

LUIS CARLOS JIMÉNEZ REYES

THE VULNERABILITY BEFORE NATURAL EVENTS AND URBAN INSECURITY, FACTORS WHICH INCREASE SEGREGATION IN THE SOUTHERN PART OF BOGOTÁ

Summary - Urban segregation is a social and spatial phenomenon to which different authors attribute more or less shared features. These features underline several negative effects experienced by a population which generally shares a common space, and which acquires such a condition of segregation because of the accumulation over time of certain trends of urban growth, and because of socio-economic dynamics which are specific of urban environments. Some of these features refer to actual geographical space and other to the population.

This article focuses on some of the negative effects which have been dealt with less frequently by scholars. In particular, reference is made to the greater social vulnerability caused by the comparatively disadvantageous exposure to natural hazards, by the greater exposure to violence and urban insecurity, as well as by the unfair treatment resulting from the application of planning and land use tools, which in turn would cause perverse effects for the entire population. The spatial environment involved is the southern part of the city of Bogotá, which approximately coincides with the urban part of the Tunjuelo River basin.

Introduction - This text deals with a specific research goal which stems from various projects in which the author has taken part, some born of joint work with several offices of the Administration of the Capital District of Bogotá, some from direct observation and ethnographic work with BA students in geography, some from the author's personal research preferences. This work and this research have allowed to inquire about the social and environmental problems of the Tunjuelo River basin and of the southern part of Bogotá.

This essay explores the relationship, or causal chain, between landscape forms, exposure to natural hazards, history of land occupation, perversity of planning tools, higher relative exposure to violence and situations of insecurity, all of which finally emphasize the conditions

of segregation and worsen the social vulnerability, despite the remarkable efforts made by the most recent city governments to provide infrastructure and equipment.

The population of these southern territories is prone to falling into adverse situations, as regards their relationship with the environment, to be prey to certain "traps of nature". Additionally, this population is exposed to significantly higher crime rates if compared with other parts of the city. In the same way, the question arises of how the stigmatization in which the population of the South of Bogotá is held by the city as a whole may be itself worsening the negative perception which the rest of the city has of inhabitants of this part of the city. A vicious cycle of stigma and segregation may be noted here.

Definitions and contextual elements - According to François Madoré (2004), the concept of segregation has a history which it is necessary to take into account. A Marxist reading insisted, in the 1980's, that segregation is caused intentionally by a few dominant classes who want to expressly put aside or exclude some dominated classes; but that is not the only explanation which may be put forward for "segregation". On the other hand, this intentionality may not be given for certain, and we should rather think about the ways in which the State has ensured the distribution of wealth, the access to ownership of land, the compensation for work and the access to social security.

It is not necessarily true that in Colombian society, and even less so in Colombian cities, there have been situations of deliberate segregation of a sector of the population towards another. Rather, what exists is an inaction or failure to perform by State and Governments in order to solve specific situations of segregation generated by the evolution or by the specific dynamics of growth of the economy in the cities and in the countryside of Colombia.

According to several authors, wishing to classify this concept, there are at least three multiple trends. Three trends that are not mutually exclusive, but rather are complementary: in the first place, a geometric trend explains segregation as the distance between the dwelling places of certain population groups; a second trend explains it as the unequal access to goods and services offered by a city to its population, and a third one as the existence of spatial enclaves very clearly marked by their ethnic, racial or social character. The outlook this essay adopts tends to fall within the first and second of the abovementioned trends. As regards the third trend, in Colombia there are 'social' enclaves within the urban environment, but there

wouldn't really be signs of segregation marked by their ethnic or racial character, and if such segregation exists, it is rather a positive segregation, i.e. for the benefit of a population which, whereas in other times was the subject of a discriminatory treatment, it must be nowadays "positively discriminated" through policies that attempt to remedy situations of social vulnerability.

Other extremely valuable definitions may be added, which locate us in the dimensions of the concept this essay deals with. Such is the case with Grafmeyer (1996) who said that segregation is a concept that should be considered both as a social fact of "setting aside" or "neglection", with all its meanings, and as an act of physical separation in the strict sense of the term. The two terms appearing between quotation marks host a range of meanings that involve, in particular, social exclusion, neglect and oblivion.

The sociologist Manuel Castells (1972: 287) offered a definition that, formulated decade of the seventies of the last century, is still valid today, and for the purposes of this essay: "segregation is the tendency towards the organization of space in areas having a strong social homogeneity and a strong external social disparity; this difference is understood not only in terms of "difference", but also of "hierarchy".

