

**From wooden huts to seven-floor buildings:**

*An analysis of the house-building process in the*

*Rocinha slum in Rio de Janeiro, Brazil along fifty years*

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**Abstract:** This work intends to contribute towards a better characterization of the dynamics of the production of the built space in slums in the city of Rio de Janeiro. For the development of this study, we chose the Rocinha slum, located in the south side of the city. The main objective of the research is to analyze the evolution of the housing production process in that community, during the period between the 1930s – when the occupation of the area begins – and late 1990s – when Rocinha was considered by many as the largest slum in Latin America. With this work we intend to contribute to a better understanding of the logics that order the spatial structure in slums and also present proposals to face the main problems that exist in the community. We believe that the relevance of this study is also associated to the expression that the spontaneous settlements assumed in the last decades in the process of urbanization of large Third World cities – and particularly in Brazil.

**Keywords:** Rocinha; Evolution of dwelling production in slums; Spatial structure of slums; Urbanization of slums; Low income dwellings;

## **1. Introduction**

This work is the result of the current reflections of our professional and academic activities. Along the last twenty years, we have been working in several slum communities, located in the metropolitan area of Rio de Janeiro, executing urbanization projects, projects for social dwelling units, and for community equipment. Accompanying the poorest population day after day we concluded that the study of the housing production process in these communities, and promoting the analysis of the actions of the different involved agents, could contribute to a better characterization of the dynamics of production of the built environment in the slums of Rio de Janeiro. In order to carry out this work we chose the Rocinha slum, located in the south side of the city.

Apart from the particular characteristics it presents, Rocinha was chosen for the execution of our research due also to the fact that we worked there for five years, between 1985 and 1989. During that period we participated in the implementation of the 25<sup>th</sup> Rocinha Local Government Office (XXVII - Região Administrativa/Rocinha), and acted in the coordination of the different city organs that provided services in that community - which allowed us to take active part in the daily life of their dwellers. Since then we have been maintaining regular contact with the technicians of that Administrative Area, as well as with community leaderships from the different associations, thanks to the development of our Doctorate research and to the educational activities in the School of Architecture and Urban Planning of the state of Rio de Janeiro Federal University (UFF).

In this paper we present a brief analysis of the evolution of the housing production process in Rocinha, along the period between the mid 1930s - when the beginning of the occupation of the area starts - and late 1990s - when many already pointed the community as the largest slum in Latin America. We intend to demonstrate, in this study, that the practices of the production of the space in the slum were transformed along the time, and also modified the products generated by those practices. In that sense, we intend to demonstrate that:

- from a predominantly residential space, Rocinha developed into another one that is increasingly more complex, when the use and occupation of the soil is considered;
- the housing construction patterns also changed: precarious wooden constructions are now side by side with six-floor high concrete-and-brick buildings;
- changes also took place in the house construction process: there are still houses built exclusively by the families that lives in them, but, more and more contractor workers can be seen building in the slum for clients that pay them;
- along to last two decades, the formation of an expressive informal real estate market in the slum was seen - a market that, at the same time, resembles and differs from that which exists in the official city; and
- starting from the late 1970s, the occurrence of a growing internal social differentiation in space occupation in the slum can be seen.

The description and analysis of the different stages of the occupation process in Rocinha, starting from the mid 1920s, constitute the first part of our work, in which we also focused on the role played out by the government in this process of production of the habitat. In this part the forms of housing production in Rocinha are also presented, from the time when precarious wood huts prevailed, to present times, when four, five and even six-floor buildings are common to the local landscape.

Finishing our work, we present a summary of the subjects focused on previously on the transformations that took place in the housing production process in Rocinha and the challenge posed by the attempt at extending town planning norms and building laws of the so called 'official city' to the slums - norms that seem to oppose the peculiar characteristics of the production of the habitat in these informal areas. We also seek to highlight the relevant role that new agents - that started to act in the slums from the early 1990s – can play in overcoming this challenge, which consists of reconciling the peculiarity of the manners of housing production in the slum with the maintenance of minimum patterns of satisfactory habitability and sustainable urban development.

With this work we intend to contribute to a better understanding of the logics that order the spatial structure in slums - a seemingly chaotic structure but one that possesses its own order (and, under several aspects, a surprising one). We believe that the relevance of this study is also associated to the expression that slums assumed in the last decades in the process of urbanization of large Third World cities - and particularly in Brazil.

