BRASILIA, FROM PLAN TO METROPOLIS:
a critique from the perspective of low income housing policies.

Claudio Acioly Jr.

DRAFT WORKING PAPER

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ABSTRACT

Brasilia represents a turning point in the history of town planning and it is undoubtedly the most expressive example of a city in which the paradigms of the CIAMs-International Congresses of Modern Architecture were implemented to their fullest extent. The Plano Piloto of Brasilia is the only 20th century urban area, that was elected as a patrimony of humanity by UNESCO.

The city experienced a rapid development but after thirty-two years since it was officially inaugurated, it presents features similar to other metropolises in the Developing World: high rates of population growth, housing shortage, squatter settlements, urban struggles, inappropriate public policies etc. In this paper, the author makes a critical review of the development of the city, emphasizing low income housing policies, stressing the conflicts of the planning process with emerging social-political movements of residents. Theoretical parameters and development premises of the new Brazilian capital are analyzed. It is argued that these parameters have decisively influenced further urban policies of the government, which created a series of constraints on the urban poor. The text provides evidence that a critical housing shortage has accompanied the development of Brasilia and that it is directly associated with restrictive public policies towards land, housing, infrastructure and employment.

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A survey conducted in two urban settlements brings other relevant evidence from the grassroots project level and is used to sustain the critique of housing policies pursued by local government. The appearance of politics in the urban scenario gives some indications of future changes in the functional characteristics of the Brazilian capital.

BRASILIA, FROM CONCEPT TO METROPOLIS: a critique from the perspective of low income housing policies.

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1. INTRODUCTION

During its 32 years of official existence, Brasilia has received the attention of a considerable number of researchers resulting in several studies and articles published in Brazil and elsewhere in the world. At the international level there are three interesting publications (Epstein, 1973; Evenson, 1973; Holston,1987). Except for the study of Evenson, they all focus on the development of the city from an ethnographic and anthropological point of view and they lack an analysis in depth of the urban and housing policies pursued by the local government. Epstein emphasized the development of squatter settlements, providing an excellent overview of the living conditions of the inhabitants of a particular area, namely the IAPI settlement, after having been a resident of the area for a few months. Already in that period, he pinpointed the duality and the continuous and unresolved conflict between squatters and the planning framework of the capital. Holston analyzes the rupture that Brasilia and its paradigms imposed on the urban tradition of Brazilian cities. He criticized the way that the defamiliarization of this urban tradition is undertaken through application of the premises of the modern movement. He pinpoints the paradoxes of Brasilia's planning and design frameworks. Although he disregards the importance of the government in urban and housing policies, he provides the reader with an interesting view of the existing dichotomy between a modernistic utopia and politics of development.

Anthropologists have made a valuable contribution to the study of Brasilia specially when it concerns background information. Due to several circumstances, this information was never accessible until Lins Ribeiro published a text based on his research on the lives of the pioneer workers who migrated to the city (Lins Ribeiro, 1980). He dug out the unwritten story of labour camps as an archaeologist and compiled astonishing data about living and working conditions during the construction process, and about the conflicts and massacres that occurred during the period.

Evenson's study pays more attention to the modern movement in Brazil through the analysis of the development of two Brazilian capitals: Rio de Janeiro and Brasilia. She looks at the competition for Brasilia and presents an analysis of a number of proposals, including the one awarded by the commission. Her study focuses on architectural and urbanistic aspects (resulting from the popularity of the international modern movement among practitioners). Her study unfortunately neglects the housing problem of the capital city that was already evident during the period of her research.

Several articles published in architectural periodicals, both in Brazil and abroad, have concentrated on Niemeyer's work and its symbiosis with the monumentality and symbolism of Costa's pilot plan. They

sometimes reveal a certain degree of idealism, propagandism and non-critical approaches, specially during the early years of development (Acrópole, 1960; Crease, 1962; Architecture d'Aujourd'hui, 1962).

