project was launched and I had the chance to visit Columbia, I came to perceive that this feeling was gradually but surely changing. The cheerful local people spoke to us despite numerous social obstacles and then the Columbian architects - highly cultured and with a quiet trust in architecture. Through interactions with these Columbians, I became aware of a feeling of wrongness in seeing architecture as an object for the self-realization of one small individual. Thus, I think this attitude towards architecture directly led to the concept of having three open spaces.

We sometimes come across the kind of remark that says that an architect's work involves observing oneself in depth, discovering the characteristics of the work within their own identity and then establishing that. That an architect has a kind of lifelong theme, and reflects that in their work. They say that is what is necessary in a good architect's creative character. However I believe this is wrong. There is no doubt that a considerable amount of effort is necessary to realize the potential of a place. That is also quite a challenge - understanding the site situation as precisely as possible, learning about the region and creating a suitable place. Taking responsibility for the future that the place must sustain. Conversely, superfluous personal desires contribute nothing whatsoever to urban regeneration. Nevertheless, I drew a great number of drawings for the Parque Biblioteca Belen project. From the structural framework of the library to the lighting designs, they became countless. Yet I tried my utmost not to let anything like my ego slip in to any piece. As a result, therefore, we are blessed with the lucky result that so many people visit and appreciate the park library day after day.

To harmonize oneself with the feelings of the local Columbian people rather than insisting on one's own identity. The design was undertaken rather like in the reverse operation of reading the records of a game, picturing every single Colombian who would visit the place – from the rich to the poor, from the highly educated returnees to the illiterate. That can be described as the achievement of the multi-identities of architecture brought about by open spaces. Open spaces cannot be designed purely through the power of one individual. Although pavements and planting locations can be designed, the real attractiveness is achieved when the open space leaves the hands of the designer. In other words, the small identity of a designer was destined to be sublimated at the moment when the open space became the core of the project. I still think about that now. And this has to be achieved in small urban projects in Japan as well, and not just because it was an open space or because it was in Columbia, a site blessed with advantages. We are constantly facing the problem of the multi-identities of architecture.

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「生きる選択肢」を増やす：起業文化を根付かせるCEDEZOの試み

山重 徹 / Toru Yamashige

メデジン市は、南米コロンビア北西に位置するアンティオキア県の県都であり、人口（人口約225万人）・経済規模において、首都ボゴタに次ぐコロンビア第二の都市である。同市は、メデジン川が市の中心部を南北に貫く谷状の地形をしており、16のコムーナ（都市部）と5つのコレヒミエント（農村部）と呼ばれる行政区分により構成される。

メデジンは1930年より、コーヒー・繊維産業によって急激な経済成長を遂げ、多くの人口流入を経験した。しかし、同時に1946年に勃発した内戦の混乱に乗じて、様々なギャングが暗躍し、1991年には世界で最も高い殺人率（年間の死者数は6,349人）記録するなど、国際的にも最も治安の悪い都市としてのレッテルを貼られた。これらの犯罪集団の温床となっているのがスラムである。市内のスラムは、市の周縁部の急斜面にへばりつくように形成されており、これは、地方から流入してきた人々が土地の不法占拠・不法分譲を行なうことによって形成されてきた。スラムは、公共空間が極めて少ない猥雑な形状をしており、地形的にもリスクの高く、中心市街地からは隔離されているために、行政からの死角が多い。また、スラム居住者のほとんどが教育を受けておらず、雇用の機会も得ることが困難なことから、安易に稼ぐことができる麻薬ビジネスへと手を染める悪循環も生じている。このようにメデジンでは、地区の空間的特性と経済的特性の両者が構造的に絡み合い、スラム市街地において根深い貧困問題・治安問題として表出している。

このような状況からメデジンが再生に動き出すのは1990年代以降である。1991年にコロンビア憲法が大改正され、各基礎自治体が独自の都市像を設定し、都市問題に受難に対応した計画を策定することが可能になった。その後の関連法の制定により、都市全体の長期的な物的整備方針を示す「地域整備計画」（Plan de Ordenamiento Territorial; POT）を、そしてマスタープランとしてのPOTを社会・経済状況を踏まえながら具体的に進めていく戦略を示す「開発計画」（Plan de Desarrollo; PD）を、各基礎自治体が策定して行くことが義務づけられた。

メデジンでも1994年から各市長により開発計画PDが策定されてきたが、スラムに代表される都市問題に関連して大きく政策の舵を変えたのが、セルヒオ・ファハルドが市長に就任した2003年以降である。ファハルドはメデジンの再生政策を”Medellin, la mas educada”（メデジン、最高の市民へ向けて）と銘打ち、それまで政策上軽視されてきたスラム地区に焦点を当て、スラム地区が抱える貧困・格差問題を市全体の社会問題と捉え、明確に政策課題化した。ファハルド市政下で推進された開発計画は「社会的都市計画」（Urbanismo Social）と名付けられ、従来の物的環境整備だけでなく、改善事業に並行して社会的包摂プログラムも進めて行くことが重視された。