## **1. Rocinha: an emblematic slum in the city of Rio de Janeiro**

In the last twenty years, few cities in the state of Rio de Janeiro grew so much, proportionally, as this one: its population practically tripled. The majority of the new residents came from the northeast of the country. They are from Ceará, Paraíba, Pernambuco, and Alagoas, people from all parts in that area of the country. People say about the residents of that city that, if they are not from the Northeast, they are sons or grandchildren of those that came to try their luck in Rio de Janeiro and decided to stay. As in any other city of the state of Rio de Janeiro one can find people who live with larger incomes and others that are poorer. This cannot just be verified in the appearance of streets and of buildings. It can also be seen in the own residents' words: when somebody says one lives in this or in that place is giving much more information than only an address.

The diversified and numerous stores - more than 1,500 shops – are a reason of pride for the residents, when they say that, more and more, it is not necessary to leave the city in search of something they need to buy. People even say that each month several new commercial establishments open their doors. Almost all of these shops are managed by the owner him/herself, although there are news in the press that reveal the interest of large organizations to set up shop there, too. Many of these small companies were given special financing lines in recent years which contributed to stimulate the growth of businesses. New business opportunities appear every day, the most recent ones in tourist activities: the city was recently included in the itinerary of travel agencies that promote visits to allow foreigners discover the natural beauties of the place, the peculiarities of its urban structure and the residents' lifestyle.

The vitality of the commercial activity in this city seems smaller only when compared to the building sector: the impression is that people are always building such is the number of constructions being built, enlarged and rebuilt. To face the growing demand for space, the solution found by many of its residents is the vertical growth of the buildings, investing everything they can in foundations, since growing up depends mainly on them. Maybe many people will not believe how much is paid and the substantial number of purchase, sale and lease transactions that happen in that city: in one of their neighbourhoods, the rental price of a flat, only to give an example, is the same as that of a property with similar characteristics in the neighbourhoods of Glória, Catete and Flamengo, located in the valued south side of Rio de Janeiro.

But the people in this city do not live only for work: culture and leisure also have their place - and an important one. It is well known that there are neither cinemas nor theatres there - but this is also a problem of other cities in the state of Rio de Janeiro. However, from the nightclub – visited by some of the main Brazilian pop music artists - to amateur theatre groups – that often perform in the streets of the city – apart from North Eastern singers, that intone their verses at a fair organized in the main square and the samba school created in the late 1980s, it can undoubtedly be said that culture is present everywhere. And the VHF Radio station cannot go unmentioned, inaugurated some years ago, to become one more reason of pride for the local community, as well as the TV cable system, that connects the city to whatever happens in the rest of the world.

In this city, the residents associations have been struggling for years for the improvement of the life conditions of the local population. Some are more active and representative than others; however, those entities play, with other non-governmental organizations, an important role in the daily life of the community.

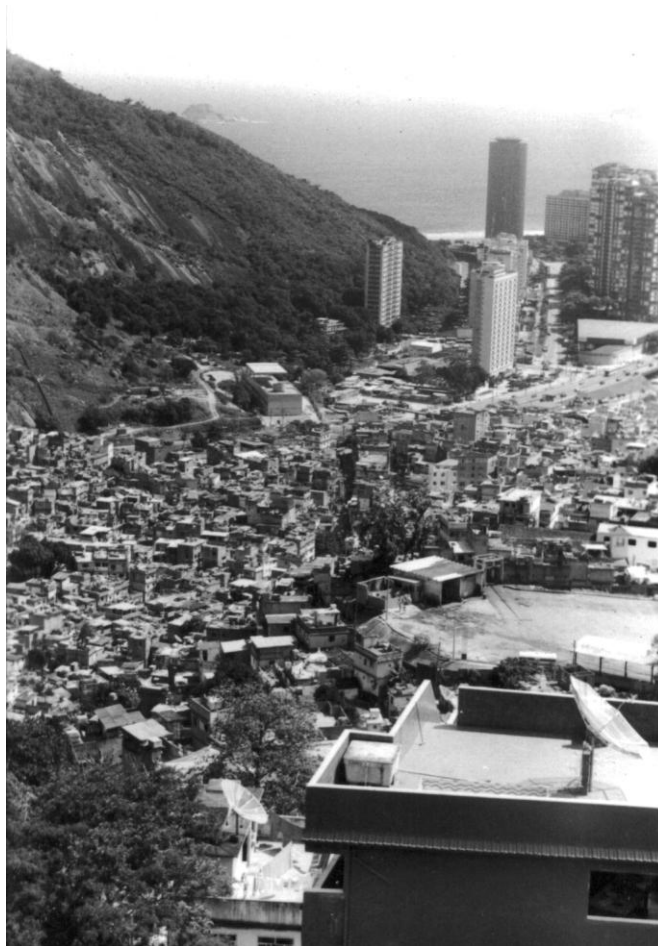
Problems also exist - and they abound. First of all, there is the issue of infrastructure, that most of their dwellers consider the main problem in the community. There are countless complaints regarding the absence of government investment in basic sanitation work - not without reason: most of the streets do not have sewage systems and the water supply is quite precarious in some places. In spite of the several private clinics that have been opened in recent years - some even sophisticated - the population demands better public health services.

