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INCREMENTAL LAND DEVELOPMENT IN BRASILIA

Can the Urban Poor Escape from Suburbanisation?

by CLAUDIO C. ACIOLY Jr

Institute for Housing and Urban Development Studies, Rotterdam, The Netherlands/
Faculty of Architecture, University of Technology, Delft, The Netherlands

This paper reviews the development of Brasilia with special attention to the housing problem and the delivery of urban land to low income residents. It highlights the paradox of Brasilia, where the land stock is kept in public ownership but where the local government is incapable of providing shelter to the urban poor. It is argued that, apart from the overly technocratic planning process, public ownership of land is one of the factors that hinders access to housing for the urban poor and perpetuates a continuous displacement process towards peripheral land developments. The paper analyses the development and consolidation of Samambaia, a recently created satellite city, where a peculiar incremental land development approach was implemented with the main objective of providing housing to the urban poor.

Brasilia has just completed its thirty-third anniversary and is now one of the largest Brazilian cities. Its official inauguration took place in 1960, and since then it has grown remarkably fast to become a city with a population of about 1.8 million inhabitants. The population is spread over 12 different urban areas that form a very peculiar urban network whose parts are linked with one another by an efficient road network: the Plano Piloto, the world famous monument, protected by the International Congress of Modern Architecture (CIAM) and UNESCO, surrounded by 11 satellite cities (see Fig.1). Its development and consolidation coincide with the period of modernisation and heavy industrialisation of the country, and overlap the rise and decline of the military government that ruled Brazil during the period 1964–85. For some, Brasilia is a success story, while for others it is a case of many failures, despair and disillusion. Fortunately, there are already a significant number of studies that contribute to the development of a systematic critique of Brasilia, its planning parameters, its concepts, its development and its contradictions as a dynamic and strongly segregative urban environment.[1] Despite its modernity and presumption to be different from other cities in Brazil and elsewhere, Brasilia is a typical example of a city in the developing world. Urban poverty, the phenomenon

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[1] The Faculty of Architecture, University of Brasilia, published a series of monographs on Brasilia during the second half of the 1970s. During the 1980s, Aldo Paviani edited three important books in which he compiled a number of papers on Brasilia by different authors (Paviani, 1985; 1987; 1989).

of squatters and a compressed demand for land, housing and infrastructure are just some of the indicators that reveal the true face of the Brazilian capital.

In terms of settlement development policies, incremental land development is as old as the city itself, since it has been part of the basic development strategy undertaken by the local government. Before the city was inaugurated, hundreds of labour camps were erected in raw and undeveloped areas in order to provide houses for workers and technicians involved in the different construction works. Some of them gave birth to a developed neighbourhood like Candangolândia or a satellite city like Núcleo Bandeirante. During the construction period, a number of illegal settlements, which grew alongside the existing official settlements, were bulldozed and their residents were relocated to distant and undeveloped areas where plots were demarcated and no infrastructure was available. This was the case in Taguatinga (227 000 inhabitants in 1990), which became the most dynamic and fastest developing satellite city of Brasilia within a few years. At the beginning of the 1970s, there was an ongoing resettlement policy coordinated by the Slum Clearance Commission (CEI), whose objective was to wipe out squatter settle-ments from the urban tissue of Brasilia. The CEI gave birth to a new satellite city, called after its name, Ceilândia, a distant and undeveloped area where more than 80 000 residents were dumped on raw plots. These residents were living in over 15 000 shacks situated in different squatter settlements and labour camps before they were evicted. Ceilândia became the largest (364 000 inhabitants in 1990) and one of the poorest satellite cities of Brasilia. Samambaia, one of the most recent satellite cities, was created with the intention of implementing the 1978 master plan and of offering new opportunities for housing to low income residents living in squatter settlements and in rented accommodation in satellite cities. Samambaia became the clearest example of a successful incremental land development project. But both examples present a series of problems which will be dealt with in this paper.

In fact, the development of several satellite cities was based on the delivery of raw plots and minimal supply of infrastructure. This was a model basically introduced in the city due to its pilgrim and pioneer character, and became a common practice of the local government. Although this innovative and, to a certain extent, successful approach did provide land to the urban poor, it also created other problems. This model consolidated a trend towards peripheral development and it increased the disparity between residential areas in terms of living standards, level of services and transportation costs, and perpetuated very sharp income inequalities.

The government has consistently played a dominant role in the process of housing production, but both low- and middle-income residents are confronted with a number of barriers to finding affordable housing. The former are mainly concentrated in satellite cities, squatter settlements and in some remaining labour camps, while the latter are struggling to stay in the highly developed and class-selective Plano Piloto. Middle-income groups are slowly moving to nearby satellite cities, expelling economically weaker groups from these locations and creating new processes of social mobility and spatial stratification. This cycle is just one facet of

the chronic and complex housing problem of Brasilia[2] which turns it into a city like any other in the developing world, except for the level of social and spatial segregation, which is only comparable with the network of townships in South Africa.

There are other peculiarities about the city which are worth mentioning, such as the number of experimental urban layout designs implemented throughout the city, particularly the Plano Piloto, which is the only twentieth-century town honoured by UNESCO as part of the 'Cultural and Artistic Heritage of Humanity'. The government monopoly in the land market is another trademark of Brasilia, where it retains almost 60 per cent of the land stock, while the other 40 per cent is in the process of expropriation. The dominant role of the state reinforces the tertiary character of Brasilia. The tertiary sector employs no less than 85 per cent of the labour force. Another important aspect is related to the level of financial autonomy of the city, since it fully depends on subsidies provided by the federal government. Two-thirds of the local government budget of 1993 originated from transfers from the national government, while only one-third was collected through local taxation and revenues (Caderno Cidades, 1992). The city never had political autonomy either. It was only in 1990 that the inhabitants elected their first local government representatives, including the city governor. In addition, it has a peculiar institutional status: it is at the same time a municipality, a state, a federal district and the national capital, seat of the federal government.