この政策の中で、PUIと呼ばれる空間整備事業による公共空間整備とともに、政策の両輪に位置づけられたが雇用創出を軸とする社会的包摂プログラムで、その拠点となったのがCEDEZOである。CEDEZOとは「起業育成促進センター」（Centros de Desarrollo Empesarial Zonal:CEDEZO）の略であり、スラム地区の住民の中から新規事業者を発掘・育成のために、ビジネス開発のための様々な支援を行なう拠点である。2005年からその運営が始まっており、現在までに14の拠点を市内に擁している。CEDEZO設立の背景には、1980年代から続く不況及び根強いインフォーマルセクターの存在、高い失業率といった社会問題がある。特に、人も経済も物的環境も著しくすいたいしているスラム地区では、①若い世代や女性、高齢の人々が職を得る機会が少ないこと②インフォーマルセクターが市場に入り込もうとすると競争に負けて生き残れないこと、の二点が問題視され、彼らを長期的に支援して世紀の雇用を生み出すことを目的にCuluturaEと呼ばれる起業プログラムが打ち出された。CEDEZOはCulturaEを展開するセンターとして構想、建設され、起業支援拠点として機能している。拠点としてのCEDEZOは、マイクロクレジットおよびマイクロクレジットネットワーク、そしてビジネスアイデアコンペの3つのサービスを、個人のニーズに合わせながら提供する場である。そのため、CEDEZOには利用者の要望を聞くために決まった職員が常駐している。

CEDEZOのような低所得層への経済的な支援プログラムは、2004年以前から展開されてきた。しかし、拠点となるべき施設のいずれもがCEDEZOのようなスラム地区内ではなく、スラムから遠く離れた中心市街地に設置されていた。そのため就業支援施設はほとんど有効にはしようされなかったのである。そこで、そうした経緯を踏まえ、2004年からは雇用創出の拠点を需要者の多く住むスラム地区内に設置した。住民の生活圏内に拠点が存在することは、利用者が気軽に立ち寄れるだけでなく、運営者側が地区のニーズを詳細に把握できるという利点を持つ。さらに、CEDEZOのほとんどが、PUIによって地区に新しく建設された公園図書館や文化施設の内部または近傍、駅や広場の近く等、スラムの中心地に戦略的に設置されている。すなわち、CEDEZOは単なる雇用創出のための場ではなく、一種のランドマーク的存在として機能しているのだ。

こうしたPUIにあわせたCEDEZOの展開は、まずは市の北東地区およびコムーナ13に集中的に行なわれた。メトロ・カブレにより死を縦断する公共交通（メトロ）とフォーマル市街地に連結されている。斜面の中腹にあるケーブルカーの駅を降りたすぐ目の前に、同地区のCEDEZOは立地している。施設に隣接して広場が整備されており、存在を容易に認識できるだけでなく、空間的にも開放性のある構成となっている。またCEDEZOはPUIによって整備された街路（106通り）、公園図書館、正広場に近接しており、疲弊地区の再生事業のツボとも言える場所に立地している。2005年にオープンし、3名のスタッフ、5部屋、面積400m2の施設である。2008年から2011年（10月）の間に1,664人がCEDEZOに登録している。

サント・ドミンゴ地区は、メデジンのスラム再生の典型事例である。メトロ・カブレにより市を縦断する公共交通（メトロ）とフォーマル市街地に連結されている。斜面の中腹にあるケーブルカーの駅を降りたすぐ目の前に、同地区のCEDEZOは立地している。施設に隣接して広場が整備されており、存在を容易に認識できるだけでなく、空間的にも開放のある構成となっている。またCEDEZOは再生プランによって整備された街路（106通り）、公園図書館、小広場に近接しており、疲弊地区の再生事業のツボとも言える場所に立地している。2005年にオープンし、3名のスタッフ、5部屋、面積400m2の施設である。2008年から2011年（10月まで）の間の施設登録者数は1,664人にのぼる。

