

The Slums Affect the Future of the Metropolis

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1 ABSTRACT

This work is part of a research in progress: in particular it is aimed to tackle the problem of uncontrolled city growth. Urban sprawl has recently become a critical issue not only from the spatial point of view, but also for overcrowding.

The main objective of this study is to point out the need for a proper planning of the largest urban areas in the world by means of a strategic project. Also, the need for a functional organization of the so-called slums is worth considering.

Slums are usually left out from the well-organized urban system. Although they can easily be identified within the city, they are not formally recognized from the perspective of soil occupation and the related social issues.

In the light of this, planners are increasingly given important responsibilities as well as a set of different tasks. In fact, besides the multi-disciplinary approach, they should deepen the correlation between space and the population.

The explosion of megacities, along with the prospect of further settlements in the world, involve a mixture of people, cultures, religions, education, interests, and technologies which undermine the traditional planning methodologies. In fact, this situation affects the functional integration and the development of a participatory process.

This research in progress would provide new methods and new models so as to analyze the phenomenon, both large-scale and the small-scale aspects.

2 MIGRATION TO THE CITY

2.1 Population growth

The world population is rising very fast, in fact, now about half live in urban centres. Census data in 2010 indicate that cities are home to 3.5 billion people, which is 50.5 percent of the world. The growth of cities is one of the most significant phenomena of our time. Most of this massive urban growth will take place in Asia, Latin America and Africa. The total population presents one overall measure of the potential impact of the country in the world and within its territory. In general the movement of large masses of the population is determined by the hope of improving their living conditions.

This rapid and massive urbanization poses serious problems for countries in the developing world that need to find means and policies to provide essential services to their growing populations. „When cities fail to satisfy these basic needs, it creates areas known as slums, which usually lack drinking water, safe sanitation, durable living space, or the safety of a lease“ (Worldwatch Institute, 2012).

Migration in the cities poses complex problems with regard to the management and governance of urban areas in fact the rate of growth in demand for goods and services will become much higher than that expressed by the capacity of government and response from the authorities.

The result of this differences will be the rapid expansion of slums that are the most obvious expression of urban poverty.

2.2 Slum's space

„Probably in the world there are more than two thousand slums with a population living there that ranges from some hundreds to more than one million“ (Davis, 2006).

The comparison between the most recurring settlement typologies points out the lack of an organic pattern and technically functional to the settlement. The layer building in following times takes to the occupation of all the available spaces, without any distance, heights, road space regulation, and the environment safeguard.

A first reading of the settlement pattern in relation to the city leads to the following graphic synthesis (Fig.1):