And there is violence - a subject most residents avoid commenting with outsiders. Leaderships in community associations regret that the city is almost always shown as a violent place where crimes and murder are part of the daily life. For those leaderships it is not fair that an entire community of hard-working people must have such a reputation due to the action of a small group of criminals. Many also complain of police abuse. They recognize, with regret, the power that the drug traffic has in the city, shown in different ways: from the social welfare provided to poor families to the safety measures implemented in the neighbourhood around the points where drugs are sold.

This "city", however, does not exist, except in the imagination of many of their residents. In the imagination of thousands of residents what really exists is a city called Rocinha. Located in the south side of Rio de Janeiro, it is considered the largest slum of Latin America by many people - an expression invariably used, mainly by the press, to qualify this enormous slum. For those who live in Rocinha it is something more than that: it is a true city, with several "neighbourhoods" that have each, one of them, their own identity. Some of the residents that came from the distant state of Ceará - and there many of them - like to say, in a mix of pride and exaggeration, that "*Rocinha is the second biggest city of Ceará, after Fortaleza (its capital)*". Neither the "biggest slum in Latin



America", nor the "*second biggest city of Ceará*": from the mid 80s, Rocinha is another neighbourhood of Rio de Janeiro, after a decision by the city administration, to recognize the needed and wanted integration between the formal city and the slum - a fate certainly not imagined by the Spaniards who planted vegetables in that place fifty years before.



Rocinha and São Conrado: worlds apart.

Occupying an area of approximately 453,440 square meters on the hillside of the Dois Irmãos and Laboriaux hills, with a population of approximately 70,000 - according to 2000 Census data - Rocinha is limited in its lowest part by the Lagoa-Barra (RJ-071) freeway and moves upwards to the highest points, bordering the Gávea Highway. The area occupied by the slum presents a shell form and it is formed by a flat part that represents the central nucleus, close to the entrance of the Dois Irmãos Tunnel, growing, soon after that, towards very steep slopes that lead to the top of the hill. Rocinha has as neighbours the boroughs of Gávea and São Conrado - two of the highest income residential areas of Rio de Janeiro. That proximity evidences, especially to the eyes of foreign visitors the income distribution disparities in Brazil: it is not necessary to walk much more than a kilometre to go from the 'hell' of the precarious wooden huts - located in risk areas on the hillside, with no water and sewage structures - to the 'heaven' of the sophisticated shops in one of the most refined shopping centres in Rio de Janeiro, where it is possible to find the most expensive consumer goods.

The data presented by the Rio de Janeiro Human Development Report - prepared by the United Nations in partnership with the Applied Economics Research Institute (IPEA) and the City Hall - confirm that social polarization: Gávea has second largest IDH (Human Development Index) in the city - 0.89, in a scale from 0 to 1 - while Rocinha has the fourth worst - 0,59. When schooling is considered, half the population of Gávea has a college degree while only 2% of their residents are illiterate. The opposite happens at Rocinha: 20% of the citizens that live there can neither read nor write and only 2% had access to college education. While the Gávea resident has, on average, 12 schooling years, the resident of Rocinha has only four. Still in the field of education: in Gávea only 5% of the

children aged 7 to 14 are out of school; however, in Rocinha, 25% of the children do not have access to schools.