コムーナ13のCEDEZOは、サン・ハビエル駅の南側約100mの位置に立地しており、公園図書館に隣接している。2006年にオープンし、4名のスタッフ、4部屋、面積200m2の施設である。CEDEZOは2階に入居しており、同建物の1階には、市のアーバンデザイン事業を一手に引き受けている開発公社EDUが入居している。コムーナ13のメインストリート（99通り）ともほど近く、駅と歩道橋で結ばれており、簡単にアクセスすることができる。

figure 1 CEDEZO building

CEDEZOは新規起業者に対する補助だけでなく、イベントや部屋の開放を通してコミュニティに対しても働きかけを行なっている。その代表に、不定期に開催されるフリーマーケットの開催がある。当該のCEDEZO支店の支援を経て独立した起業家の商品や活動内容を展示するイベントである。地区住民同士の交流を通し、起業家側としては自身のビジネスのプロモーションの機会になると同時に、住民としてはどのような起業家が自身のコミュニティにいるのか、またCEDEZOがどのような機関なのかを知る貴重な場として機能している。北東地区では、フリーマーケットが開催される空間は、CEDEZOを始点に新たに埋め込まれた公共空間の軸を協調するかのように公園図書館までのびており、地域内の拠点性を強化する役割もある。

このように、CEDEZOは①雇用の創出や地区内経済活動の推進②住民のエンパワーメント機能③再生拠点としての拠点性を強化する機能を備えており、社会的弱者の人口比率が高い南米ゆえの新たなまちづくりの場の展開可能性が見出せるのである。

In Medellin, the second largest city in Colombia, the integrated interventions called PUI and CEDEZO have been carried out by the government since 2004. These interventions focus on spatial regeneration and employment creation especially in the slum districts and are included in Medellin's development plan to make it sure to be executed in the same time. PUI is the framework to generate public space/facilities in the slum districts, and CEDEZO is the center that aims to create employment through supporting those who have a business ideas but no ability to implement it. CEDEZO is the unique tool for the slum regeneration in terms of the way that not only to create employment but also empowering the community through holding several kinds of event for the slum residents.

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[山重 徹 / Toru Yamashige]
東京大学大学院都市工学専攻都市デザイン研究室修士課程修了

インフォーマル市街地のガバナンス：ボゴタとメデジンの再生政策

Governing the informality in Bogotá and Medellín

阿部 大輔（龍谷大学）/ Daisuke Abe (Ryukoku University)

figure 1 ボゴタ市のスラムの現況（筆者撮影）

1. 世界の都市再生運動からボゴタ／メデジンを考える

東京大学cSUR-SSD研究会がまとめた『世界のSSD100』（彰国社2007）は、疲弊した都市環境を再生し人間の手に取り戻そうとする都市再生運動が世界レベルで大きなうねりとなっていることを示している。とはいえ、欧米やわが国のように都市化が成熟期を迎え、むしろ人口減少にどのように地域をマネジメントするかが問われる諸国と、都市化に依然として歯止めが利かずメガシティ問題に対応を迫られる発展途上国では、再生に向けたアプローチも異なってくる。

コロンビアの首都ボゴタ、第二の都市メデジンは、困難な状況下、挑戦的な政策アプローチにより、徐々に都市再生に成功してきた。リオデジャネイロやクリチバ、サンティアゴ・デ・チレなどと並ぶ、中南米を代表する都市再生の事例である。ボゴタおよびメデジンの都市再生過程を振り返ると、何点かの共通するアプローチが見えてくる。

・市長の強力なリーダーシップと効果的な組織運営
・インフォーマル市街地（スラム）の居住環境の漸進的改善
・交通権・文化権の確立を通した地域住民のエンパワーメント（シンボリックな施設・機能・活動の挿入）
・雇用政策の転換

2. インフォーマル市街地の漸進的改善

国連の推計によれば、世界の都市人口の約3割、約10億人もの人々がスラム地域に居住している。発展途上国のメガシティ問題は、人口の大半が居住するスラム地区の問題でもある。

スラム地区は、増殖を続けている。かつての歴史地区（中心市街地）が空洞化しその結果として低所得者層や移民の集住地区へと変容していった欧米諸都市の場合、スラム地区というよりは地区のスラム化という表現の方が適切かもしれない。多くの場合、政策的空白やガバメントの欠如が原因となっている。一方、中南米のスラムは市街地の「スラム化」といったような動態の問題ではなく、より社会構造的な要因が強く働いた結果、生成されてきた。

スラムの大部分は正規の土地所有権を有していない、あるいは正規の開発許可手続きに則っていない状態で建設行為・市街化が進展するという点で、「インフォーマル」である。このように形成されたインフォーマル市街地は、未確定な土地権利、道路舗装や公共空間および施設等の一般的なインフラの未整備、住宅内のインフラの欠如（上下水道など）、急斜面地や河川の近傍への立地とそれに起因する災害時の脆弱性といった問題を抱える。その中でも、空間・社会・経済の問題が複雑に絡み合い、特に劣悪な状況を呈しているのが「スラム」である。