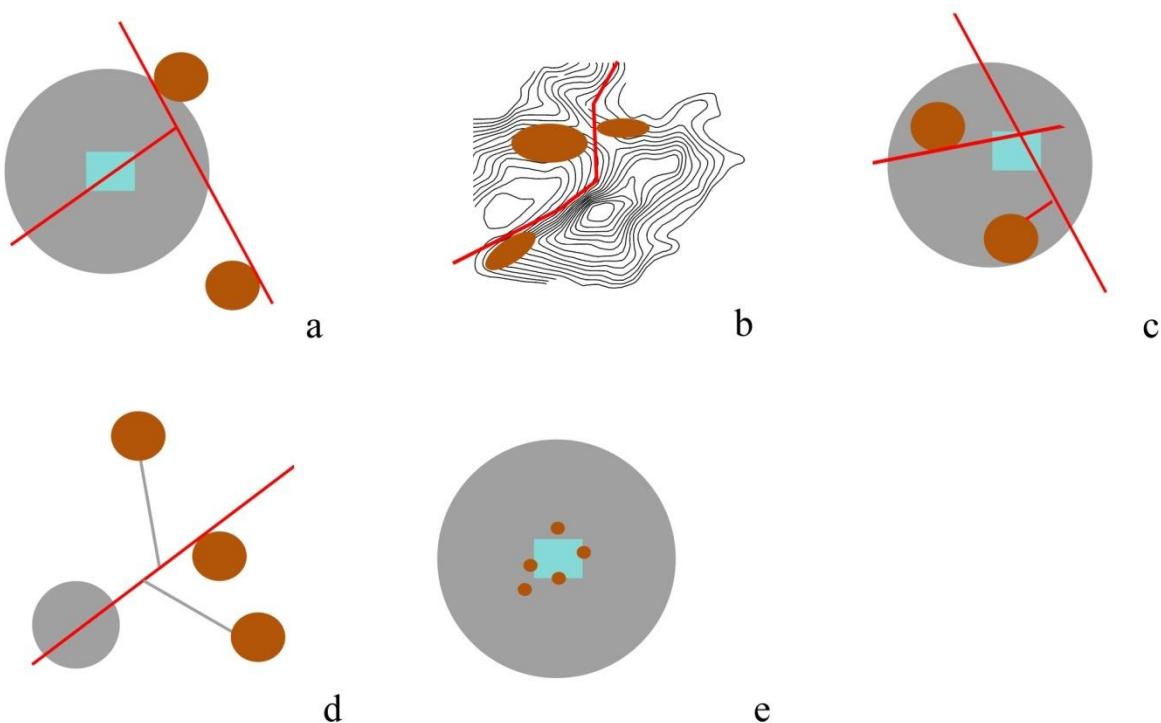


Fig. 1: Graphic synthesis of the types of slum

Peripheral slums (Fig.1.a): they take a side position compared to the urban centre, they are often next to a road infrastructure linking to a financial and productive centre of the city.

Hillside slums (Fig.1.b): are characterized by the precariousness of the training site. Generally these are the surroundings of the steep hills (for example favela of Rochina a Rio de Janeiro), alluvial soils, overall areas with a high risk of natural disasters.

Inner city slum (Fig.1.c): they are located in the empty spaces of the existing urban structure (for example Dharavi slum in India) or they are incorporated in the city process of expansion.

Satellite slum in the wide area (Fig.1.d): they are far away from the city (for example, refugee camps) next to a main road or to secondary roads linking to the urban centre.

Gentrification (Fig.1.e): they are typical suburbs and urban centres areas. They are characterized by a cycle "degradation – requalification, and they are used alternately by the immigrant population and high-income population.

In "Planet of slums" Mike Davis represents the comparable models of rational choice that can be found in all cities (Table 1). He identifies a number of specific types of ownership and settlement and also he said: the table below is „an analytic simplification useful to set a global comparability, but it does not take into consideration locally important characters“.

City centre	Periphery
<p>1 Formal</p> <p>1.1 blocks</p> <p>1.1.1 " second hand "</p> <p>1.1.2 built for the poor</p> <p>1.2 public housing</p> <p>1.3 hostels, dormitories, etc</p> <p>2 Informal</p> <p>2.1 occupants</p> <p>2.1.1 authorized</p> <p>2.1.2 abusive</p> <p>2.2 people on the sidewalks</p>	<p>1) Formal</p> <p>a) private rental</p> <p>b) public housing</p> <p>2) Informal</p> <p>a) private housing estate</p> <p>i) owner - tenant</p> <p>ii) landholder</p> <p>b) occupants</p> <p>i) authorized</p> <p>ii) abusive</p> <p>3) Refugee camps</p>

Table 1: Typology of slum (Source: Davis, 2006)

It is difficult to take an action for a reconversion apt to guarantee the minimum civil living standards, without a strong action able to dimension the population density and the use of soil for public and collective aims. If the conditions to move outside the slum part of the overcrowded inhabitants do not come up, it will be easy to think about the only option of widen the building action areas. It is probably also one of the reasons why the slums do not come into the strategic projects of great areas. Those projects that should express a strategic vision of the metropolis and a sustainable mission of the territory infrastructure, supported by a financial policy of public intervention.