From the mid 1970's onwards several studies started to appear, mostly published by the Faculty of Architecture of the University of Brasilia. The studies varied in scope and analysis but contributed significantly to the development of a systematic critique on Brasilia, its planning parameters, its concepts, its development and its contradictions as a dynamic urban environment (Kohlsdorf, 1975; Holanda, 1975; Farret, 1976; Gorovitz, 1976).

During the 1980's there was an increase in the number of studies about the city and many important publications became available (Paviani et al, 1985; Paviani et al, 1987; Paviani, 1988; Farret et al, 1985; Holanda, 1989; Turkienicz and Wright, 1988). They revealed the interest and the different approaches of Brazilian researchers to analyze the peculiar aspects of the capital. The relationship between urban structure and social practices and the process of spatial and social segregation seem to be important topics of discussion of architects, while geographers and social scientists devoted their attention to the process of development at the periphery, the social mobility of the different social groups and the astonishing income inequalities between the different urban areas.

Except for the studies of Brandão and Gonzalez (Brandão, 1976; Gonzalez, 1979, 1985), few researchers were preoccupied with the housing sector and therefore there is a lack of studies on the different government policies addressed to this sector. Studies that could go beyond the formal architectonic analysis of the housing projects within the Plano Piloto and that could provide us with analyses of the different strategies and the different programs designed and implemented to resolve the continuous housing shortage.

Brasilia grew remarkably and is becoming a city with metropolitan characteristics. Its development and consolidation coincided with the rise of the military government (1964-85) and with the implementation of a particular development strategy that directly affected the growth of the city. This remarkable urban and population growth can be explained through several social, political and economic arguments concerning the macro economic development context of Brazil in this period. There was a lack of an effective and continuous rural policy towards land ownership; rural production and employment could possibly slow down the pace of migration; a deterioration of incomes in the rural and urban areas; the world oil crisis and the increase of foreign debt which caused extreme government centralization and emphasis on export policies; the structural adjustment programs implemented under the auspices of the IMF and the World Bank and the policies derived from that; military intervention, economic stagnation, lack of programs of job creation on a regional scale, etc. and an overall process of capital accumulation and monopolization, are typical of the capitalist development model applied in Brazil.

In this article I will concentrate my attention on the local situation of Brasilia and specifically on the role of public policies of the local government, particularly, low income housing policies. What attempts have been made by the government of Brasilia to cope with the emergence of a serious housing problem? How has the government used one of the most ideal set ups from planning point of view: an immense land stock under public domain, a considerable amount of financial resources and a very fresh institutional framework with recently created public agencies? This article intends to highlight the development of Brasilia from the point of view of housing policies, and to look at the different strategies carried out by the local governments in order to respond to housing demands. It hopes to fill the existing gap in this field of knowledge. The article provides an analysis of the basic

theoretical and development premises that sustained the formulation plans and further development of Brasilia. It argues that these premises have produced a paradigm that will influence decisively the housing sector and the consolidation of the city in the future.

Brasilia is a typical example from the Developing World. Despite all the efforts made by the government and despite significant state participation in housing production, these actions have not been able to cope with the increase in housing demands. This demand is mainly located in satellite cities, squatter settlements and the remaining labour camps, but it also comes from the middle income sector. Middle income groups are already facing serious difficulties finding housing accommodation in the highly developed Plano Piloto and is moving towards nearby satellite cities creating new processes of social mobility and spatial stratification.

The author argues that the existing critical housing problem in Brasilia is to a large extent, related to the incapability of the public sector to design appropriate policies and programs which allow opportunities for decentralization of planning and job opportunities, for better accessibility to land and credits, for diversification of productive activities and for more autonomy of the different actors involved in urban development.

Before going further, it is worthwhile clarifying a common methodological error and misapprehension found in many studies about the Brazilian capital. Brasilia is not the Plano Piloto or vice versa. Brasilia is an urban archipelago formed by different urban islands which are represented by the different urban areas and satellite cities who have kept until today a high degree of dependency in relation to the world famous Plano Piloto in terms of movement of population, jobs, services, facilities, etc. Students should start by perceiving the complexity of this urban network. In this article, Brasilia is dealt with as an urban structure, formed by 12 urban cores, the Plano Piloto and 11 satellite towns.