スラムは常にクリアランスの、あるいは「解消すべき」対象であった。地区の大規模な助教は問題を他の場所に移すだけであるから、従来はスラム内に順次低廉住宅群を供給するというアプローチが主であった。デイヴィスが指摘するように、1970年代後半以降、インフォーマル市街地の存在を容認し、スラム地

区を住民主導のもとでオン・サイトにより改善していく「セルフヘルプ」の考え方が主流となっている(デイヴィス2010ほか)。

コロンビア諸都市のスラム形成のメカニズム

ボゴタやメデジン、カリといったコロンビアの大都市のスラム形成の社会背景には、内戦を背景とするDesplazamientoと呼ばれる強制移住がある。1946年に勃発した内戦では、地方部においてゲリラや犯罪組織が暗躍し、彼らの活動拠点や麻薬の栽培地を獲得するために、住民を暴力的に追い出した。追い出された人々は故郷を失い、大都市へ移住することを余儀なくされた。こうしてボゴタやメデジンの人口は爆発的に増加した。

地理的不利地域に居住するスラム住民はどのように土地を獲得するのか。以下の2つがよく見られるパターンである(山重2011)。

① 不法土地占拠:土地を無断で占拠し、セルフヘルプで住居を建設する。適切な材料や行程を経ずに建設されるため、脆弱な建築構造のものがほとんどである。また、不法に土地を占有しているため、土地所有権を持たない。

② 不法な土地分譲:基本的なインフラ整備を備えていないため法的に売却することのできない土地を「海賊的に」売却する業者(urbanizadores piratas)から土地の所有権を低価格で不法に購入する。この場合、購入者は不法占拠とみなされないが、所有権自体は不法のままである。

このように、スラム地区が抱える貧困の根底には、不安定な土地所有権の問題がある。不法な土地所有権は、土地を担保とした補助金需給など信用制度へのアクセスを困難とし、スラム地区の貧困の問題の解決を阻んでいる。こうした問題認識のもと、ボゴタ・メデジンでは、インフォーマル市街地における土地所有権の「フォーマル化」、ひいてはスラム地区全体の合法化へ向けた各種プログラムが実施されている(Torres, 2009)。

ボゴタの「脱スラム化」戦略

ボゴタを中南米を代表する再生都市に押し上げた立役者である元市長、エンリケ・ペニャロサ[Enrique Peñalosa:在任1998〜2001年]は、在任時の開発計画(2000年)に盛り込んだ「7つの戦略」の第一番目に、「コミュニティの脱スラム化」[Desmarginación de barrios]を掲げている。政策実施の初期の3年間だけを見ても、約4億ドル相当の投資がなされたが、これはペニャロサ市政の予算の実に13%を占める。一般に20〜50haの事業範囲が設定され、その中において公共空間・施設・インフラの整備ならびに社会的包摂プログラムが実施された。364のコミュニティが合法化の措置を受けるとともに、上下水道網の整備が700のコミュニティにおいて実現された。約300もの地区公園が整備され、危険地域に居住していた約3000世帯の住み替えが実施された。公共施設の建設も進んだ(3つの病院、29の学校、4つの大規模図書館など)。スラム地区の改善は、そのコミュニティ内部の環境整備に加えて、専用レーンを備えた高速バスTransmilenioや自転車専用ルートCicloRutaの整備によるアクセシビリティの大幅な改善によっても補完される。

界隈統合改善プログラム

ボゴタの都市周縁地域は37,414haの領域に広がっており、そのうちの6,500ha、およそ18%に相当するエリアが違法に形成されたインフォーマル市街地となっている。

C.Escallónの調査によると、2005年の段階で、ボゴタには175万8,344戸の住宅が建設されており、そのうち約54%が違法の状態にある。こうした違法バラックが広がるエリアは8,000haに及ぶ(ちなみに「適法エリア」は30,000ha)。そして、依然としてインフォーマル市街地化は進展中である。劣悪な住環境や失業、治安問題など様々な問題を複合的に抱えているスラム市街地をどのように合法化し、環境整備を進めるかが都市政策の大きな課題となっている。

スラム地区の合法化プロセスに並行して、界隈統合改善プログラム[Desmarginalización de Barrios y Mejoramiento Integral de Barrios]に基づき、住民発意による漸進的な生活環境改善を進めている。整備対象エリアは「地区計画単位」[UPZ:Unidad de Planeamiento Zonal]と呼ばれ、重点整備対象を限定し、公共空間の改善や住宅の修復、交通動線の向上を図っている(figure 2)。