The negative effects, or the consequences of segregation, based on Feitosa (2006), are, among other aspects:

- The systematic exclusion, implicit or explicit, of certain groups of population because of a specific condition;
- Unequal access to infrastructure and basic public services;
- The lower probability of access to employment,
- Stigma and discrimination; and finally
- Greater exposure to violence and insecurity.

It is necessary to add two features to these consequences of segregation, on which this essay will insist. In the first place, it is something that is both a consequence and a cause: the imposing, owing to the logics of the market of urban land, upon specific sectors of the population to live in certain geographic areas of the city that have cheaper urban land prices and at the same time tend to be more exposed to multiple natural hazards, such as landslides

or flooding; finally, it is precisely this land which is settled by people with lower incomes than the rest of the population.

The second issue is a cause of segregation, and has to do with the perverse effects that planning and land use tools may harbor. Normally inspired by ideals of justice and order, these tools may also punish sectors of the population which are already segregated. In our case, some planning tools, and specifically Bogotá's zoning laws ("Plan de Ordenamiento Territorial"), are also increasing the conditions of segregation and exclusion; specifically, from the double perspective of geometry and of social segregation, it is necessary to underline the predominant concentration towards the South of the city of mining areas and of high impact equipment, both of which have restricted mobility, such as the landfill, the only place the city has for the disposal of waste products, and the only three industrial mining parks. This seems contradictory from an environmental point of view, since garbage trucks and the trucks transporting building materials must travel more than 40 kilometers to cross the city.

The high exposure to natural hazards because of the settling in natural landscapes with steep slopes or liable to flooding, as well as the exposure to situations of insecurity and violence, although they are more and more seen as generators of segregation, are nonetheless the least addressed as causes or conditions of segregation and space fragmentation. This essay discusses them in the specific case of the South of the city of Bogotá, an area more or less coincident with the Tunjuelo River basin. Therefore we shall indifferently refer to the south of Bogota or to the river basin, as the geographical space which we are studying.

The origins of the South-North differentiation and the provision of building materials in the city of Bogotá

At the beginning of the 20th century the urbanization of the city of Bogotá accelerates; in less than 100 years the city goes from around 100,000 inhabitants today the nearly eight million of today. At the outstart of this process of urbanization there was a process of segregation and differentiation between a rich and properly settled North and a poor and precarious South. Several factors appear to have contributed in the creation of this distinction: in the first place, because it was decided to locate in the South of the city "some urban facilities for poor and marginalized people, such as the home for the elderly and the orphanage, while in the north

priority is given to the construction and improvement of the connecting infrastructure, such as the tram and the railway" (Suárez 2006, quoted by SDA-UNAL 2008: 90). It is necessary to make clear that if this differentiation does not fully apply to contemporary Bogotá, in the Tunjuelo River basin, and in general to the South and West side of the city, there seem to be several combined socio-spatial differentiation characteristics, attributable to processes of segregation with regard to the rest of the city.

The geology and the lithology of the "savanna" on which the city is originally located, on the other hand, seem to have dictated this situation. The place in which the founding Center of the historical Santafé de Bogotá is located tends to mark the difference between a kind of Piedmont, where thicker layers of tertiary-age clay emerge, towards the South, and a Piedmont or edge where these clays do not emerge so abundantly, towards the north. These southern outcrops were quickly identified, at the dawn of the 20th century, as the supply of the raw material for the manufacture of the bricks required in the construction of housing and other kinds of buildings.

A specific feature of the brick-making process is that it is done in small plants, called "chircales", which are located in the same place the clay is extracted. Chircales, on the other hand, demand the use of coal as an energy source for the baking of the mixture of clay and water from which bricks are made. In the South of Bogotá factories settled in a linear pattern along the tertiary clay outcrops; this rectilinear pattern goes approximately from the historical centre to the South, following the contact line between the mountain and the flat savanna.

A landscape of chimneys shooting soot into the air, the scars of clay extraction on the surface, the characteristic smell of the ignition of coal, the atmosphere, rarefied by the presence of particles, appear to have conditioned such South-North differentiation from the beginning of the 20th century.



Fig. 1. Clay mine clay and sheds for the manufacture of brick in the town of Ciudad Bolívar.

Twenty-first century.

Photo credit: Luis Carlos Jiménez Reyes

The amalgam between clay mining, chimneys brick manufacturing and urbanization deserves to be noted; this kind of landscape continues to mark a significant part of the South of the city of Bogotá.