The population growth of the capital has been amazing for a new town located in the hinterland of Brazil. It has been one of the fastest growing cities in the country, growing from 6823 inhabitants in 1957 to roughly 1.8 million inhabitants in 1993. The population growth rate was 14.4 per cent in the period 1960–70; 8.5 per cent in the period 1970–80 and between six and seven per cent in the last decade. The government has registered the arrival of an average of 30 000 migrants per year in the last three decades, which means that the city receives the population of a small municipality every year.

Brasilia is a perfect image of Brazil, showing a remarkable concentration of income, services and job opportunities in the Plano Piloto, while the satellite cities are deprived of many basic services. In 1988, the Plano Piloto registered the highest per capita income in Brazil, US$4218. In this location, 60 per cent of the population have a monthly family income of more than 20 minimum wages, i.e. an income above US$1191.20, since a minimum wage is equal to US$59.56 (February 1993 figure). Only 20 per cent of the total population live in the Plano Piloto, but it concentrates two-thirds of the jobs and the greatest part of the income of Brasilia. In contrast, the satellite cities contain 80 per cent of the total population and the

2 It is worth clarifying a common error found in many studies about the Brazilian capital that leads to misapprehensions. Brasilia is not the Plano Piloto or vice versa. Brasilia is an urban archipelago formed by different urban islands: the satellite cities that have to date kept a high degree of dependence on the world famous Plano Piloto in terms of movement of population, jobs, services, facilities etc. The area of jurisdiction is known as the federal district. If one wishes to study and to understand the nature of the urban development process of the Brazilian capital, one ought to start by perceiving the complexity of this urban network. In this paper, Brasilia is dealt with as an urban structure formed by 12 urban cores, the Plano Piloto and 11 satellite towns.

lowest family incomes. In Planaltina, 18.93 per cent of the population have a family income below one minimum wage, in Samambaia this figure is 11.11 per cent and in Paranoá 9.10 per cent, while in the Plano Piloto it is only 0.55 per cent (Governo do Distrito Federal, 1992).

Due to its peculiar profile, Brasilia is an interesting case study. Lucio Costa and his associates planned Brasilia to become a city without any poor, where all social classes would share the benefits provided by its urban environment. It would differ completely from Rio de Janeiro and São Paulo, where squatters and informal urban development were already signs of the discrepancies in terms of opportunities and access to resources. In fact, however, considering the process of capital accumulation and income inequalities inherent to the modernisation programme sponsored and implemented by the Brazilian state, it is obvious that the poor would find no place in a modern and well equipped urban environment. There is no need to describe the naivety and idealism of the architects and planners involved. Since the beginning of Brasilia, the urban poor have been continuously pushed out to peripheral developments and to satellite cities created specifically to provide housing for them. Evictions, police actions, resettlement programmes, master planning, land use regulations and police control over land occupation are just some of the instruments utilised by the local government to manage the growth and development of the city. None of these measures were able to provide the urban poor with basic services and a decent living standard. Behind these practical measures are conceptual issues which contribute to the perpetuation of urban poverty and social and spatial segregation in the city.

A Theoretical Consideration

In another article, I have argued that there are some theoretical premises related to the decision to plan Brasilia which are implicit in its plan and design (Acioly, forthcoming). They are based on a number of paradigms that, to a great extent, influence decisions concerned with the urban development and consolidation of the city and that systematically create obstacles for the poor in their access to urban commodities.

In the context of this article, one of these paradigms is of particular importance. It is the concept of pole of development. Brasilia was thought to be an irradiator of regional development, but it became the opposite, a pole of attraction. The geo-economic region of Brasilia, formed by 86 municipalities, was confronted with an abrupt change in its development pattern with the increase of poverty, change in land tenure and total dependency towards Brasilia in terms of services, facilities and employment possibilities. The municipalities that form the region of Entorno (14 municipalities that share territorial boundaries with the federal district) were suddenly confronted with the phenomenon of suburbanisation, registering alarming rates of urban growth. The result of that was a fast and continuous transformation of rural land into urban land subdivision projects, the expulsion of small farmers, the disappearance of small-sized rural properties, and landless unskilled workers living under extremely poor conditions in the urban centres of the region.

1	Plano Piloto	7	Samambaia
2	Cruzeiro	8	Brazlândia
3	Guará	9	Gama
4	Núcleo Bandeirante	10	Paranoá
5	Taguatinga	11	Sobradinho
6	Ceilândia	12	Planaltina