メデジンのスラム改善プログラム

メデジンで最初のスラム改善はモラビア地

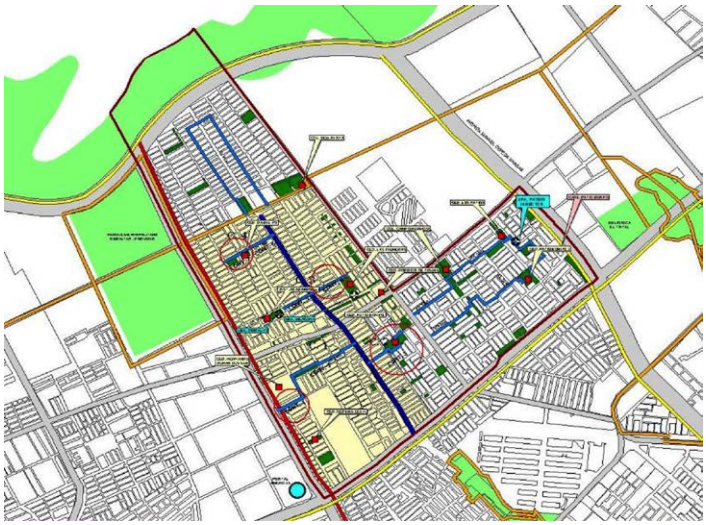

figure 2　Ciudad BolívarにおけるPatio Bonito界隈の住環境改善プラン(UPZ82)
(C.Escallón氏提供)

figure 3　Ciudad Bolívarの現況(筆者撮影)

区[Moravia]を対象に1983年に行なわれた。同地区は市の中心市街地内に位置する。かつては公園だった場所に不法投棄された産業廃棄物が山積し、そのゴミ山が不法占拠されることによってスラムが形成された。モラビアは当時15,000人もの人口を抱え、劣悪な地区環境、とりわけゴミ山による環境汚染が深刻であった。市によって地区改善のための委員会が創設され、改善事業が1983～87年にかけて実施された。同事業は、ゴミ山に住む世帯の移転や氾濫の可能性のある水路の整備などの災害対策を中心に実施された。しかし、移転を余儀なくされた世帯が再び不法占拠によりスラムを形成するという問題も発生した（山重2011）。

メデジンでは都市統合事業(PUI: Proyectos Urbanos Integrales)を用いて、スラム地区において公共空間を基軸とした空間整備を、住民参加を通して実施している。PUIでは事業の目的を以下のように掲げている：「市内の脆弱な地区に対して全ての資源を投入し、物的な再生を通して、コミュニティの活性化など社会的な再生を図る。そして、居住者の生活の質を向上させる」。物的整備だけでなく、それを通したスラム地区住民の社会再生が着地点として認識されている。その有効性が認められ、市長が変わった今でも、対象地を変えてPUIは受け継がれている。

3. 文化施設の戦略的配置：公園図書館政策

社会的な衰退も目立つような地域では、交流のみならず、文化へのアクセスがエンパワーメントの面からも重要となる。ここでは文化の機能を生かしたメデジンの再生の取り組みを紹介する。

Medellín, La más educada政策

麻薬に代表される社会問題、未整備のインフラや劣悪な居住環境といった都市問題がそれぞれに絡み合い、世界でも有数の治安の悪い都市として認識されていたメデジンがその環境を大きく変えるのは、若きセルヒオ・ファハルド[Sergio Fajardo]が市長に就任した2003年以降である。高い失業率や治安の問題は歴代の市制においても最優先課題であり続けた。しかし、ファハルドはインフラ整備や住宅整備といったハードの整備もさることながら、真の都市再生のためには、メデジンに住まう人々の再生ことが最重要であると認識していた。彼はメデジンの再生政策を “Medellín, la más educada”（メデジン、最高の市民へ向けて）とのスローガンに託した（阿部・山重2012）。教育や文化にアクセスする機会、そして就業に必要な能力開発の機会の不足こそが、スラム住民に代表される社会的弱者の存在を都市社会の中に固定化しているという認識が背景にある。

後にファハルド市政下で推進されたのは、社会的なアプローチを重視したアーバンデザインやまちづくりを基盤とする都市政策であり、「社会的都市づくり」[Urbanismo Social]と呼ばれた。メデジンでソーシャルな課題と言えば、スラム住民の教育文化レベルの低さ、それに起因する就労機会の低下とインフォーマルセクターへの従事であり、その結果としての治安の悪化であった。そうした問題は、従来の物的環境整備だけでは到底解決できず、改善事業に並行して社会的包摂プログラムも進めていくことが重視されたのである。