When the income is analyzed, the disparity is so marked as in schooling: the per capita income of Gávea is 10 times higher than the one in Rocinha. In Gávea, only 1% of the residents get less than half a minimum wage a month. In Rocinha, that number reaches 41%. In Gávea, the monthly medium income is of R\$2,042; in Rocinha, just R\$214. The children mortality rate in Rocinha is five times higher than in Gávea. The residents of that neighbourhood live, on average, 13 years more than those in Rocinha.

When the discussion moves to the access to basic sanitation services, 99% of the Gávea residents have an official sewage system while in Rocinha 60% of the population do not have appropriate sanitary services. However, it is possible to find areas that are relatively well provided with infrastructure in the slum - water supply, sanitary services, paved roads, public lighting - as in the case of the Borough of Barcelos (section located on the lower part of the hill, close to the access of the Dois Irmãos Tunnel). But it is also possible to find places of a more recent occupation where the buildings are quite precarious, without any infrastructure and, almost always, located in risk areas. Despite all the problems, in the universe of slums of Rio de Janeiro, Rocinha can be considered a special place, a place "*where things happen first*", as a local community leadership says, pointing the innovative projects for income generation and for social promotion that began there.

The area occupied by Rocinha had, originally, rural characteristics. In mid 1920s, the first records point the existence of a big farm, partially occupied in the place. The first population census in Rocinha, done in 1950, points the existence of 4,513 dwellers in an area that, due to the dispersion of the houses and to the rarefied character of the occupation,

presented characteristics that differ from those observed in other 'carioca' slums, where a bigger density of constructions could be seen.

Twenty years later, in 1974, a new census - this time done by the General Public Security Office - pointed the presence of 33,790 inhabitants, living in about 7,500 houses. In 1980, the data supplied by the City General Planning Office, indicated that the number of residents in Rocinha had reached a total of 97,945, occupying 19,489 houses. Those numbers represented a growth percentage of, respectively, 190% and 160%, in relation to the 1974 data, which showed the fast expansion process of the slum that occurs after the second half of the 1970s

Among the factors that contributed significantly to the accelerated expansion in the occupation of Rocinha was the appearance, in late 1960s of a new border of urban expansion in Rio de Janeiro's seafont: Barra da Tijuca, whose occupation plan had been conceived by architect Lúcio Costa – the same architect that created Brasília (Brazil's capital). Placed halfway between the south side of the city and Barra da Tijuca, Rocinha would become an alternative for living for the poorer population that finds in that new border of urban expansion more work opportunities, especially in the services and building industries.

In the 1980s Drummond (1981) says that the whole space susceptible to occupation on the hillside had been taken: the houses reached maximum density in the lower part while more precarious houses are located in outlying passages of the slum. "*The slum*", says that author (1981:74), "*is now saturated with dwellers, limited by the inaccessible scarps of the hillside and by the freeway that links the new neighbourhood of São Conrado to the city*".

The opening of the Dois Irmãos Tunnel would also bring expressive consequences to the internal differentiation of the community, as it triggered new dynamics in space

structuring, with the displacement of the area once defined as the centre of Rocinha - due to the concentration of services and commercial activities - initially located along the Gávea Highway to the lower part of the slum, close to new Lagoa-Barra highway. In the 1990s, the expansion of Rocinha is extended: the different "neighbourhoods" in the community see the vertical growth of existing houses with the addition of new floors while other areas near the original slum are occupied, with the creation of new sections, such as the Vila Cruzado and Vila Verde areas.



The lower part of Rocinha, close to new Lagoa-Barra highway.

The expansion of Rocinha is sharply associated to the internal migration processes in Brazil. It would not be an exaggeration to say that this slum is a Northeast Brazil enclave in Rio de Janeiro. This was the conclusion obtained after research – made by a local dweller’s association - the “União Pró-Melhoramentos dos Moradores da Rocinha” - at the end of 1987 that revealed, according to one of the directors of the entity, that Rocinha is the “*capital of Northeast Brazil in Rio de Janeiro*”: according to the data obtained, in each group of 14 people, eight were from Ceará and three came from Paraíba.

The expressive population growth in Rocinha in the last twenty years, however, was not accompanied by urbanization actions that would allow better living conditions for its residents.