3 TWO EXAMPLES OF REFERENCE: DHARAVI (MUMBAI) AND ROCHINA (RIO DE JANEIRO)

To get a first evaluation of the relationships on the wealth status of the population, it is indicating a data that compares the recorded urban population with that one which we assume to be informally settled in the slums.

(Table 2). Two significant examples that are examined here are: the case of Dharavi slum in Mumbai and the case of favela Rochina in Brazil. The two examples are not comparable to each other in terms of differences for the population structure, types of urbanization and cultural factors but they have also analogies in the economic aspects, settlement growth, poverty, humiliation, degradation. However, there are differences on the typological profile: settlements, or favelas, in Brazil are made of masonry, with much better anthropological and relationship-wise factors; however, in India slums are constructed with metal and recycled materials. Even the actions and the state hand that point to give answers to the seriousness of the problem are different. The efforts, even if just occasional, like those taken or taking place at the moment in the Rochina's favela, are characterised by the goal to project proposals that will allow to improve the environment quality without great changings of the settlement, but especially to give a positive hope to the inhabitants. It is as well important to point out that in India there is a common policy to accept the state of things as they are to enjoy "the induced effects", in a relationship cost and benefit between city and slum; in Brazil the state of things is different under this aspect because the contest exploitation is less clear.

Country	• Urban population (thousand) ¹	Percentage living in slums (%)	Slum population (thousand)	Year
India	341247	32,1	109540	2007
Brazil	163462	28,0	45769	2007

Table 2: Urban population and slum population (Source: UN-Habitat)

1 United Nations Department of Economic and Social Affairs Population Division – World Urbanization Prospects: The 2007 Revision

3.1 The case of Dharavi in Mumbai (India)

India is an ancient nation and more than a billion people live there, one sixth of the world population. Mumbai, also known as the "city of dreams" is the financial heart of the country. The mirage of wealth caused a population explosion: in ten years the population increased from 9 to 14 million people. This has led to an overcrowding of colossal proportions and to the creation of one of the Asian largest slums: Dharavi (Fig. 2). Mumbai suffers from one of the most desperate urban poverty than any other part of the earth.

„The reality is that over one half of Mumbai's population live in conditions of abject poverty, squalor and deprivation (...) the poor live in overcrowded slums and hutments, on pavements, along railway tracks, beside pipelines, under bridges, on ill craned marshlands and in other vacant spaces available to them. Although not strictly categorized as "slums", many others live in relatively old and dilapidated single room tenement chawls (...) The slums and hutments are located in highly polluted and unhealthy environments as a result of proximity to industrial emissions and effluents, and/or from poorer sewage, drainage and irregular garbage clearance“ (Byrne, 2001).



Fig. 2: Slum of Dharavi in Mumbai (India) (Source: <http://news.bbc.co.uk>).

In the slum of Dharavi a million people live in less than two square kilometres. The state capital of Maharashtra, in the south west, is both an economic centre and the poorest place in the entire India. In the eighteenth century, Dharavi was a fishermen's island and slum, it subsequently emerged from the mud without any planning and infrastructure. Although it is impossible to live there, it still is a place full of life. Among the slum and narrow constraints there is a „city within a city“. Inside Dharavi, divided into sectors, in fact, work activities such as: plastic recycling, metal processing, textile take place. These activities made the slum community economically independent. „India is full of human energy and talents which could be positively gathered without too much bureaucracy, (Gleaser, 2011).

3.2 The case of favelas in Rio de Janeiro (Brasile)

„Brazil presents a very contradictory image to the outside world. The seductive face of Brazil is represented by its music, soap operas, football, innovative cities like Curitiba, and, of course, the delirious aphrodisia of Carnival. However, Brazil is also the daily violence of its cities and the misery of its countryside. It has the world's highest national ratio of socioeconomic inequality“ (Davis and Monk, 2007).