公園図書館政策

先述したファハルド市政の「社会的都市づくり」の理念は、公共空間の整備を通して社会再生を図るというものであったが、その中でも根幹的な戦略を担ったのが公園図書館プ

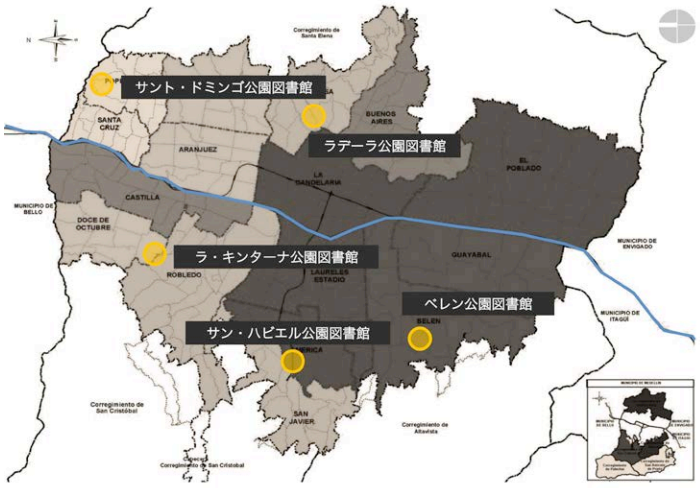

figure 4　公園図書館の立地

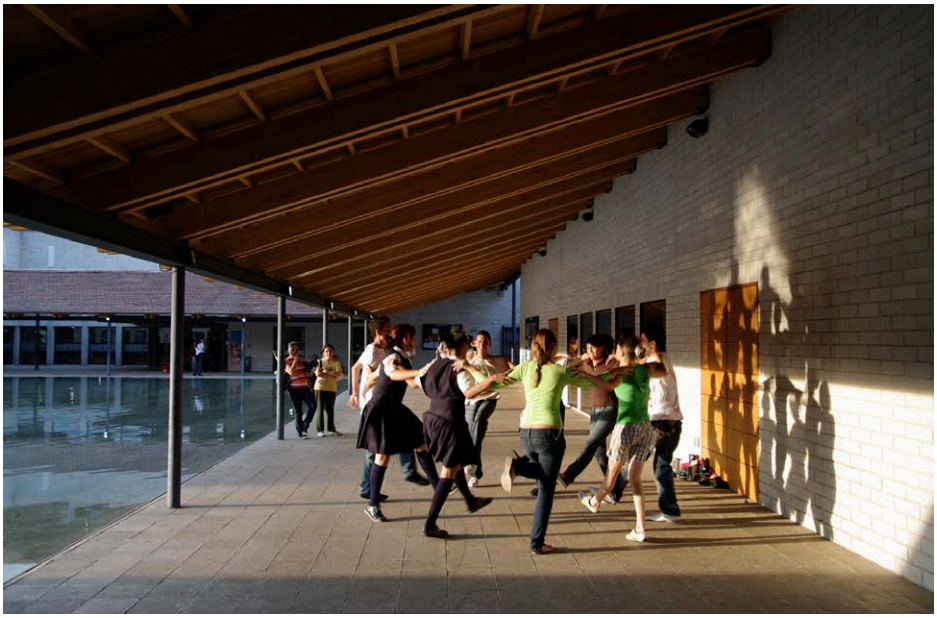

figure 5　ベレン公園図書館：夕暮れ間際に遊ぶ中学生達

ロジェクト(Parque Biblioteca)であった。これは、歴史的に文化施設に触れる機会が稀少であった空間的にも社会生活的にも疲弊したスラム地区に、「最も貧しい場所に、最も美しいものを」という考えの下、優れたデザインの図書館を埋め込み、隣接して質の高い公共空間を整備することによって、図書館の機能に加えて地区内に不足していた公園的な空間を産み落とす意図がある。内藤廣氏（東京大学大学院社会基盤学専攻教授・当時）が設計したベレン図書館もこのプロジェクトの一環に位置づけられている（figure 5）。

山肌にへばりつく形でインフォーマルに広がったサント・ドミンゴ地区は、インフラの未整備、住環境の低下、麻薬組織・犯罪集団の抗争による治安の悪化といった都市問題に悩まされていたが、近年、公共空間の創出、公園図書館の整備、学校施設の整備を起点とした漸進的な環境改善により、蘇生を果たしつつある。

サント・ドミンゴ地区の再生の一端を担っているのがスペイン図書館だ（fig 6）。地元建築家による設計で、見晴らしのよい台地に立地している。図書館機能だけでなく、近隣住民が気軽に集える場所として、また、パソコン教室や保育所など総合的な地区施設としても機能している（figure 7）。公園図書館は後述するケーブルカーの駅からのびる公共空間ネットワーク上に戦略的に位置づけられており、新たに近傍に生み出された広場は住民の格好の遊び場となっている（figure 8）。