—— Limits of the Federal District

SCALE 1:200,000

0 ———— 6,000 m

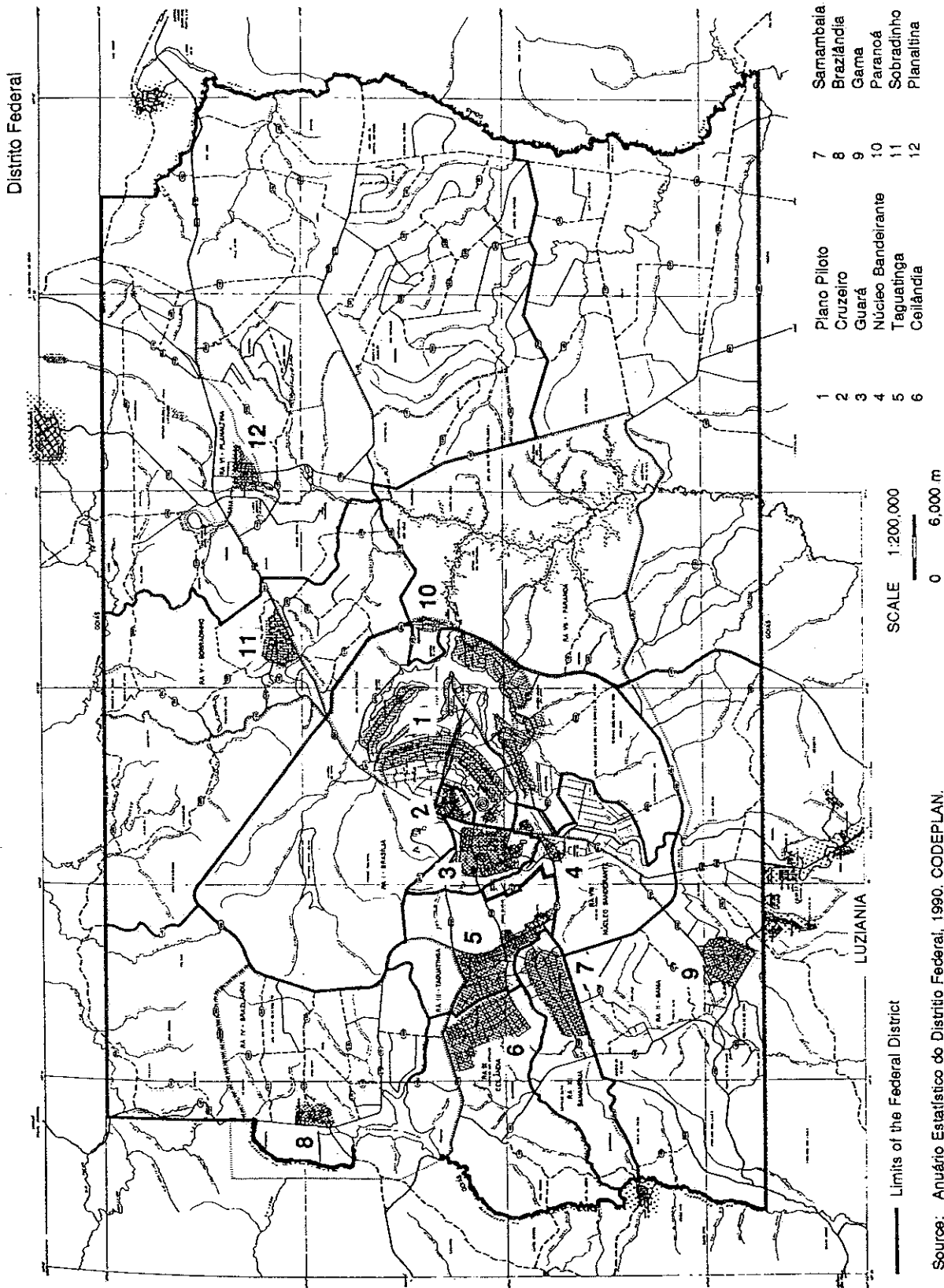Source: Anuário Estatístico do Distrito Federal, 1990. CODEPLAN.

Fig. 1 The urban network of Brasília, 1990

For the purpose of this paper, another paradigm is also important. It is the perpetuated belief that public land ownership is a precondition for perfect and efficient planning and urban management procedures which would be certain to meet the needs of the urban poor. Paradoxically, the severe housing constraints faced by the poor in Brasilia are in fact caused by scarcity of land, among other things. In theory, public ownership of land should facilitate the planning process and create conditions for the efficient management of urban growth. The government would be out of the hands of free market mechanisms and would not depend on acquisition of land to develop its programmes. In principle, it would guarantee government control over the areas of housing expansion and allow the monitoring of what, when and where to develop, assuming that the needs of the urban poor would be satisfied through government intervention.

In a market economy where land is an exchange and capital good, land parcels are frequently subject to speculation, which consequently places the costs of urbanisation projects beyond the capabilities of the poor. Thus, the government is expected to play the role of mediator, safeguarding the interests of the poor and guaranteeing access to a plot in the city. Public ownership of land can overcome this market barrier and facilitate the role of the government in the implementation of public policies that imply the social use of land and access to shelter and basic infrastructure by the most vulnerable social groups. However, the one thing does not necessarily imply the other, simply because urban planning is not at all neutral. The urbanisation process in the developing world, and particularly in Brazil, gives clear evidence that this neutrality is a myth. The decision making process is subject to political pressure by the most influential groups of a society which rarely takes into account the demands of the poor unless they are organised and exercise similar political pressure. In addition, the various government bodies and the different actors involved in urban development have their own individual agendas and vested interests which make the planning process even more complex. Thus, urban equity and access to shelter in Brasilia will only be accomplished by the urban poor through political struggles.

The success stories about public ownership of land and compulsory expropriation from Canberra, the Australian capital, and in various municipalities of Sweden and the Netherlands are not yet applicable in Brasilia. On the contrary, public ownership of land has been a direct stimulus to squatting and massive land invasion, overcrowding of residential units, high speculation in the housing market, an increase of subletting and rental practices and a unique social and spatial segregation.

The Land Issue in Brasilia

The real estate company of the local government (TERRACAP) was created in 1972 in order to take over from the Capital Development Corporation (NOVACAP) its responsibilities related to land and real estate development. Since then, TERRACAP has achieved outstanding performance. It developed a land cadastre and a registration system, delivered land to private and public sectors and produced a continuous financial surplus, except during the period 1978–82 when the local

government decided to decrease public auction and freeze the housing sector as part of a strategy to safeguard Brasilia as a national capital. There was a belief that easy access to a plot was a major stimulus for migration to the city. TERRACAP is a business type of organisation and utilises land sales as a way to generate income for the government, which is a practice already consolidated in the city. Between 1976 and 1979, it transferred around US$160 000 in revenue to other public agencies to be invested in development, construction, roads and infrastructure. In 1986 it registered a profit of approximately US$550 000, discounting all losses of the past years ('Brasilia, 20 anos', 1980; *Correio Braziliense*, 18 March 1987). Its predecessor, NOVACAP, used the land auctions during the early years of Brasilia, even before the city was inaugurated, as a mechanism to generate financial resources to finance the development of the capital. A clear and formulated land policy is something Brasilia never had.