After clay, another material used in building is sand. In the case of Bogotá the source of sand are Cretaceous sedimentary rocks that emerge in the eastern and southern hills of the city of Bogotá. These are the rocks that are on the outer or higher edges or mountains of the savanna of Bogotá. In the case of the city of Bogotá, these are the source of the mining of yellow sand and other materials, such as "recebo" (gravel, NdT), used for wall coverings and foundations. Sands are exploited in opencast quarries, they have always given rise to very steep slopes of exploitation; they have been exploited anti-technically; and they have generated large landscape, visual and environmental impacts on the eastern and southern hills of the city. These are the mining scars which are more clearly visible in the landscape of the South of Bogotá, in such a way that they can be seen from most of the city. These quarries have also spread in an area on the eastern hills towards the North of the city, clearly marking an

"extremely poor" population pushed live in areas characterized by steep slopes susceptible to landslides or mudslides.

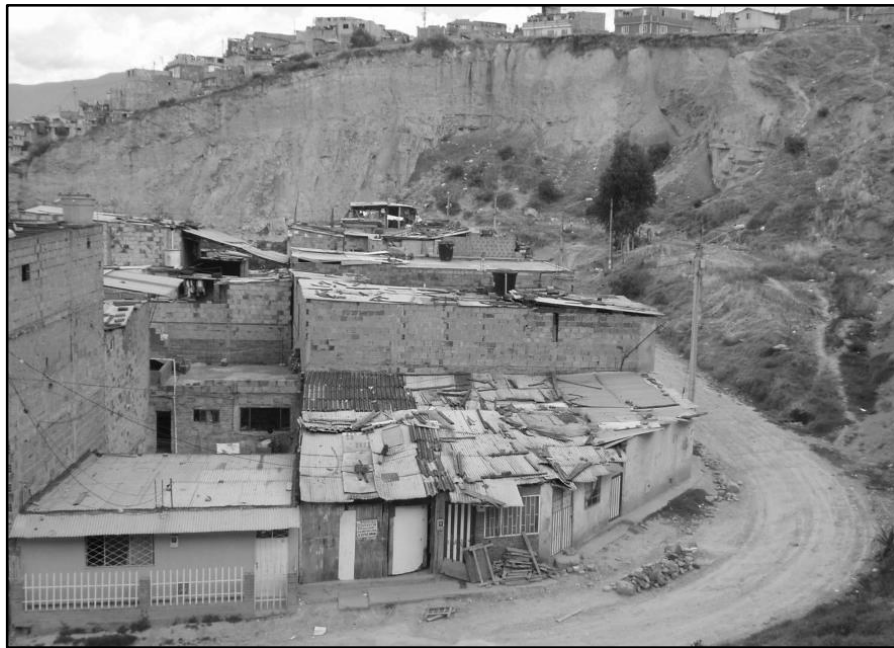


Fig. 2. Abandoned sand and gravel quarry, subsequently urbanized, in Ciudad Bolívar

Photo credit: Luis Carlos Jiménez Reyes

The morphology of the neighbourhoods is determined by the scars left by mining activity; abandoned mining was characterized, while it lasted, by the anti-technical exploitation and by the generation of highly unstable slopes.

We have already mentioned tertiary clays and cretaceous sands in the Savanna of Bogotá. In addition to these, in the basin of the Tunjuelo River another building material that appears abundantly throughout the Savanna may be found. This is gravel of alluvial and glacial origin, which in more recent geological times, in the Quaternary, deposited in the place where the Tunjuelo River ceases to be encased in the hilly area and releases its energy in the flat part of the Savanna of Bogotá. There, abundant deposits of gravels and sands formed, with thicknesses exceeding 100 m, in what is now known as the Tunjuelo river middle valley. This valley has met for more than 70 years the need for gravels and sands for the manufacture of concrete which the building industry in the city has had. According to information provided by

the environmental authority of the capital district of Bogotá, the valley still holds reserves for another 70 years. Exploitation is underway by two multinational corporations, Cemex, from Mexico, and Holcim, from Switzerland, as well as a foundation belonging to the Catholic Church.



Fig. 3. Aerial view of the Valley of the Tunjuelo River, an area which is dedicated to the legal mining of gravel and sand.

Photo credit: Luis Carlos Jiménez Reyes

In addition to the industrial mining area of the Tunjuelo river, which occupies the central part of the picture, in the upper right-hand corner, below the shadows of the clouds, we may see the scars left by the exploitation of clay for the manufacture of bricks in the industrial mining area of Usme. These two areas, along with another one which lies even more to the South, are today the only three areas legally defined the Territorial Plan of the city of Bogotá. At the bottom of the photo the Doña Juana landfill may be seen as well. The photo shows the magnitude of the surface given over to mining activities, as well as to the landfill.