Rio de Janeiro is one of the biggest cities in the world and there are more than 600 favelas, most of them are in the north and west parts of the urban centre. In the south, on the contrary, it is located what is considered by most the biggest bidonville of Brazil and of Latin America in general, Rochina's favela. It is a detached administrative region which stretches for 1,44 square kilometres. It arose at the beginning of the thirties, at first it was made of a few wood or recovered materials huts, basic facilities, like water and electricity were illegal. Nowadays, however, most of the buildings are built with bricks. Just like in many other favelas the



inhabitants live from informal productive activities, with a high unemployment rate that is one of the highest in the country. In addition to that the same inhabitants suffer a condition of discrimination and isolation.

In Rio de Janeiro there have been several attempts to improve the favelas: projects to make better housing conditions, to redevelop the landscape, services and networks (Fig. 3).

Fig. 3: Project of Arch. Frederic Druot to the favela of Rochina (Rio de Janeiro).

Starting from a precise diagnosis of the urban organisation and of the existing buildings, the project recommended by the Architect Federic Druot, aims at transforming and adapting a situation of fragility by rebuilding the existing precarious housing.

The objective is: to offer smarter, brighter, more comfortable surfaces providing the housing of basic services.

4 CRITICAL ECONOMIC AND PARADOXES

4.1 Cultural factors: indicators of perspectives and integration

„The fastest and most dramatic process of urbanisation in history takes place in the marginal areas, illegal settlements and slums of the metropolitan areas of the developing countries. Because of globalization and of the unequal development million of people are forced to live in a physical and social misery that is reaching a point of idealogic disaster“ (Schmidt, 1998).

The traditional planning must take into consideration the consequences of the metropolis expansion and of the perspectives that come from further settlement aggregations. They take place through a mixture of different populations, cultures, religions and technologies. The possibilities of creating a condition of functional integration and of a shared development seem to be rare. In its historic evolution, the city tries to keep in itself all its qualities by defending its own social and economic features. This is the reason why mass immigration is seen as a threat for the cultural identity of the consolidated groups and a factor of pollution of the reached quality of life. The difficult relationship between residents and immigrants has a negative effect on the city organisation. Informal settlement, or slum, suffers discrimination between the welfare state and poverty. The social and cultural contradictions are due to an uncontrolled growth and they appear also in the building typologies and in the urban pattern.

4.2 Determinants economic factors: GDP

„A nation's GDP (Table 3) rates is the sum value of all goods and services produced in the country. This is the measure most economists prefer when looking at per-capita welfare and when comparing living conditions or use of resources across countries“ (IndexMundi, 2010).

„Cities are the motors of economic growth and social development; they claimed the industrial and commercial development around the world“ (Dogan – Kasarda, 1988), where new forms of activities and economic organization evolve and acquire a greater value. Metropolis are, therefore, responsible of a significative portion of the Gross National Product and the main sources of development opportunities. Although the metropolis economic development is linked to the informal economy, which grows through the companies working there, in part or totally, out of the legal system, ignoring any health, environment and labour security regulations.

The informal employment is a widespread phenomenon, especially in development countries where growth is strong for the presence of immigrants. They are the poorest part of the society and they accept extreme working conditions. The levels of informality vary from country to country: in Brazil, for example, „informal economy accounts for 40 % of the national GDP (compared to 13 % in China and 23 % in India)“ (McKinsey Quarterly, 2011). The size of these realities is incredible. Often activities which characterize the informal market are: recycling plastic, manufacturing, ceramics.

The informal sector generates many micro companies almost always strictly connected to the productive cycle of the great companies which are part of the productive system projected into the local market and above all on the international one.

„In the developing countries the high weigh of the informal work reduces their capacity of gaining benefits from an opening to trade and it creates poverty traps for those working temporarily“ (ILO, 2009).