Up to 1980, TERRACAP had already sold more than 43 000 plots, but the company should be considered as the main actor in, and the key vector of, land speculation. So far the only land policy or land allocation programme implemented by the government is the periodical public auctions carried out by the company. All candidates are carefully checked in a very accurate cadastre as to whether they are or have been a plot owner in the city. If that is the case, they are automatically excluded from the auction. When an auction is arranged, according to a particular settlement development plan or a land division scheme, it is announced in the local newspapers and a list with all plots, specifications, locations, minimum price and so on can be obtained from TERRACAP. A written proposal specifying how much the participant is willing to pay has to be delivered within a certain period of time, with all participation fees to be paid in advance. It is known that many private developers utilise a camouflage to acquire a plot in such auctions through the arrangement of a 'front' person who will participate on their behalf. The auctions are usually busy and because they are held irregularly, there is a natural process of speculation before the plot is delivered to the market. In 1986, plots were sold at prices 400 to 600 per cent above the initial values stipulated in the auctions. With regard to the urban poor, they are automatically excluded from these procedures because they are simply incapable of fulfilling the legal requirements such as down payments, registration fees, declarations of official/legal source of income, formal employment status, and so forth.

Some Indicators of the Housing Problem

The first indicator of a housing problem is the social mobility from the Plano Piloto towards peripheral settlements, a process that is the spatial reflection of the city's income stratification. The core (Plano Piloto) concentrates services, infrastructure, jobs, income and wealth, while the periphery is characterised by poverty and lack of services. The phenomenon of newcomers in nearby satellite cities like Núcleo Bandeirante and Guará provides evidence that middle-income groups are moving out of the Plano Piloto and expelling the original and economically weaker residents from these locations. There is a peculiar cycle of displacement that is pushing the urban poor to very distant peripheries, even situated outside the limits

of Brasilia. The urbanisation process in the municipalities of the Entorno, like Luziânia, is a vivid example of this phenomenon. Although 90 per cent of the inhabitants of these localities earn a maximum of two minimum wages (less than US$120 in February 1993), they continue to commute to work, to do their shopping, to have medical treatment and to vote in Brasilia. More than 60 000 people commute every day from the Entorno in spite of the fact that they are subject to one of the highest inter-urban bus tariffs in Brazil.

Another indicator is the limited access to government-sponsored housing and credit systems by the urban poor, despite the significant number of housing projects sponsored by the Social Housing Agency (SHIS) of the local government and addressed to the popular sector. These housing units were mostly built in conventional housing projects in which the poor were never able to participate since their salaries never met the requirements. By the end of the 1970s, the SHIS had already built around 60 000 units, and to date has built a total of more than 100 000 residential units which never reached the most needy groups.

The macro-economic context of the country imposed severe constraints at the local level. This is the third indicator, caused by structural adjustment policies, economic uncertainties, high rates of inflation, and the decline of project and building activities in the city due to the decrease of government investment in the city, which resulted in a serious recession in the building sector. The impact on the poor population was severe, because this sector is a major source of employment. The development of informal employment and housing processes, the densification in existing squatter settlements and the appearance of new informal settlements are related to the recession.

The fourth indicator was the development of illegal practices of land subdivision, coincidentally taking place in parcels of land either in private hands or in the process of expropriation. A very peculiar form of settlement started to offer plots varying from one to two hectares which were only affordable by middle- or high-income groups. By the end of the 1980s, there were more than 200 settlements known as 'rural condominiums'. Actually, there are 472 settlements in the cadastre of the government, which were taken into account by the new master and urban development plan (PDOT), of which 160 are located in areas of environmental protection.

Finally, the local government showed no ability to design and implement sustainable employment policies and appropriate housing programmes that could address the needs of the various income groups, particularly the poorest one. The result was that not only did squatter settlements and labour camps expand their areas and population, but overcrowding of residential plots in all satellite cities became a special phenomenon. Plots of 250 square metres could have between five and 12 families living in subdivided rooms and sharing sanitary facilities. Subletting of rooms and houses made for the emergence of a new category of low-income resident: *o inquilino de fundo de lote*—tenants who occupy rooms and houses located in the backyard of plots. Estimates show that 50 per cent of the population was already living in rented or borrowed accommodation by the mid-1970s (Gonzales, 1985). The 1984 cadastre of the SHIS registered 90 437 families who were in need of a house. At the time 74.8 per cent of them were living in rented

houses. Two years later, estimates revealed that 60 000 families were living in overcrowded plots in the satellite cities (Acioly et al., n.d.). By 1987, the Government of Brasilia estimated that the population living in rented accommodation could be as high as 150 000 families. That means an estimated population of 750 000 inhabitants, or almost half of the capital's total population in that year. It is interesting to note that in this period, every satellite city had a tenants' association organising and mobilising the residents in order to get a plot in Brasilia, while in the squatter areas the residents' associations were struggling for land tenure, upgrading and infrastructure improvement.

Government Response, Land Spectulation and Displacement

After four years without a single housing programme addressed to the low-income population, the government realised that squatters had multiplied and that the housing situation had deteriorated enormously. In 1983 the government designed a housing programme (PAPE) to improve the conditions of the population living in squatter settlements and labour camps. It implemented upgrading and sites and services projects in different satellite cities, allocating 8329 plots during a period of three years.

A survey carried out in two of the PAPE's projects in 1986 provided clear evidence that low-income settlements had been hijacked by newcomers (Acioly, 1987). In the case of Itamaracá, out of every ten families, two were newcomers after three years of project implementation. That means an impressive rate of displacement of 20.37. There was an organised newcomers' committee which was assisted by a lawyer in its negotiations with the government to have their tenure rights recognised because the plots and housing units could not be sold before a period of five years after allocation. The majority of the newcomers were previously tenants in the city of Gama, which is a vivid example of the mobility of the urban poor towards the periphery. It is possible that the original beneficiaries moved out to the nearby peripheral municipality of Luziânia, a locality that is facing the fastest and most uncontrolled urbanisation process among the peripheral municipalities, where the urban population grew 2590 per cent in the period 1960–90 ('A vez do entorno', 1991). Project developers are promoting land subdivision schemes which are clearly addressed to those who cannot apply for or acquire a plot in Brasilia. Both Oliveira and Paviani confirm in their study that the great majority of the households interviewed in two different settlements have lived before in one or two locations in Brasilia (Oliveria, 1987). In a settlement called Pedregal, 80 per cent of the respondents indicated a past residence in Gama or Taguatinga (Paviani, 1987).