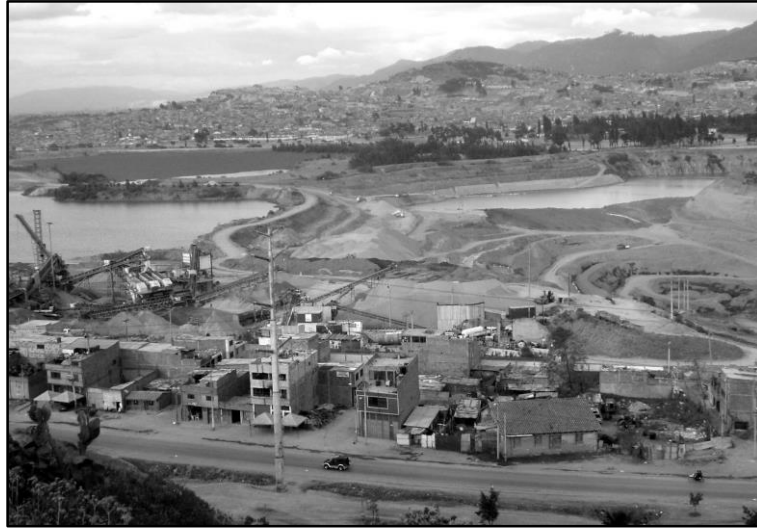


Fig. 4. Gravel and sand mining area in the middle valley of the Tunjuelo River, Park mining industry the Tunjuelo industrial mining area. This area has been granted to the multinational corporation Cemex.

Photo credit: Luis Carlos Jiménez Reyes

In the foreground we can see the Villa Jackie neighborhood, collapsed in 2009 because of the crumbling down of the slope of exploitation of the multinational corporation Cemex. The families that lived in the nearly 100 houses had to be compensated and resettled in other places in the city.

While, beginning in the mid-20th century, the South of Bogota was cast as a promising area for the provision of construction materials and that the landscape of southern Bogotá consequently deteriorated, Bogotá became a destination for the immigrant peasant population, which came from other regions of the country that were mired in civil war and violence. This population found in the South of Bogota a cheap source of urban land, and this gave rise to the creation of spontaneous, unplanned neighborhoods.

The traps of nature and the nature of segregation in the South of Bogotá

The South of the city is framed between two chains of hills which are over 200 meters higher than the bottom of the Tunjuelo River Valley; the latter, and in general the swampy valley on which the city of Bogota is built are 2500 m above sea level. This means that some parts of the South of the city almost reach 3000 m above sea level.

In Colombian cities there is, on the other hand, a specific way of measuring socio-economic differences, for the purpose of billing and granting of subsidies in the provision of basic services such as water and energy: socio-economic stratification. This system classifies population according to classes called "strata", ranging from 1 to 6, with the peculiarity that it is not people or households which are stratified or classified, but rather the environment and the physical characteristics of the neighborhoods, the buildings.

The lowest socioeconomic strata are known as 1 or "low-low" and 2 or "low". In Bogotá, 94% of the population belonging to these strata are concentrated in the south (see Figure 1); this fact underlines the conditions of segregation of the population of Bogotá, both because it is classified as "1" and "2", punishing them owing to the characteristics of the place and the environment where they live, and by the socio-economic conditions of households living in these areas. The strata system has been heavily criticized because it is a kind of sieve, pushing people to choose their place of residence on the basis of the household's income, but at the same time *a priori* assigning to people certain characteristics, depending on the stratum they belong to.

Strata 1 and 2 are clustered on the eastern and southern hills, usually in areas with steep slopes, or flood-prone areas on the river valleys. See Figure 1 (socio-economic stratification of Bogotá). This part of the city tends to be visible from the rest of the city, because of the difference in height; it is clearly manifest in the eyes of the majority of Bogotanos, but ignored by the rest of the city.

The southern end of the city, and especially stratum 1 areas, have the peculiarity that houses located there tend to occupy the scars left by abandoned mining. There is almost a punishing relationship between belonging to stratum 1 and occupying an abandoned mine. These are groups of people, families, who, during the 1980s and '90s occupied these abandoned areas, usually buying from "pirate" developers, illegal opportunists supplying plots of land without access to basic utilities like water and electricity, and on these plots the new inhabitants gradually built their makeshift dwellings. However, this process did not come to an end in the 1990s. Even now, deep into the 21st century, illegal urban sprawl continues to spread over the hills of southern Bogota, occupying mountains and hills, in such a way that new settlements

have ceased to be visible, hidden behind mountains and hills, invisible to the eyes of the rest of Bogotá.