In 2004, the state government of Rio de Janeiro promoted, with the cooperation of the Brazilian Architects Institute, a National "Ideas Competition for the Urbanization of Rocinha", with the selection of a team, coordinated by architect Luis Carlos Toledo, whose project had as main proposals:

- to complete the sanitation infrastructure (water, sewage and pluvial waters) and removal of solid waste;
- to guarantee better accessibility conditions by improving the circulation conditions on the Gávea Highway, prolonging and enlarging, whenever possible the other streets of the community, creating parking areas and eliminating the physical barriers that today hinder pedestrian circulation;
- to establish limits to the horizontal and vertical growth of Rocinha through echo-limits and appropriate town planning laws, considering local characteristics;

- to adopt a Master Housing Plan that allows the reallocation within the community of the families that will have to leave their houses due to the urbanization work or because they are located in risk areas;
- to implement a factory in Rocinha to produce prefabricated wall and roof concrete elements for new buildings and also for drainage stairways and hillside contention walls;
- to value the culture and to strengthen the identity of the people of Rocinha, creating a "*cultural corridor*" to improve the memory of the neighbourhood through the maintenance of constructions and spaces considered as important and relevant;
- to implement a cultural infrastructure with the construction of cinemas and theatres, cultural centres, small libraries and spaces for the development of the arts, music, dance, etc.;
- to give special treatment to the contact areas between Rocinha and the neighbourhoods of Gávea and especially São Conrado where Rocinha certainly will occupy the role of main trade centre and services of the neighbourhood;
- to locate in these transition areas, between the formal and the informal, city equipment of common interest that can attract the populations of Rocinha and of the neighbouring boroughs;
- To implement a series of urban equipment elements in Rocinha: two day nurseries, a public market, a hospital unit and a technical school.

The project selected in the National Contest is already being implemented with the support of the Federal government.

In order to conclude this characterization of contemporary Rocinha it is necessary to highlight three relevant aspects of the community.

The first of them is the vitality of the commercial activity in the community: according to data from Sebrae and from the Rocinha Trade and Industry Association there were, in the second semester of 1998, about 3,000 entrepreneurs and merchants in the community, and 28% of the existing businessmen in Rocinha had already worked there for more than ten years. According to the research done by those entities, 48% of the merchants and small entrepreneurs established in Rocinha earned between R\$1,000 (about US\$450) and R\$3,000 (about US\$1,300) a month. Another peculiar characteristic of the commercial activity in a slum like Rocinha is revealed in that research: 97% of the settlements only accepted cash payments. Business hours for those enterprises show another particularity: as many of the activities are undertaken by their own residents - often on the ground floor of their own homes - 88% of the settlements open every day of the week and 37% are open 12 hours a day. Additional data obtained in this research shows the informal character of those businesses: only 37% of the companies are legalized, while 54% of the local entrepreneurs do not pay Social Welfare taxes. The access to resources that could finance the implementation of business is restricted due to the informal character that the activity almost always has in Rocinha, so, to open a business, 60% of the entrepreneurs used their own savings while 16% invested resources from their FGTS (Unemployment Savings Fund) pay.

The second aspect to be considered is the appearance of the drug traffic as a relevant agent in the daily life of the community. Already in 1980, a report from the State Engineering



and Environment Foundation - FEEMA - "Characterization of Rocinha", registered the presence of organized crime in the community, pointing the existence of some areas considered dangerous, where the visitor is advised to avoid due to the risk of robbery, usually made by children (defined in the document as "smaller attackers"). That picture, in which organized crime did not have much expression, would change in the late 1980s.

The actions of the organized drug trafficking in Rocinha motivated, in June of 1988, a large police operation with two hundred men from the Civil and Military Police forces with the objective of "*destroying an autonomous and paramilitary criminal group that grew for years with the money of the drug traffic on the hills of the city*". That operation resulted in the death of three of the main drug lords in Rocinha and the –temporary - elimination of the existing drug marketing network. The importance the drug traffic has - not just in Rocinha but also in other slums in Rio de Janeiro – attracted the attention of the press that denounces the increase of criminal activity with slums being controlled by gangs that keep some kind of 'social peace'. This 'social peace' comes from the distribution of part the profits obtained with drug trafficking among slum residents: it is not uncommon that drug dealers will pay for day nurseries and hospitals for those who need them and, in exchange, obtain security and sometimes the support of people for their operations.