A similar phenomenon should be expected in Candangolância, especially considering its locational advantages, easy access to higher standards of infrastructure and services, and nearby possibilities of employment (Acioly, 1987). Indeed this locality has gone through a rapid process of transformation in recent years and is becoming a well developed middle-class neighbourhood. There are already brokers operating in the area, revealing the market potential and opportunities offered by what was initially a low-income settlement. The housing stock

has significantly changed. Several new houses have been built with two storeys and very high standards of building materials ('Classificades & Serviços', 1992).

Due to a lack of empirical evidence, it is not possible to confirm that the original residents are moving towards the peripheral developments of Luziânia, but they are certainly not moving towards the nearby satellite cities where prices of land and housing are beyond their reach.

The commercial transactions involving plots situated in the PAPE's and in many local government-sponsored low-income projects are only logical considering the city-wide constraints such as; (1) the discontinuity in housing programmes; (2) the ad hoc character and limited scope of the programmes; (3) the suppressed and unresolved demand for housing which gives rise to extra pressure on the existing housing stock and stimulates housing speculation; (4) the speculative informal rental market; and (5) a profitable land market due to the limited supply caused by government monopoly in land ownership.

Incremental Land Development in Samambaia

The fall of the military government and the subsequent wave of democratisation that swept away authoritarianism throughout the nation seem to have blown winds of hope for the urban poor in Brasilia. The nomination of an ambitious local politician as the new governor of Brasilia in the second half of 1989 marks the start of large-scale initiatives in the housing sector. A city-wide programme of guided land occupation was launched throughout Brasilia with the main objective of solving the housing shortage in the popular sector. Some upgrading projects were carried out like the one in Vila do Areal in Taguatinga, where an alternative 'on site' sewage treatment system based on collective septic tanks was implemented; the high-income squatter settlements, known as rural condominiums, were legalised under certain conditions; the largest and most populated squatter settlement (Vila Paranoá, a former labour camp) was finally consolidated in an adjacent area, where the inhabitants were relocated on raw plots, and it was officially declared the tenth satellite city of Brasilia; Samambaia would become the promised land for the tenant population, and the eleventh satellite city created in the capital. Unpaved roads and raw plots of 120 square metres were demarcated and eventually connected to an electricity network. Water was supplied through public water standposts in strategic locations of the city. Self-help housing was strongly stimulated and basic urban services such as schools and health centres were created on a gradual development basis. In the space of three years, Samambaia became a mid-sized city of 200 000 inhabitants, showing the most rapid development process that Brasilia has ever seen. Fifty squatter settlements were relocated to the area, of which half were situated in the Plano Piloto. Families living in rented accommodation in various satellite cities, who were registered in the cadastre of the SHIS, completed the target population.

Samambaia[3] is the ultimate materialisation of the first master plan of the city,

3 Most of the data about Samambaia have been compiled from the archive of the Documentation Centre of the National Congress (Centro de Documentação do Congresso Nacional), Brasilia DF, in the month of June 1993.

the Expansion and Territorial Organisation Plan (PEOT) of the federal district, approved in 1978. The PEOT is a macro-zoning and structural land occupation plan leading to the development of a linear and polynuclear city. The PEOT advocates the need to have a sustainable response to the high concentration of activities in the Plano Piloto and to establish environmental restrictions for new human settlements in its surrounding district. The hidden agenda of the PEOT was basically the safeguarding of Plano Piloto as the seat of the national government, which had to be protected from any kind of confrontation with popular movements and informal urbanisation. It stimulates the development of new residential areas far from the Plano Piloto, creating a conurbation of human settlements towards the south, in the Taguatinga-Gama axis, in the direction of the peripheral municipality of Luziânia. The feasibility of this linear conurbation would depend on an efficient mass transportation system, including a very modern metro.

Samambaia has been planned for a population of 330 000 inhabitants in an area of 4400 hectares. It is projected to have 102 schools, a regional hospital, health and community centres, a good transportation network and community gardens, and is expected to alleviate the housing problem of Brasilia. It was officially declared a satellite city at the end of 1989, although its occupation began in 1987 when an initial house building scheme was started by the SHIS. The most important historical facts are the following:

1978: The PEOT sees Samambaia as an alternative for urban growth.

1981: First preliminary sketches and plans of the city are formulated.

1985: The first implementation steps are carried out with the demarcation of roads and some basic infrastructure. Democracy is re-established in Brazil and the first civilian president is indirectly elected by the National Congress, after 21 years of military regime.

1985: (August) TERRACAP announces a public auction and the sales of the first plots in two locations of Samambaia where infrastructure (water and electricity) is already available.

1987: The SHIS starts to build 4000 popular housing units in these locations. A housing deficit of 190 000 houses is announced by the local government, of which 80 per cent concern families earning between one and five minimum wages.

1988: (September) A new governor is appointed by the president of Brazil.

1989: (March) The government of Brasilia announces that plots have been demarcated, roads are opened, electricity is installed and the public water standposts are under construction. Plots will be allocated to 15 000 squatter and 135 000 tenant households registered in the last two months. The newly appointed governor (J. Roriz) starts the settlement of 60 000 families on raw plots where only electricity is available.

1989: (October) Samambaia is officially founded as a satellite city.

1990: Governor Roriz is nominated a minister in the federal government and resigns a few hours after taking office in order to run for governor of Brasilia.