＊＊＊

ここではメデジンの政策を重点的に紹介したが、ボゴタでも図書館を核とするインフォーマル市街地の再生の試みが展開されている。かつてのゴミ処理施設をコンバージョンしたエル・ティンタール図書館は再生政策の一環として整備され、自転車専用ルートの整備と組み合わせながら敷地周辺を公園として整備し、周辺の労働者コミュニティの一体的な再生を図っている。

メデジンの公園図書館政策は、コミュニティ・ベースの図書館ネットワークである。図書館自体は施設（建築）でありハードの存在だが、公園という公共空間と図書館内で展開される各種の社会的包摂プログラムを併せてみると、むしろソフト面からの公共空間の形成であるとも理解できる。一般的に、スラムの住民は都市における文化的活動から排除されてきた。メデジンでは社会的弱者（貧困層）が包摂されていく過程が観測される。公共空間の創出だけでなく、市民文化としての図書館を拠点整備し、日常生活に文化活動の糸を織り込むことで、市民としてのアイデンティティや誇りを「見える化」していく。メデジンの取り組みは、文化が本来有するインキュベーターとしての役割を再認識させる。

figure 6　スペイン公園図書館（サント・ドミンゴ地区）

figure 7　公園図書館は学習・集い・交流の場として機能している（サント・ドミンゴ地区）

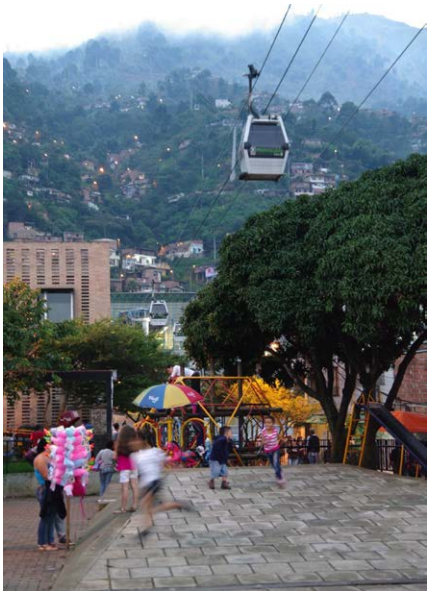

figure 8　公園図書館に近接して再整備された広場

4. 公共交通の導入による移動環境の再生

市民の「足」をどのように確保するか。バリアフリー化を含め、交通権の保障など公共交通の利便性とサービスの維持は、高齢化社会・人口減少期にあるわが国でも大きな課題である。ボゴタとメデジンでは、格差社会への対応として、特に移動交通手段の確保を都市再生戦略の基礎に置いてきた。

ボゴタ

旧市街（La Candelaria）を中心とするボゴタの中心市街地は、長らくにわたり荒廃の一途をたどっていた。街路や広場といった公共交通は麻薬の取引など違法な業者に占拠されており、組織間の抗争も頻発するなど治安も悪化していた。特に、旧市街の広場から2ブロックしか離れていないカルトゥーチョ [Cartucho]

地区は麻薬組織に完全に掌握されており、一般市民は決して足を踏み入れてはならない場所となっていた。治安が悪いので旧市街にはテナントもあまり入居せず、空洞化が進行した。そうした状況を受けて、市はカルトゥーチョの全面撤去に踏み切る。約600の建造物を取り壊し、約23haに及ぶ公園を整備し、市民のアイデンティティの核である旧市街に人々が戻ってくることを狙った。そして、旧市街に隣接し、かつて大量の自動車道路で大混雑していた中心市街地の大動脈のヒメネス通りを、公共交通（バス）と歩行者優先の遊歩道へと転換した（figure 9）。

ボゴタは自動車社会である。格差社会でもある。自動車保有者は市民の約20%に過ぎないが、そうした富裕層が大きな政治力を持っていることも事実だ。ペニャロサ市長が大胆な一連の交通政策を公表し、実施する過程では大きな抵抗があったが彼は持ち前のリーダーシップで交通システムの改革に乗り出す。ブラジルのクリチバの経験を参考にしながら、バス専用レーンを整備し、Transmilenioと呼ばれる公共バスシステムを整備した（figure 10。なお、大規模幅員道路がボゴタ市内を何本も走っているが、これはコロンビアの独裁政権時代にコルビュジェが計画を作成し、一部実施されたことを背景としている）。また、ナンバー規制やカーフリーデーの実施による交通量のコントロールにも取り組んできた。都市再生運動の観点から見れば、自動車に支配された都市空間を人間の手に取り戻すこと、歩きやすい空間づくりを行うことは、全世界的に確認されたアプローチであった。さらに、Ciclo Ruta（自転車専用ルート）を整備し、歩行環境だけでなく、交通の手段を増やすことで様々な移動が可能になるようにも配慮している。スラム地区の問題は土地所有権を基礎とする居住環境の問題でもあるが、同時にフォーマル市街地との連続性、交通手段の確保の問題でもある。ボゴタでは、そして次に見るメデジンでは、スラムの改善と都市全体の交通システムの抜本的改造を連動させた政策に挑戦してきた。