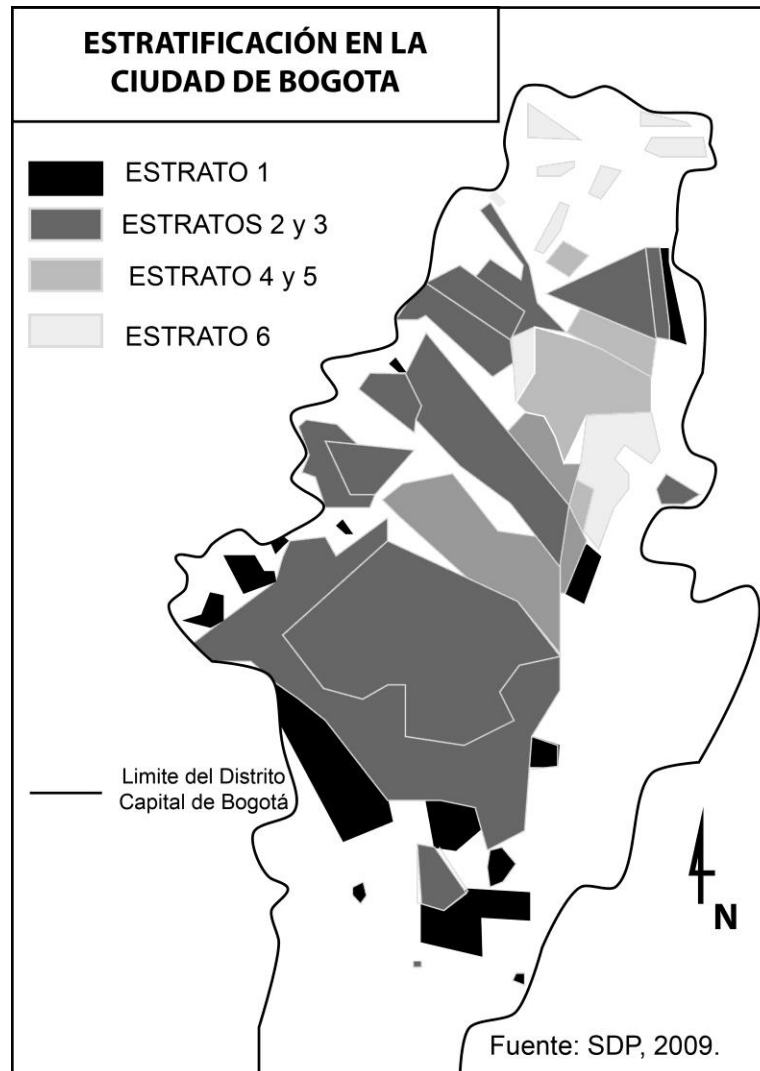


Fig. 5. Stratification in Bogotá

Stratum 1 is mainly concentrated towards the south and west of the city, as well as in some scattered places on the eastern margin, along the foothills, or along the western border, on the western limit of the city, which is the river Bogotá. Strata 1 and 2 predominate in the southern

part of the city. Stratum 2 is located along a peripheral ring, thicker towards the south, closely following the mountain ranges, and on the west the city limits.

The diagnostic study included in the masterplan for the Tunjuelo river basin (SDA-UNAL, 2008) shows how one of the predominating landscapes in the basin is that resulting from the combination between abandoned mining and urbanization. This landscape's main features are those of being a patchwork landscape, of having steep slopes and of being difficult to access, of having a dispersed urbanization pattern, mixing yellows and oranges given by the material used in building or by exposed bedrock, and greens due to the chlorophillic footprints left over by urbanization.