1990: (November) J. Roriz is elected governor of Brasilia in the city's first election, with more than 50 per cent of the votes. He captures more than 90 per cent of

the votes in Samambaia. Brasilia achieves political autonomy with the election of the first house of local representatives. Roriz announces an ambitious human settlement programme and heavy investment in basic infrastructure throughout Brasilia. A special secretariat for the Entorno region is created and the construction of a modern metro system is launched, linking the conurbation Taguatinga-Ceilândia-Samambaia to the Plano Piloto. Roriz postulates Brasilia as the seat of the Olympic Games of the year 2000.

The target population of the settlement programme undertaken by the local government in Samambaia was selected according to some basic criteria: the inhabitant should never have been a plot or house owner in Brasilia, must be able to prove residence in the city for more than three years and must have his name registered in the cadastre of the government as a person who is looking for a house. The monthly family income should be less than three minimum wages, i.e. US$170. Twenty-two thousand plots had already been allocated to low-income residents by September 1990.

The population of the city is extremely poor, the great majority are half literate (fourth class of primary education) and mainly working in the tertiary sector, with a significant engagement in informal activities. According to a survey sponsored by the UNDP (Correio Braziliense, 4 October 1991), which covered 525 households, only 17 per cent have formal registered employment, which reinforces the argument that the rate of unemployment is high. The same survey revealed that 36 per cent of respondents have a family income between one and three minimum wages, 13.5 per cent earn only one minimum wage, and 21 per cent earn between two and five minimum wages. In all, 94.4 per cent of the families have been living for more than three years in Brasilia, and only 3.8 per cent had a former residence in the Northeast or North of Brazil, known as the poorest regions of the country and exporters of migrants and cheap labour to the major Brazilian urban centres. The population is rather young, 21 per cent being children between the ages of five and nine years. It is estimated that out of the population of 200 000 inhabitants, there are 130 000 people less than 18 years old.

After being registered in the official cadastre of the government and before occupying his plot, the allottee has to sign a term of land concession issued by TERRACAP. The term guarantees his right to use the plot as long as he lives. It is inheritable, but the term prohibits him from renting, lending, leasing or selling the plot. After the plot has been allocated, the beneficiary has a period of 45 days to move in. The plots were delivered semi-urbanised, demarcated and situated along unpaved and compacted gravel roads, only served by an electricity network. The electricity company only installs the domestic connection after occupation takes place through the construction of a shack or a small building, and after the concession documents have satisfied the requirements. The water supply was first organised through vans with a capacity of 15–18 000 litres each and through the installation of 200 public water standposts. There was no programme of housing finance, no bureaucracy, no public housing construction and no government support in the occupation of the plot, except for the inhabitants of squatter

settlements whose shacks had to be demolished in the original location. For these residents, the government gave support by providing transport for belongings and wood from the shacks, as well as social assistance. Housing construction on the new plots would have to rely on the initiatives and opportunities of the inhabitants.

No other community service was available. At the very beginning, public transport was restricted to two trips a day, one early in the morning and the other later in the afternoon. After the completion and occupation of the SHIS housing scheme, the buses started to run every two hours, linking the city to the Plano Piloto and to Taguatinga/Ceilândia. The roads were all unpaved until the end of 1990, when 370 000 square metres were paved with asphalt, mainly the roads where the buses circulate.

One year after its inauguration, the inhabitants of Samambaia had already demonstrated their incredible capacity to undertake improvement action in order to overcome the daily difficulties of water shortage, irregular trash collection and overcrowded buses; above all, they showed their ability to mobilise resources in order to build their houses within a short period of time. Many shacks were replaced by houses built with bricks and masonry structures, and the city's appearance started to change rapidly. The main streets were already paved with asphalt, and there were 17 schools and three health centres in operation, one small police station and a fire brigade. But in spite of this rapid development, Samambaia still suffered from water shortage, violence, misery, unemployment and malnutrition.

The 200 public water standposts were insufficient to supply the population with drinkable water and were a continuous target of vandalism. Water taps were continually broken or stolen. Faced with a water shortage, the inhabitants demonstrated their capacity to organise themselves for the installation of illegal connections to the water network which was originally set up to serve the standposts. A number of taps were installed in individual plots by groups of residents who shared the cost, use, maintenance and the management of these taps, and thereby managed to overcome the water shortage. While solving the groups' water problems, this alternative worsened the situation because the pressure in the pipes was not yet sufficient to allow individual connections. That forced the government to bring in more watertank trucks. After two years, 20 per cent of the public water standposts were not working or had been closed down by the water and sanitation company (CAESB). Twenty-three trucks were serving the settlement and 23 mobile tanks, with a capacity to store 12 000 litres each, were installed in strategic locations of the city in order to alleviate the situation. The basic premise of Samambaia was the incremental development approach. However, according to the CAESB, its validity and feasibility with regard to development of the water supply system is doubtful (Jornal de Brasilia, 1 July 1990, p.18). The company registers a monthly water consumption of 330 million litres in the city, and affirms that it spends the equivalent of US$14 495 per day in maintenance of the system, replacing an average of 30 taps a day. The CAESB sustains an amazing daily financial loss of US$43 485 due to the fact that the inhabitants of Samambaia do not have domestic connections.

Samambaia is innovative in the delivery system of land and infrastructure, but

there is no attempt to create participatory forms of decision making and a more comprehensive involvement of the target population in the definition of choices and alternatives in the infrastructure development programme. The top-down approach applied here repeats the former government procedures and inhibits an open dialogue between the government, its various agencies and the community groups. It is likely that a continuous and systematic participatory approach would have favoured the involvement of the inhabitants in the daily operation of the system, a more responsive attitude regarding maintenance and consistency in terms of management at the grassroots.

Another surprising aspect is the level of violence registered in the city—which gave it notoriety as the most violent satellite city of Brasilia—which is so serious that a night curfew was enforced by the local police, without any actual constitutional basis. It is difficult to find a clear explanation for the violence, but it is worth recalling the case of Ceilândia, a city created in a similar way at the beginning of the 1970s. Ceilândia was implemented as an incremental land development project with 21 792 plots, situated 35 kilometres away from the Plano Piloto and involving more than 80 000 inhabitants. It was the climax of a slum clearance policy and the result of one of the most spectacular relocation programmes ever carried out in Brazil, only comparable with those of Rio de Janeiro's *favelas* during the 1960s. Residents from various squatter settlements situated in different locations of Brasilia were transferred to this newly created satellite city. In a very short period of time, it became the poorest and most violent of all, at least until Samambaia was implemented.