メデジン

メデジンは、アブラー渓谷と呼ばれる南北にメデジン川が貫く谷状の地形を有する。谷の底部には行政・産業等の地区が、その周辺部には住宅市街地が集積している。また、メデジン川に沿って国内唯一の鉄軌道システム（Metro）を有しており、昨年からはメトロプルス（Metroplús）と呼ばれるBRTが試運転を開始している。スラム地区の統合的な再生政策の一環として、メトロカブレ（Metro Cable）と呼ばれるケーブルカーを山裾の東西方向へと拡張し、インフォーマル市街地から都心部へのアクセス改善を図っている。ケーブルカーが行き来する風景は、公園図書館周辺の賑わいと並んで、メデジンのスラム地区再生の象徴的な景観だ（figure 11および本誌表紙カバー写真）。

5. スラム住民のエンパワーメント

インフォーマル市街地の問題は教育レベルの低さや雇用問題など社会的・福祉的な問題である。メデジンでは、スラム住民のエンパワーメント政策として、CEDEZOと呼ばれる起業育成促進センターを設立し、無学な若者が犯罪に手を染めぬよう、起業に向けた様々なプログラムを展開している。詳細は先の山重論文を参照するとして、ここではスラム住民の大きな課題である就業・雇用の面から見たCEDEZOの特徴を指摘したい（阿部・山重2012）。

第一には、従来の「雇用創出」アプローチから、積極的かつ内発的な「起業家育成」アプローチへと明確に雇用福祉問題の論点を転換している点である。従来の雇用施策は、SENAと呼ばれる職業訓練所にて技能を身につけ、そして企業に雇ってもらうというアプローチ、もしくは市が水路や広場の掃除夫として雇い入れ、面倒を見るというアプローチが取られて

figure 9　ヒメネス通り（ボゴタ）

figure 10 バス専用レーン（ボゴタ）

figure 11　スラム地区に走るケーブルカー（メデジン）

いた。一方、起業家文化醸成プログラムの特異な点は、その名の通りに、自らがビジネスのアイデアを考え、そして自らが起業してビジネスを行なうという点である。従来の手法が、雇用をもらいにいくという受動的な考えだったのに対し、当プログラムでは、雇用を自ら創り出すという能動的なものに変化した。CEDEZOの活動は、単なる雇用創出のみならず、起業文化を脆弱市街地に根付かせることで、自律的な、あるいは内発的な雇用循環の構築を目論んでいる。自分の力で雇用を獲得し、そしてビジネスの拡大を自らが試行錯誤しながら行なっていくこのやり方は、まさにエンパワーメントの視点を強く取り入れたものであると言えよう。

第二には、「雇用支援の拠点」の戦略的配置である。かつて、雇用支援の拠点となるべき施設のいずれもがCEDEZOのようにスラム地区内ではなく、中心市街地に設置されていた。スラム住民は、サービスを利用するためにわざわざ都心へ行く必要があった。平地の市街地と斜面に形成されたスラムを結ぶケーブルカーは当時存在せず、就業支援施設はほとんど有効には使用されなかったのである。そこで、そうした経緯を踏まえ、2004年からは雇用創出の拠点を需要者の多くが住むスラム地区内に設置した。住民の生活圏内に拠点が存在することは、利用者が気軽に立ち寄れるだけでなく、運営者側が地区のニーズを詳細に把握できるという利点を持つ。さらに、CEDEZOのほとんどが、地区に新しく建設された公園図書館や文化施設の内部または近傍、駅や広場の近く等、スラムの中心地に戦略的に設置されている。

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『SUR』は、社会基盤学、建築学、都市工学の専門家が協力して形成した東京大学グローバル COE プログラム拠点「都市空間の持続再生学の展開」が刊行する雑誌です。

［1］専門分野の垣根を取り払う場としての機能
［2］国際的に普遍的な課題の設定
［3］仲間内での機関誌の枠を超えた開放性
［4］時代の言論を先導する深みのある先端性

――という 4 つの編集方針を掲げ、「都市空間の持続再生」に関する議論の場と思考を深める場を多くの方々に提供することを目指しています。
本拠点は、21 世紀 COE プログラムとして拠点を形成した 2003 年度に活動を開始し、都市空間に関わる様々な局面において、数多くの研究成果や社会的活動を行ってきました。『SUR』はそうした具体的な活動の成果を、国内外に広くご理解いただくことを目的に発行するものです。読者の皆さまからご意見やご支援をいただくことで、本拠点の活動をより充実したものにしていきたいと考えております。

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