However, in the late 1990s, according to Police authorities, Rocinha became a "drugs warehouse in Rio" and a "meeting point for the bosses of the so-called Red Commando (a criminal organization that operates in several slums in Rio de Janeiro)". According to the Police Narcotics Repression Group, the drug traffic would promote the commercialization of approximately "R\$10 million a week (about US\$4.5 million)" and of "about 500 kilos cocaine a month". Today, Rocinha stores, the authorities say the marijuana and the cocaine

that will be distributed in the south side of the city and in Barra da Tijuca (higher income neighbourhoods).

The last aspect to be considered refers to the transformations that took place in the house production process in the slum. In the early 1960s, although a series of house typologies could be seen in Rocinha - showing, in a certain way, a social class differentiation in the space - still the wood huts prevailed, covered with ceramic tiles or zinc tiles, and houses with a bathroom and adequate hydro-sanitary facilities were few.

At the end of the 1990s, however, the wooden huts had nearly disappeared in Rocinha, as shown in the report published by *Jornal do Brasil* on Nov 22<sup>nd</sup>, 1998: *'the wood gave place to the brick, stimulating a trade that, only in Rocinha, moves more than 30 building materials shops'*. Along that decade, the expansion of the slum is registered by the research made by the Brazilian Geography and Statistics Institute (IBGE) in 1991 that shows the existence of 11,900 houses in Rocinha, 9,445 of which being "*subnormal condition houses*", while 1,734 are "*subnormal condition apartments*", and with 721 families living in even more precarious conditions. Apart from the diversity in house typologies, the IBGE data confirms the observations made years before by the technicians from the Rio de Janeiro City Administration, revealing the importance of the property rental market in Rocinha: the number of rented properties (2,916) was significant when compared with the total number of properties owned by its residents (8,839).

The transformations in the morphology of the houses in the slum continues and, in the period mentioned above, six or even more floor buildings, with concrete structures and ceramic brick walls are common in Rocinha, although one can still find precarious wooden huts located in inappropriate places. Among those two extremes, there is a diversity of

house typologies - one, two, three floor high - that have, in common, the use of ceramic brick walls and concrete as a structural element that will allow future expansion.

Associated to the transformations in the house production process, we must point the appearance of an expressive informal real estate market: in 2002, four estate agents operated in Rocinha – offering rental, acquisition and sale services. One of them, named Pasárgada, manages the properties of 280 customers who owned about 400 rented houses. When the conditions of real estate transactions in the slum are analyzed, the most significant difference among what happens in the official city is connected to the land property: almost all of the properties marketed in Pasárgada are not legalized.



A building nine floor high: the Empire State of Rocinha

When analyzing the characteristics of that informal real estate market, Abramo (2000) says that it now constitutes one of the main access mechanisms to the slum. There are empiric evidences that the prices reached by those properties are high even when compared to property prices in the official city. The proximity to the place of work and the neighbourhood relationships inside the slum would be other justifications: when acquiring a property in the slum, says Abramo (2000:16), the family has the '*possibility to redefine the composition of their expenses and to guarantee a strategy of residential stability related to the proximity to the place of work (permanent or sporadic)*'.

The expansion of the informal real estate market can also be attributed to the residential displacements from one sector of the slum to another, motivated by several reasons: improvement of income, search for a house with better constructive characteristics and better located, or an increase in the rent of the property (Baltrusis, 2003).



Rented houses in the Gávea Highway.

#### **4. Challenges for sustainable development in the slum: Rocinha as an example**

We attempted in this work to analyze different aspects of the house production process in the Rocinha slum, along the last 50 years. Through this analysis it was possible to find the occurrence of deep transformations in the social-space structure of the slum.

These fifty years saw the precarious wooden huts – and they still exist albeit in considerably smaller numbers - give place to masonry buildings, with five, six and up to seven floors. If in the past it was possible through contacts with relatives and friends to set the marks of a plot and to build a hut, now to live in Rocinha one has to pay - to rent or to buy - even in the places with more difficult access and with no infrastructure. As in the 50s

and 60s, people still build with the support of friends and relatives, however, more and more, DIY construction practices mix with situations where people get paid to build a house. The residential use - almost predominant in the past - is shared now by a diversified commercial activity and also by services until then unimaginable in a slum. Those who lived in Rocinha in the 60s - when, here and there, a "*birosca*" (small bar/dry goods shop) or a small greengrocer's shop attended to the most immediate needs of the daily life of their residents - and, for some reason, had to return to Ceará, returning forty years later would certainly be surprised with the vitality and diversity of the local trade that, as explained by a resident, "*has everything one needs*".