2. THE CITY OF TOMDROW: THE FIRST PARADIGM.

A generation of magilian architects and city planners was much influenced by a dogmatic belief that it is essential to perceive its principles in order to understand the development of Brasilia. Some paradigm are sufficiently strong to affect the formulation of policies, plans, designs and projects, and to influence the development of the city remarkably.

The theoretical basis that sustains the concept of Brasilia stems from ideas developed during the process of industrialization which took place in Europe one hundred years ago. The effects of those ideas on a generation of brazilian architects and town planners was sufficiently strong to affect the formulation of plans, designs and projects and it remarkably influenced the development of the city in the years to follow.

It was during the second half of the nineteenth century that certain concepts of city models started to be formulated, whiles rapid industrialization and city growth took place in Western Europe. The incipient city planners of that time expressed their strong concern about the salubrity and the spatial organization of the living environment which greatly influenced their visions of an ideal city for an idealized human being. Neighbourhood projects were formulated in the search for adequate housing solutions for the emerging urban labour force. Some visionary proposals presented a clear preoccupation with the visual expression and aesthetic composition of the urban space, advocating the separation of the essential functions of city life, with a greater emphasis on production and residential functions. Choay describes this "progressive model" shared and disseminated by Owen, Fourier, Richardson, Cabet and Proudhon (Choay, 1965:08). It was only during the first half of the twentieth century that these ideas gained strength among architects and urban planners who were organized under the umbrella of the C.I.A.M.-International Congresses of Modern Architecture. These ideas were brilliantly summarized in the famous Athens Charter or Town Planning Charter, formulated in the 4th congress realized in 1933. Four basic functions of the city were defined: living, working, recreation and circulation.

The Charter became the 'bible' for most prominent modern architects involved in city planning in this period. However, it was Le Corbusier who was able to give guidelines and recommendations a systematic form and a theoretical structure, proposing new concepts for city planning. He voluntarily accepted the task of propagating the new trend at the international level. Choay argues that during the period of the C.I.A.M. congresses, a new version of the progressive model was formulated in the book "The Industrial City" by Tony Garnier, which influenced the next generation of architects and city planners (Choay, 1965:18). Le Corbusier was strongly concerned with the machine age and with the problems of deterioration city life but surprisingly he put a lot of emphasis on architectural and

urbanistic solutions and disregarded the latent social-political and economic implications of the urban problem. An obsession for hygiene, health and aesthetic issues was combined with the demand for full liberty for the creative process of the architect. "His call was for a bold expression, through urbanism, of society`s confidence in the future. For him, city planning, besides being a science, was the noblest of the arts; the expression of the activity of an epoch" (Sarim, 1982:33).

Besides the similarities with the 19th century "progressive model", Le Corbusier made explicit in his works the need for a centralized planning and decision making process through which the elite of technicians could keep control over the planning cycle and bring cities under the guidance of competent expertise.

This conceptual framework generated several experiences not only in Europe, but it also led to a great number of urban planning projects and design in Developing Countries. Abuja in Nigeria, Dodoma in Tanzania and Gaborone in Botswana are some of the best known contemporary examples in Africa but Chandigarh and Brasilia are the most famous cases of fully pre-planned capital cities implemented in the fifties in India and Brazil, respectively.

3. SCIENTIFIC PLANNING AND MODERNIZATION: THE SECOND PARADIGM.

As well as in Chandigarh, the construction of the Brazilian capital evoked all sorts of bombastic statements nationalistic sentiments through which the construction of the city could be transformed into a symbolic step of the brazilian society towards a new era of modernization development and self-determination. It was during this period that the strategy of the modernization and economic development of Brazil became accepted by politicians, intellectuals, the military and lay citizens. This strategy would be realized through industrialization- and import substitution policies, frontier colonization and regional development programs.