Even though trade contributes to the world's growth and development, it does not take to better working conditions. In order to create new quality working positions, the opening of trade should necessarily come together with national appropriate policies. It is, therefore, particularly evident because, in a time of crisis like the present, thousands of workers have found a place in the informal economy.



Fig. 4: plastic recycling in the slum of Dharavi (Mumbai) (Source: www.newfractals.net)

Country	GDP (Gross Domestic Product) (Billion \$)	Year
India	4,515	2011
Mumbai	209	2008
Brazil	2,324	2011
Rio de Janeiro²	96	2011

Table 3: Gross Domestic Product (GDP) (Source: CIA World Factbook, 2012)

4.2.1 The Gini index for inequality

One of the largest impacts of the economic crisis are social inequalities. These last can be measured by the Gini coefficient, which measures the deviation from the wealth (or consume) among people inside a country, through a value equal to 0, which represents the absolute equality, and a value equal to 100 which defines the absolute inequality (Table 4).

Country	Gini Index	Year
India	36,8	2005
Brazil	59,3	2009

Table 4: Gini Index (Source: World Bank, 2011)

A social policy in Brazil has had a significant impact on the reduction of inequalities in the country. Strong changes have taken place, particularly during the eight years of Lula's presidency (2002 – 2010) Who, for the first time has included the poor people in the economy, leading the country to a strong lowering of the poverty rates. Furthermore, this changing is connected to the supported development plans. Among which

2 <http://www.ibge.gov.br>

Borsa Familia: a benefit given to mothers exclusively supplied with the guarantee of a regular school attendance of their children. The strong changes, which are taking place in the country take it to be an important symbol of an attempted development which aims at cancelling poverty and reduce inequalities. .

4.3 Slum productivity

The informal economy will be a permanent character of the metropolis economy in the near future, as strictly connected to the massive arrival of immigrants. Paradoxically the breaking of the balance between city and slum could lead to a lowering of GDP and to the unemployment of the slum workers.

,In 2007, the Ministry of Finance, the Government of India, constituted a High Powered Expert Committee to examine various aspects of making Mumbai an International Financial Centre. GDP in Mumbai (estimated in PPP terms) was \$209 billion in 2008 that makes GDP per capita at \$10,800“ .

The incidence of the city on the country's GDP is 4.63 %.

,„Mumbai needs to become the first world city that can attract the brightest minds of the world by being an attractive place to live, work and play“ (High Powered Expert Committee on Making Mumbai an International Financial Centre, 2007).

In Dharavi is case, it is clear how it can be convenient to keep a mass of “precarious balances”, in a reality of social and structural contrasts rather than running the risk of the same metropolis “medium term” breakdown. In an international competitiveness environment if the game rules between the established city and the slum's system, in some way egoistically efficient, were modified.

5 CONCLUSION

Either from an architectural or urban point of view, it is taking place a deep historical changing „an overcrowded city can survive in two different ways either new building areas are created or new ways of using the existing ones are invented“ (Mehta, 2006).

The urban area organization should take into account the political, social, economical and infrastructural elements which, through a difficult mediation path of interests at stake, which are the core of the strategic urban planning. This is a task that the central and municipal governments bring forward even though they are aware of the more and more sudden changing of indicators and of coordinates to which refer. Taking also into consideration the fact that, the will to increase the effect of the development indicators, in order to improve the collocation in a world context, is so strong to become a priority in the urban and social choices.

On the basis of the work done so far, the research aims at improving the knowledge between the urban methodologies and of the urban sociology to evaluate if it does exist coherence between the settlement models and the land policies able to face the slum topic. In particular they want to understand to what extent the general planning models (linked to the American city) can still be effective for the problems solution and to redefine the indicators between land and population, between cubic meters and rooms, between services and community needs. Furthermore, it aims at finding the most suitable solutions according to the political and regulations situation (democratic, participating, representative democratic, oligarchic, monarchist, authoritarian) with the land potential.

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