In the past, water was collected from sources on the hillside and now it is distributed by a public net, although in some places in Rocinha the provisioning is precarious and done by "sangrias" (pipe bleeding, or irregular connections) done by the residents or transported in plastic buckets. The "Light Commission" (light being the name of the main power company in Rio) exists only in the oldest residents mind: twenty years ago the implementation was started for regular distribution of electricity in the community - which does not mean that clandestine connections do not exist (named as 'cats' or 'gatos' by the population), particularly in areas of a more recent occupation. The conditions of sanitary exhaustion are still precarious and were even worsened not only due to the extraordinary growth of the population that took place along the last two decades but also due to the lack of adequate collection systems in the whole community. The alleys continue to be narrow and sinuous, although most of them are paved, almost always thanks to the residents' organized action. Transport conditions have improved: apart from the vans and taxi-bikes, regular bus lines connect Rocinha to the other boroughs in the south side and city centre.

However, not all transformations occurred in Rocinha can be considered positive for the people who live there. Starting from the mid 80s, the presence of the drug traffic in the slum gained more prominence, with actions that interfere significantly in the daily life of the local population. Some factors contributed to turn Rocinha into the "main drugs warehouse in Rio de Janeiro", according to the Civil Police Intelligence Office. The community's proximity with the south side boroughs of the city and with Barra da Tijuca - areas that concentrate the higher income segments and with a bigger potential for drug use – can be one of these factors. The entangled and steep alleys that form the local road system hinders not only the action of the police, but also the ‘invasion’ attempts from rival groups that seek to control the drug sale points could be another factor. And lastly there is the drug dealers' organized action which controls the slum through violence or through social assistance – or both.

The relationship of Rocinha's residents with the public authorities also has changed substantially in the last twenty years - and fortunately for the better. The localized interventions that had electoral interests - the so-called ‘water tap policies’ - gave place, since the 80s to regular actions seeking to expand local public services. However, the special characteristics of the site, the enormous population and the complexity of the problems that must be solved, particularly sanitary exhaustion, make the urbanization of Rocinha - the residents' main demand - a complex and costly project, which is acknowledged by community leaderships and government representatives. Nevertheless, although insufficient for the local needs, the community equipment items implemented by the government (schools, community day nurseries, and health units) represent apart from other interventions, the acknowledgment by the State that the slum is also part of the

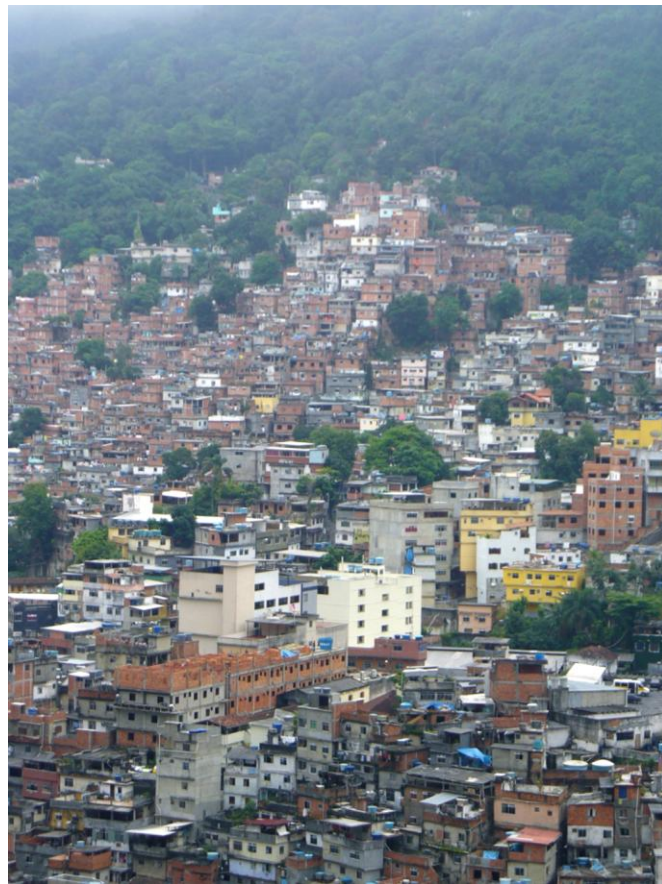
official city - which was formally expressed by the creation in the mid-80s of the 25<sup>th</sup> Rocinha Local Government Office.