Juscelino Kubitschek (JK), an experienced politician, articulated these aspirations in his pragmatic political program and in his campaign for president in 1955. In his development plan ("50 years in 5"), Brasilia occupied an important position and became a main strategy in the march towards the west. With his election the decision to change the capital from Rio de Janeiro to the hinterland of the central west region was finally taken.

During the Kubitschek administration, planning activities with a strong ideological character, gained real support. Planning became an efficient instrument for state control and a tool to guide the modernization projects promoted and sponsored by the brazilian state. "From the fifties onwards and particularly during the Kubitschek government, the ideology of planning took shape within the Brazilian state under a process of modernization; an ideology in which the act of planning is represented as a strictly technical-scientific action, neutral, through which one can foresee and control, that is to say, to administer in a rational way" (Bicca,1985: 111). In the words of Kubitschek, "the rational planning would be the reliable means to surpass particular interests and materialize the superior objectives of the nation, which would be translated into a goal oriented development program formulated with the technical competence to build a large, strong and powerful empire" (JK, 1956:47; cited from Castelo Branco, 1987:28).

However, Sarin precisely states that, "as practised in market economies, urban planning has consisted of the imposition of a framework of rules, presented as being neutral, and legitimized on the grounds of being in the 'public' interest. However, within the urban Third World, characterized by extreme social and economic inequalities, it is not difficult to show that the neutrality is a myth" (Sarin, 1982:

1).

In reality, the planning strategy gave priority to an increase in production and the maximization of the rate development and capital accumulation, and it disregarded the sharp economic inequalities already existing among social groups and the serious problems of distribution of wealth. In this apolitical technocratic scenario, the dogmas of the CIAM and the revolution through spatial planning advocated by Le Corbusier, found firm ground amongst the selective club of prominent Brazilian architects and urban planners. Those with sufficient prestige to coopt public opinion and the capacity to influence high governmental officials, politicians, intellectuals and artists identified with the modern movement. The consequences can be still observed today in the mentality of a whole generation of architects and urban planners, and in the plans, urban designs and planning procedures undertaken in different Brazilian cities, particularly, and most evidently in the case of Brasilia.

The national competition organized by the Federal government in 1956 to select the plan for the city provided clear evidence of this fact. The specifications and parameters provided by the organization committee were quite vague, giving only the population limit to (500,000 inhabitants) and the fixed location of the dam and the artificial lake, the military airport, the hotel and the presidential palace (AU, 1985:29). Despite the short period available for the presentation of plans, 26 different teams presented their ideas. Most projects presented social-economic and demographic studies, a maquette and detailed designs except the "Plano Piloto" presented by Lucio Costa. Above all, they had very strong similarities and showed clear influences of the C.I.A.M.`s concepts. Some plans were quite visionary and provided interesting views of a futurist city (eg. the plan presented by the team lead by Rino Levi and awarded with the 3rd place). The team formulated a plan of a city based on a series of neighbourhoods settled vertically in towers of 350 mt height, 435 mt long and 18 mt large separated by green spaces and connected by mechanic as pathways, lifts and elevators. The other proposal that also qualified in 3rd place was presented by the team of M.M. Roberto with a completely different approach: a linear city composed of 7 urban units of circular forms for a population of 72,000 inhabitants each, connected by an efficient transport network and automated pathways. Most proposals established a comprehensive set of objectives, land use control norms, building regulations, an obsessive concern with visual expressions and the aesthetic composition of city form, a sharp segregation of major urban activities, a lot of green spaces and strict separation between the buildings, a linear form of growth and a remarkable state control in the subsequent development and consolidation of the new capital. Housing proposals included high rise apartment buildings and low rise 3 storey apartment buildings, some low cost housing schemes for workers and public employees. Very little attention was paid to the process of housing production and policy issues. The formal and spatial solutions were given priority.