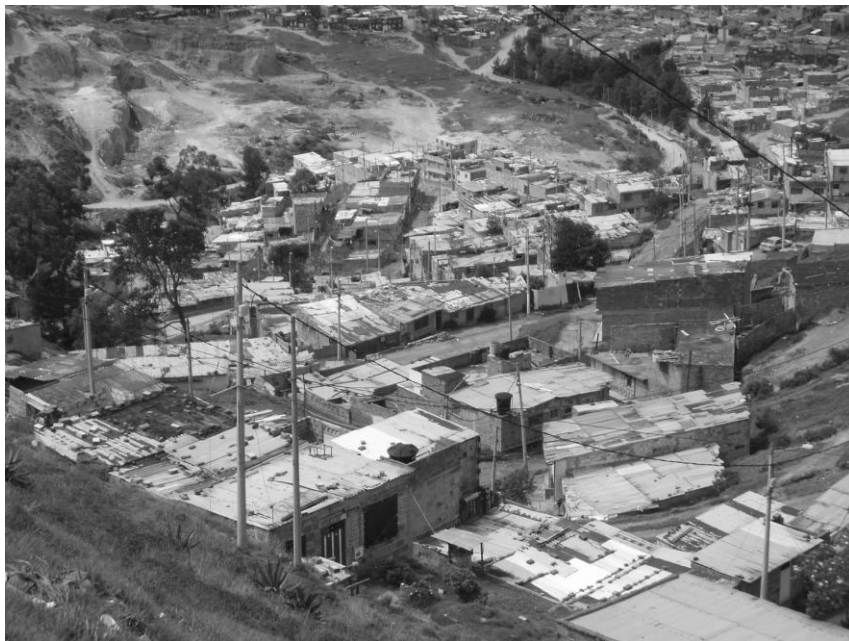


Fig. 6. Informal urbanization in the heart of a former mine in Ciudad Bolívar

Photo credit: Luis Carlos Jiménez Reyes

Illegal urbanization, generally pushed by unscrupulous urbanizers who, during the 1980s, managed to have political power in Bogotá's City Council. The holders of the property rights, once the mining was exhausted, parcelled and sold the resulting plots.

Other physical elements of great magnitude that mark the landscape and morphology of southern Bogotá, are the "pits" left by the mining of gravel in the Tunjuelo river valley, which now is in the hands of two multinational corporations, as was mentioned above and illustrated

in pictures 3 and 4. The surfaces of all legal holdings generate a huge area that, as a whole, restricts mobility in the south of the city. In this instance a planning tool such as Bogotá's masterplan legitimates a mode of occupation which is harmful in terms of socio-spatial and environmental justice.

Increased exposure to violence and insecurity and stigmatization due to place of dwelling

CEACSC, the Centre for Studies and Analysis on Coexistence and Citizen Security of the Secretariat of Government of the Capital District of Bogotá, shows that during the years 2012 and 2013 the five most violent areas of Bogotá by number of homicides were some of the more peripheral in the south and west: Ciudad Bolívar, Kennedy, Bosa, Rafael Uribe and San Cristobal (CEACSC, 2013). All of these add up to approximately 750 homicides per year. The trend observed in the official information provided by the Secretariat of Government of the Capital District shows that districts in the south of the city tend to have a much higher rate of violent deaths.

Exposure to violence and insecurity refers not only to the possibility of being robbed, it also means higher exposure to situations of intolerance and conflicting behaviors by community members, all of which is jeopardizing the quality of life and underlines the social vulnerability of the entire population. Information from the National Police of Colombia (Caracol Radio, 2009) shows that the proportion of homicides in situations associated with intolerance and difficult coexistence among neighbors or members of the same family exceeds 75% of the sum total of violent deaths in Colombia, going by the name of "diffuse social violence." In Bogotá, in other districts, fights and quarrels produce more deaths and injuries than thefts and robberies; these fights are triggered or catalyzed by the illegal possession of arms and by irresponsible consumption of liquor.

Stigmatization due to the place of residence

The south of Bogotá, in the Tunjuelo river basin, had in the year 2005 2.100.000 inhabitants out of the 7.000.000 of the entire city. These figures say that fully one third of the population of Bogotá lives in southern Bogotá; with a peculiarity: this population lives on just one fourth of the surface of the city, indicating a higher relative density. According to a study conducted by the District Department of the Environment (SDA-UNAL, 2008) the population density in

the south of Bogotá, in the Tunjuelo river basin, is of 221 inhabitants/ha, while the average of Bogotá is 154 inhabitants /ha.

In the same study (SDA-UNAL, 2008: 293), some demographic features specific to the South of Bogotá are highlighted; for instance, the age group of children less than 15 years is the widest one in the population pyramid, with more than 45% of the population. The young and the elder (> 65), who theoretically constitute the population group not in working age, make up more than 70% of the population, and this figure indicates very high dependence rates; that is, many members who do not work depending on few members working. With an aggravating factor, which UAECD (2007) describes, for the south of Bogotá, in these words: this part of the city lacks even the basic equipment for recreation, sports and culture, and this exposes the inhabitants to situations of greater social vulnerability.

On the other hand, some studies carried out by the Center for the Study and Analysis of Coexistence and Citizen Security (CEACSC, belonging to the Secretariat of Government of Bogotá), based on data from the consolidated report of the Colombian Institute of Family Welfare, say that, in the last 7 years, in Bogotá there has been a significant increase in the rate of criminal guiltiness in young people aged 14 to 17. This information, may well be associated to an increased severity in the application of the law, to new regulations coming into force to prosecute juvenile offenders, or simply to the natural increase of the population. But how can we explain that we have gone from 171 cases of young people being prosecuted to 770 in just 7 years?