In this scenario of transformation Rocinha has experienced the role played by the residents' association movement, responsible for several achievements to improve the quality of life in the slum, should be acknowledged. Similarly, in the 1990s, we should also point, due to its relevance, the appearance of non-governmental organizations that are executing several social promotion programmes in the community, with a performance that can increasingly be seen in the daily life of Rocinha residents.

Similarly to what happens in other slums in Rio de Janeiro, Rocinha has come to stay. It cannot be considered - as it was imagined until the 1960s - something of a transitory nature, an initial stage in the arrival process of migrants to the 'big city'. According to this perspective, the ephemeral slum would disappear as soon as the economical conditions allowed the incorporation of their residents into the urban life. A result of historical struggles for social justice, the acknowledgment of the irreversible character of the presence of the slum in the urban scenario as well as the political determination in promoting the integration of those informal housing elements into the official city poses, at the beginning of the 21<sup>st</sup> century, a new challenge to society: is it possible to order the process of land use and occupation in a slum as Rocinha? Is it possible to regulate the dynamics of housing production that has in the "freedom to build" (Turner, 1972) an essential character? With the absence, however, of a minimum order in land use and occupation in slums, how can one ensure habitability conditions will not be yet more precarious with the perspective of population growth of those communities - in the 1990s the increase of the population of slums in Rio de Janeiro was due mainly to the expansion of the existing ones more than due to the appearance of new communities.



From a conservative perspective, the slum has the whole responsibility for the environmental degradation seen in certain areas of the city district of Rio de Janeiro, due to the destruction of forests. From a progressive slant, the growth of the slum population is associated to the absence of appropriate public housing policies.



Rocinha, a symbol of the environmental degradation of Rio de Janeiro?

In the final considerations of our work we intended to focus, apart from the challenge mentioned previously - and that results, directly, of the significant transformations happened in the social-spatial structure of slums in Rio de Janeiro, particularly along the last three decades – on the perspectives of solving the problems associated to this

expansion. In that sense, it seems relevant to rethink the possible norms of ordering the built environment of the slum, in a way to avoid the creation of "straight jackets" that disable practices that assure, in the case of house construction, not just the shelter (the house), but also the work (the 'birosca'), the future projects (the room for the son that got married) and even the retirement (the income of the rented house) - usual practices that give answers to the demands and needs of the population that lives in the slum.

To recognize the peculiarity of the space structuring of the slum, with its practices and own dynamics, seems to be the first step to avoid control mechanisms for the use and occupation of land originated from the logic that structures the official city - as, in the 1980s, proposed, in a pioneering way among us, by architect Carlos Nelson Ferreira dos Santos. To define a group of basic constructive norms that should have as main objective the warranty of minimum conditions of habitability for slum dwellers. These norms - that must be thoroughly discussed and result from a pact with the different representative groups of slum dwellers - can be the next step.

Some government actions can enlarge and optimize the practices of the different social agents that participate in the house production process in the slum. It is necessary to promote technical consultancy programmes for people who build - with the active participation of the public university. Another necessary action would be the creation of permanent financing lines, with low interest rates, in order to allow the acquisition of building materials, to guarantee the improvement of the conditions of habitability in existing homes and the capacity to expand others, always according to new rules that will order the expansion of the slum. A third action would be the establishment of partnerships with non-governmental organizations, which already act in the slums, so that these organizations could cooperate in the publicizing and monitoring the enforcement of

regulations and norms that will order the use and occupation of the land. It should be remembered that these organizations have an expressive role in the daily life of slum dwellers and their actions will surely be a contribution to solve the operational difficulties faced by the city government.

We believe, therefore, that the implementation of actions such as those mentioned above can contribute to promote a new form of ordering the expansion of slums, in the beginning of the 21<sup>st</sup> century - now in a way that is coherent with its particular dynamics of habitat production. These actions can also contribute to ensuring better habitability conditions to the people who live in slums. The research done in the last ten years seems to indicate that the exception is increasingly closer to the rule: the expression of the informal city can no longer be ignored. To recognize the particularities of the dynamics that structure the informal city is indispensable to ensure the success of public policies that will guarantee better living conditions for all citizens in a society we want built with social justice and democratic.

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