FIGURE 1: THE PROPOSAL OF THE TEAM OF RINO LEVI

Attention should be drawn to a plan presented by a team of young and recently graduated architects, lead by J. Guedes, who disagreed with the population limit imposed by the competition committee. They argued that the city was a living organism that will grow according to its potential economy and population, and they predicted that the capital would have a population of 1.2 million inhabitants in the last decade of this century (AU, 1985:35). They optimized the use of land through higher population densities and opted to vertical solutions exploring the possibilities of available technologies. They introduced a mass public transportation system based on a railway metro which would connect the different areas of the city in a very efficient way. They also argued that "the

international urbanism was in a crisis and that English empiricism and the rationalist propositions revealed to be incapable to understand and to re-organize the post-war urbanization process" (AU, 1985:35). They were disqualified by the jury.

The jury consisted of some Brazilian members like the representative of the Architect's Institute of Brazil, the Order of Engineers of Brazil, the head engineer of NOVACAP. (The capital development authority) and architect Oscar Niemeyer who was then the project director of the NOVACAP. Other members included William Holford who had previously worked on the plan of London; André Sive, a French architect who was then a consultant of the French Ministry of Reconstruction and Stamo Papadaki, a Greek-American architect. On 16th of March 1957, they declared as the winner the plan known as Plano Piloto de Brasilia (see **Figure I**), submitted by Lucio Costa, a Brazilian architect and member of the C.I.A.M. who had worked with Le Corbusier more than a decade before in a project in Rio de Janeiro. Costa was commissioned to develop all aspects related to urbanism while Niemeyer would be responsible for the architectural matters, as previously agreed with the President. The implementation began immediately.

The shape of the city formulated by Guedes' team was quite similar to the one presented by Costa but the latter was unique in its presentation: a series of sheets of paper with a simple but strong poetic text accompanied by sketches which provided a striking visualization of what the city should look like (Costa, 1960). A simple cross mark with the horizontal line slightly bending upwards defined how and where the different functions of the city would be located (see **Figure I**). All the governmental buildings would be located along the East-West monumental axis of 9.75 km, with the legislative, juridical and executive powers situated in a very symbolic space, the Three Power Plaza situated at the eastern end of the axis. At the cross point of the two axis, a civic center with business, commerce, entertainment and a peculiar city bus terminal were created. The residential area and its complementary functions were located along the curved North-South axis of 14.3 km, formed by a repetition of 60 housing units (superblocks) of 240 mt by 240 mt, accompanied by a strip of low rise row houses located on the Western side of the axis. A housing unit (superblock) was composed by a series of high rise apartment blocks of 3 to a maximum of 6 pavements separated by communal green areas. Costa believed that the neighbourhood unit, composed of 4 housing units and served by commerce, schools, markets, recreational facilities, church- and health centres would allow the different classes of the population to live and share the communal land and urban facilities in harmony . The city was designed as a fictional Brazilian city, without the poor and free of all the technical problems faced by most cities in Brazil by that time (Evenson, 1973:140). Subsequent development of the city would very soon expose this fiction.

In order to provide housing accommodation to thousands of construction workers, governmental employees, technical staff and so forth, a network of labour camps was established at diverse sites by governmental agencies and by several private building contractors commissioned to all the different projects. After 41 months of intensive work, fully sponsored by the brazilian government, that involved in its peak around 60,000 workers and more than 200 machines like tractors and bulldozers, the new capital was officially inaugurated on 21 of April 1960. The main public buildings, 3,500 housing units, hotels, hospital, schools, the main North-South axis, the water- and electricity supply systems and the sewage- and telephone networks were completed.

The experience of building the new capital and the peculiarity of its urban plan and design, represents a significant urban innovation and a turning point in the history of town planning in Brazil. At the international level, Brasilia is undoubtedly the most expressive example of urban design in which the principles and concepts established by the CIAMs were applied in its extreme. It is the only 20th century city to be honoured by UNESCO as part of the "Cultural and Artistic Heritage of Humanity".