We don't have the specific information about guiltiness among young people in the South of Bogotá, but we may indirectly associate information which may show a trend towards a higher crime rate in young people: this is the intensity of gang presence provided by IDIPRON for 2007. From this source, it was found that the spatial distribution of gangs shows a much greater presence to the west and south of the city of Bogotá.

In the same way, some sociological studies like IDIPRON (2004) underline a quite suggestive situation as regards mobility and the characteristics of social networks in which young people, and in general the inhabitants of the neighbourhoods, are related.

"Gang members and popular dwellers of the city are more willing to leave the city than to visit it: del the neighborhood - workplace for many of its inhabitants - the streets,

the corner store corner, the open field, the bakery, and the nearest commercial block, maybe the city center, form the core of the urban structures which they know and recognize". IDIPRON (2004).

Similarly, during the development of a project for the training on heritage themes of junior high school students in Bogotá, in 2013, it was noted that some of them had never been to Bogotá's historic center. The space in which their relationships happen, and their mobility, are very restricted.

Some studies on segregation and mobility have shown that distance and transportation costs do matter in the way people relate to each other, work or study. The costs involved in moving around the city and time there spent are so high that people rather choose to stay at home since the transportation costs would outweigh the perceived income.

However, a study carried out by the author for the District Government Secretariat (SDG-UNAL, 2007), recorded for the year 2007 that some young people and adults of peripheral neighbourhoods are the perpetrators in the commission of crimes against property occurring in the main commercial areas in the city.

Following Loïc Waquant, there is an aspect that will always point a finger against the condition or specific circumstance of segregation; this is the answer to the question: what is your place of residence? What does the fact of living in marginalized or segregated spaces therefore really mean?

Conclusions - A spatial pattern which tends to concentrate certain sectors of the population in specific areas of the city, unfavourable socio-economic conditions, higher crime rates, higher proportion of young population, school absenteeism, lack of employment, increased susceptibility to the occurrence of floods and landslides, among other aspects, are dominant characteristics which have a greater intensity in the South of the city of Bogotá. This does not mean that some of these conditions are not to be found in other areas of the city of Bogotá; we are only asserting the coupling of all of these negative characteristics, with a very high intensity, in the South of the city, in the basin of the Tunjuelo River. This aspect has not been addressed in a quantitative way nor have there been used any sophisticated models of spatial analysis, but all research has been performed in an empirical way, on the basis of previous environmental studies and studies on citizen security in the city.

Other parts of the city may contain most of these characteristics as well. Such is the case of the west side of the city, in equally outlying districts, but which lie in areas subject to flooding by the Bogota River.

Special consideration, due to the similitude with the south and west of Bogotá, deserves a sort of peripheral belt which is close to the historic center of the city, which shows urban and landscape deterioration, as well as the tendency to accommodate high-impact or illegal economic activities, within the general framework of anomia and chaos; these activities sink this area in a kind of vicious circle of physical and social deterioration. It is a formerly dynamic center that experienced, since the beginning of the second half of the 20th century, population replacement and a systematic abandonment by the public administrations of the city.

The landscape types of south, west and the peripheral center contain most of the following characteristics: they may be associated with the occupation of areas abandoned by mining activity, they are of informal or illegal origin, they contain population in conditions of social vulnerability, in them we find the occupation of areas susceptible to the extreme events such as floods or landslides. Additionally, there are two features that may always be found in those areas, which are the negative perception that the rest of the inhabitants of the city generally have of these areas of the city, and of their inhabitants.

By way of advancements in the explanation of the association between phenomena this essay deals with, the following questions may be put forward: how much does the origin of the neighborhood weigh for the conjugation of such conditions of segregation? Does the action of

the State, either by action or omission, accentuate segregation? How much does the context of violence with which Colombia lives weigh in such conditions of segregation? These questions remain as starting points for further systematic investigations.

Finally we wish to assert, on the basis of the ethnographic and observation work developed in this essay, that more than the characteristics of the physical environment and the morphology of the city, that which explains the precarious social conditions is the very social construction of the territory; without of course neglecting the fact that the landscape itself is a piece of human work. This is not, however, just human work; that human action involves the interaction of multiple territorial actors and agents who ultimately determine what the city is. This does not mean that the population living in these places is in any way guilty of these conditions. However, as Waquant says, 'the origin' in terms of spatiality and symbology, seen from the point of view of the rest of the city's population, does generate a positive or negative discrimination. The place of residence points a finger to residents of certain districts, it discriminates against them. On the other hand, the logic of State intervention and the perversity which results from the implementation of territorial regulatory tools are factors that accentuate the segregation and marginality of the populations that have historically been placed in segregated conditions.