It seems that the abrupt disruption of the inhabitants' social environment and the sudden collapse of their informal networks of income generation cannot be easily reconstructed. Poverty becomes more acute, minimal leisure spaces disappear and social relationships are broken down at a time when they are confronted with a very adverse and difficult physical environment, deprived of many basic urban facilities. The pressure on the inhabitant is very great since everything is left to him, from preparing his plot, to securing his private domain and safeguarding his private belongings and to earning an income in order to be able to feed his family. The combination of all these variables seems to create a favourable scenario for absurd acts of violence. The local newspapers registered the same phenomenon in the new suburbs created within the scope of the slum clearance campaign in Rio de Janeiro during the 1960s, such as Vila Kennedy and Cidade de Deus, although they differ in nature and in the characteristics of the housing development and delivery processes (Valladares, 1978; Perlman, 1976). This allows us to argue that violence is not related to the incremental development approach utilised to create the settlements in question. Rather, violence could be explained as a symptom accompanying forced eviction and population relocation, causing the total disruption of the inhabitants' social-economic environment.

Ceilândia was implemented during the most repressive periods of the military regime, but the local government allocated teams of social workers to prepare the families and to create a friendly atmosphere for relocation. Participation was very limited, so that the operation of community based organisations (CBOs) was inhibited. Reluctance to move was not tolerated, and whenever there was

resistance, it was treated with repressive procedures. One of the paradoxes of Ceilândia is the fact that despite the levels of violence and criminality, the city was the scenario for the rise of one of the most persistent and well organised social urban movements in the history of Brasilia. The insecurity of tenure and the legal proceedings against TERRACAP's decision to increase the value of the initial payments triggered a collective feeling of dissatisfaction among the population of Ceilândia. A very incipient form of neighbourhood organisation started to take place, initially sponsored by the local church; later on it received the support of the Order of Lawyers of Brasilia, and in December 1979, seven years after the birth of Ceilândia, a powerful neighbourhood association was founded. The 'Associação dos Incansáveis Moradores de Ceilândia' (The Association of the Indefatigable Residents of Ceilândia) became a reference for all the neighbourhood associations and popular movements in Brasilia during the 1980s. It is worth noting that the president of the organisation was later elected as a political representative in the first Legislative Chamber of the local government.

Samambaia, on the contrary, was implemented during a democratic period in Brazil in which neighbourhood-based organisations had participated vigorously in all levels of affairs. Every squatter settlement involved in the relocation had at least one representative CBO, while the satellite cities had very well organised tenants' associations, especially Taguatinga and Ceilândia. The latter was known to have a powerful and extremely well organised association, with registered files of all its members and with representatives elected in every block of the city. It made petitions to the government, carried out marches and symbolic land invasions in Samambaia during 1985, and was determined to struggle for a plot for its members, even forcing the government to define emergency projects and allocate lots to them.[4] The disruption of a social organisation such as this is a very heavy loss for any community-based action, despite the fact that there are 65 residents' associations operating in the city, with a significant number of community leaders originating from their former places of residence. At this moment, it is difficult to predict whether the same process that took place in Ceilândia will repeat itself in Samambaia. However, the level of self-management of residents' groups and the various self-help actions and ongoing community activities provide some positive signs that the urban poor will manage to improve their living conditions through their own efforts and organisation. At least the government is much more sensitive and politically interested in the area, and the overall context is favourable for community-based processes in dialogue with government agencies, which was not the case in Ceilândia.

Besides the local churches, there are two organisations which are actively supporting the inhabitants to alleviate their difficulties in Samambaia: the Social Development Centre (CDS), a government organisation installed in every satellite city, and the Regional Administration (AR) of Samambaia, a type of local municipality subordinated to the local government. They sponsor community

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[4] It is worth noting that the tenants' associations were publicly threatening to carry out land invasions and to become squatters. They argued that government policy—as, for example, in—PAPE ignored their problems and gave priority to the housing problems of squatters.

gardens for which 100 families receive the seeds to plant vegetables and fruit trees, with the goal of creating a subsistence basis and the possibility of increasing family incomes. Several educational campaigns have been undertaken, related to the use of water, nutritional habits, health care and disease prevention, with special attention to diarrhoea. Both organisations sponsor training courses related to household economy such as cooking, sewing, textile painting, weaving, home industry and serigraphy, to give other possibilities of income generation. A special campaign addressed the issues of transit and traffic education, having the schools as targets. To solve the problem of accumulation of trash in open spaces, a campaign was carried out in which a sack of trash could be exchanged for a litre of milk. But there is a particular activity that attracts our attention to the issue of urban poverty: a social assistance programme sponsored by the CDS and the AR, called the 'soup campaign'. According to the CDS, there are 7500 people who receive one daily meal offered by the programme free of charge so that they will not starve. It seems that the level of unemployment is very high and that a great number of people simply do not have the means to afford a basic daily meal. Further evidence of this is the alarming number of children suffering from malnutrition. Of all the children suffering from malnutrition who are accepted into the regional hospital of Taguatinga, 80 per cent come from Samambaia, and there are indications given by the health centres that there are more than 50 000 children in this condition in the city (Caderno Cidade, 1990).

Despite the adversities, there is a degree of euphoria among the inhabitants, who see the governor as the messenger of God, the one who brought land to the poor. He is often compared with Juscelino Kubitschek, the charismatic builder of Brasilia and former president of Brazil, due to his pioneering approach and his concern for the poor. This is substantially reinforced by a great dose of populism and vested political interests for the 1994 elections. The government makes use of the governor's charisma and urges the inhabitants of Samambaia not to sell their plots. However, the appeal is not strong enough to impede the commercialisation of plots, despite the legal restrictions that prohibit any type of commercial transactions involving plots in Samambaia. In fact, commercialisation is taking place at a remarkable speed. It is difficult at this point to identify the level of displacement of the original inhabitants since the sales usually take place informally, using varied mechanisms such as power of attorney or personal receipts not controlled by the public notary. Surprisingly, there are already advertisements printed in the local newspapers announcing sales of plots, shacks and houses. On one day in October 1992 (i.e. two years after the inauguration of the city), there were 69 houses for sale (Correio Braziliense, 17 October 1992), of which 14 were plots with a shack. These are typical cases that might identify low-income inhabitants getting rid of their properties. The cheapest was on sale for US$1565 while the most expensive cost US$3912, with an average of US$2568.74 per plot, including the shack. This is an amount 31.4 times the minimum wage of that month, calculated according to the official exchange rate. The other properties were well constructed houses, flats, commercial plots and houses situated in the complex built by the Social Housing Agency. The owners of the latter are selling the units and transferring their loans within the same deal. The government has already taken a

number of plots back from second owners and has redistributed them to other residents registered in the official cadastre, but it is impossible to identify all the illegal sales that have taken place so far in the settlement.

Whether Samambaia will be consolidated with its original residents still living in the city is a relevant question to ask, but very difficult to answer. It is likely that this will not be the case. Newcomers and displacement of target groups are both part of a common phenomenon in low-income residential areas in Brasilia, familiar to the local government. During the allocation of the plots in Samambaia, the government excluded 20 per cent of the families living in a squatter settlement, called Boca da Mata, formerly situated in Taguatinga, because the government cadastre revealed that they had acquired a house or a plot through past government housing programmes.[5] The impression is that previous tenants who have come voluntarily to settle in Samambaia mostly stay on their plots. The forcibly evicted and relocated squatters, however, appear to be much more prone to selling their plots. More research is required to verify these impressions and to obtain a more detailed picture of displacement.

Displacement reflects a structural problem of income distribution which is locally expressed in the existing distortions in the housing and land markets. In addition, there is a chronic incapacity of the job market to absorb the economically active labour force. In the case of Samambaia, there is an extra impulse caused by government intervention. It made large-scale investments in infrastructure and public facilities without providing support and assistance to the poorest groups to help them cope with the rapid changes in their living environment. The sudden valuation of their property is a temptation to sell, especially when one is under-employed or unemployed. This will become even worse after the completion of the metro line linking Samambaia with the Plano Piloto, expected to be inaugurated in 1994.

After three years, the city shows an impressive development resulting from an investment of more than US$70 million. A total of 147 public standposts, with 10 taps each, were replaced by a 270 835-metre water supply network with the capacity for more than 17 000 individual connections and a daily production of 14 million litres. There are already 180 public telephones, 17 sport fields, 240 classrooms spread among more than 25 schools, 334 shops, 98 religious buildings, one bank, a creche, an integrated children's centre (CIAC), a very modern police station and a fire brigade, one regional hospital and two health centres, and 3526 sewerage connections based on collective septic tanks. Two urban centres are under construction, and the industrial sector is expected to be launched soon where small-scale non-pollutant industries will be established.

This investment programme in infrastructure is part of the development strategy undertaken by the local government within the scope of a programme called 'Better

5 This issue generates a lot of polemics in Brasilia. It is a point of divergence between those who advocate low-income housing programmes, and those who defend a more restricted supply to the popular sector. There are no reliable data, nor any study, on the route which the beneficiary takes, who sells his plot or house. It could be that he returns to the status of squatter when the surplus capital is exhausted; alternatively, he might buy a cheaper place and use the capital acquired for other purposes; he might even return to his home place.

Life' ('Programa Vida Melhor') which is basically a combination of interventions in different satellite cities. Eighty per cent of the 1990 local government budget was allocated to investments in infrastructure, education and health. The priorities are defined by the local communities during itinerant government sessions, i.e. working sessions of one day by the governor and his whole secretariat, that take place on the spot during his visit to a particular satellite city. Projects are defined, financial resources are allocated and timetables are even fixed in a clear manoeuvre to mobilise the local population's support and involvement. The government is eager to host the Olympic Games of the year 2000, and there are already plans for building and expanding the existing infrastructure for that purpose, but obviously the government's hidden interest is in the next election, to be held in 1994. At the moment, the government is putting effort into setting a planning framework and the foundation of an Urban Planning and Research Institute like the IPLAN in Rio de Janeiro and the IPPUC in Curitiba. It already has an approved legal instrument to guide urban development, which is the Master Plan for the Territorial Organisation of the Federal District, but lacks clear sustainable housing and employment policies and programmes that could link the process of housing improvement with broad development programmes, increasing possibilities for employment, income and access to resources by the lowest income groups.

More alternatives and possibilities for income generation will not stop, but might decrease the rate of displacement if they can alleviate the economic situation of the poor. A job market which is basically tertiary and with strong dominance by the public administration is limited, and this limitation tends to increase with the pressure for efficiency and cuts in personnel in the state machinery. Informalisation will be a natural outcome, and will become the outlet solution for income generation for the poor. The government is basically utilising, once more, the construction sector as a way to generate employment, and avoids touching a very delicate issue which is the establishment of an industrial park that could provide jobs for a growing population. And until this dilemma is solved, low-income settlement projects like Samambaia will continue to face the phenomenon of displacement.

For the inhabitants of Samambaia, who use their labour as their most important and valuable asset in the development process of the city, industrialisation remains the chance to improve their living standards under very inequitable conditions in terms of access to resources and opportunities. And since the government has not made a serious initiative to support neighbourhood-based activities through the provision of building material credits, technical support and social development programmes, one hopes that the inhabitants will manage to launch development processes independently from the state. In the light of the lessons from Ceilândia, one hopes that grassroots organisations will guarantee their cohesion and solidarity in facing the hardships of the following years and enable them to construct a city that they will be proud of.

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