BIBLIOGRAPHY

- Caracol Radio, 2009. 75% of violent deaths in Colombia have to do with intolerance. 6 am Hoy por Hoy of December 15th, 2009. Interview with the Director of Policía Nacional de Colombia, General Oscar Naranjo. Bogotá. Published on december 15th, 2009, in: www.caracol.com.co/noticias/judiciales, nota 924617.
- CEACSC, 2013. Balance provisional de muertes violentas y delitos de mayor impacto, jan-oct 2012-2013. Bogotá: CEACSS. PPT slide show.
- Centro de Estudio y Análisis en Convivencia y Seguridad Ciudadana, CEACSC. 2014. Tasa culpabilidad penal en los jóvenes de 14 a 17 años en Bogotá 2007-2013. Bogotá, CEACSC.

- Feitosa, Flavia et Al. 2006. Global and Local Spatial Indices of Urban Segregation. En: INPEePrint:sid.inpe.br/ePrint@80/2006/07.31.21.15v12006-08-01. On line in: <http://mtc-m18.sid.inpe.br/col/sid.inpe.br/ePrint@80/2006/07.31.21.15/doc/v1.pdf>
Last consulted: march 15th, 2014.
- Grafmeyer, Yves. 1996. La ségrégation Spatiale: une approche conceptuelle et méthodologique. En Paugam, Serge. L'exclusion. L'état des savoir. Paris, La Découverte, Coll. "Textes à l'appui". pp 207-217.
- IDIPRON, 2009. Análisis socio-espacial de las poblaciones de difícil aprehensión habitantes de calle y pandillas: thematic cartography. Final report. CONTRATO 211-2009, Jiménez, L. C., Rodríguez, J.Y.
- Madoré, François (2004). Ségrégation sociale et habitat. Presses Universitaires de Rennes. Collection Géographie Sociale. 251 pag.
- Secretaría de Hacienda Distrital de Bogotá. 2009. Mapa de Estratificación Socioeconómica de Bogotá, 2009. Bogotá.
- Secretaría de Hacienda Distrital de Bogotá. 2006. Ingresos, gastos y exclusión social en Bogotá. Cuadernos de la Ciudad, SERIE EQUIDAD Y BIENESTAR No. 8.. Bogotá: Secretaría de Hacienda Distrital. 70 pag.
http://impuestos.shd.gov.co/portal/page/portal/portal_internet_sdh/publicaciones/Est_fis_pub/cuadernos_est_pub/E_Y_B_9_8_EXCL_SOCIAL.pdf
- SECRETARÍA DISTRITAL DE AMBIENTE – UNIVERSIDAD NACIONAL DE COLOMBIA, SDA-UNAL. 2008. Informe de la fase de diagnóstico del Convenio 040 de 26 de junio de 2007, formulación del plan de ordenación y manejo de la cuenca del río Tunjuelo en el perímetro urbano de Bogotá. Bogotá: SDA. 1378 pag.
- SECRETARÍA DISTRITAL DE GOBIERNO, SDG y UNIVERSIDAD NACIONAL DE COLOMIBA, UNAL. 2007. Convenio Interadministrativo 458 de 2007 firmado entre la Subsecretaría para Asuntos de Seguridad y Convivencia, Observatorio de Convivencia y Seguridad Ciudadana; y el Departamento de Geografía, de la Facultad de Ciencias Humanas, UNAL. Bogotá. INFORME TECNICO FINAL.
- Suárez, Adriana. 2006. La Ciudad de los Elegidos. Bogotá: Universidad Nacional de Colombia. Citado por SECRETARÍA DISTRITAL DE AMBIENTE – UNIVERSIDAD NACIONAL DE COLOMBIA. 2008. Informe de la fase de diagnóstico del Convenio

040 de 26 de junio de 2007, formulación del plan de ordenación y manejo de la cuenca del río Tunjuelo en el perímetro urbano de Bogotá. Bogotá: SDA-UNAL. 1378 pag.

UNIDAD ADMINISTRATIVA ESPECIAL DE CATASTRO DISTRITAL, UAECD. 2007.

Segregación socioeconómica en el espacio urbano de Bogotá. Bogotá : UAECD-UNAL. Departamento de Estadística de la Universidad Nacional de Colombia.

Yvan Chauvire, Jacques Brun. La ségrégation sociale: questions de terminologie et de méthode.

In: Espace, populations, sociétés. Année 1983, Volume 1, Numéro 1, pp. 75-85.

Universidad Nacional de Colombia, Bogotá, Departamento de Geografía
lcjimenezre@unal.edu.co