There are also other aspects that make Brasilia a very peculiar case: the Government owns more than 60 % of the land; it maintains strict control over land use in order to avoid any type of illegal occupation and subdivision; it has had a continuous participation in the development and consolidation of the city sponsoring heavy infrastructure investments and a significant production of housing addressed to the popular sector. It has been basically a tertiary city, relying in its development on a great amount of Federal Government subsidy. The State still plays a major role in the job market as the largest employment generator. The city governor was always nominated by the president until 1990 when the first governor was democratically elected. There was no democratic forum for decision making (a city council or a house of representatives) as like in all other cities in Brazil) until 1990 when the population had finally the chance to elect it's representatives.

FIGURE 2: THE PLANO PILOTO BY LUCIO COSTA

4. BRASILIA AS AN IRRADIATOR OF REGIONAL DEVELOPMENT: THE THIRD PARADIGM.

The transfer of the capital to the hinterland of Brazil was for the first time officially recognized in the Brazilian constitution of 1891, but it had been a subject of discussion for almost a century before the idea was finally realized. During this period it has raised to different kinds of military, strategic, economic, demographic and political arguments. Among them, one seems to stand out and still create a lot of polemic: the idea that the location of the city in that particular part of the territory would create a favourable scenario for development at a regional scale and would create possibilities for the development of the municipalities that surround it.

The network of communication through air, railway and roads which actually connect the city to the North, West, East and Southern regions, and the increase of productive agricultural land in the Central West Region, can create the erroneous impression that the city has indeed fulfilled its designations. However, the effect is exactly the opposite. Brasilia has became a pole of attraction rather than a pole of irradiation. This has contributed to rapid population growth, to the increase in urban problems, and to the decline of economic development in the municipalities located in the so called geo-economic region of Brasilia.

In 1972, the Federal Government came to the conclusion that it was necessary to act urgently in order to minimize the problems created by continuous and increasing migration to Brasilia. It was necessary to safeguard the administrative and political role of the national capital. In 1975, the Federal Government institutionalized a special program addressed to the geo-economic region of Brasilia within the scope of the IPND-First National Development Plan. It was called PERGEB, the Special Program for the Development of the Geo-Economic Region of Brasilia. PERGEB was a component of the national integration policy whose jurisdictions covered 86 municipalities. It intended to channel public investment to support economic development, to increase incomes and to raise living standards within the region. Between 1975 and 1980, Cr$ 1.48 billions were invested in infrastructure, health, sanitation, education, transport, highways, energy and rural development (JBr, 1981). However, the program did not to decrease migration and according to CODEPLAN's 184,124 new registered migrants entered the city during the period 1974-80 (JBr, 1980:20). That is an average of 30,687

inhabitants per year.

The municipalities of the geo-economic region were confronted with a new scenario which they could not cope with. On the one hand, the incipient process of modernization was intended to increase agricultural production in order to supply the new consumption markets opened with the construction of Brasilia and by the highway networks which facilitated accessibility to the Southeastern markets. But on the other hand, the expansion of the internal consumption market (towards the west) was a prerequisite for the industrialization strategy that concentrated investments in the Southeast e.g. São Paulo and Rio de Janeiro. Besides that, the process of modernization clashed with a very archaic agricultural sector in the geo-economic region of Brasilia, which was mostly based on subsistence models that caused a serious conflict with the interests of small farmers.

The municipalities have not been able to provide adequate infrastructure and generate sufficient job opportunities that could stop the flow of population to Brasilia every year. They have been unable to achieve sustainable forms of development and they cannot compete with the capital given its advantages of urban services and facilities, income generation and employment opportunities that continue to attract waves of migrants. Brasilia is an urban centre with a metropolitan dimension and it tends to inhibit the development of smaller cities located in its surroundings. "In this part of the territory, almost all small sized cities are presenting a decrease in their rate of urban development, except Goiania and Anápolis (which are the largest cities of the State of Goias - state where Brasilia is located), some small urban centres located in areas of frontier expansion and those which are located just in the peripheral limits of the Federal District" (Barbosa Ferreira, 1985: 55).

A suburbanization process and uncontrolled urbanization is taking place in the municipalities situated within the so called area of the "Entorno" or immediate periphery of Brasilia. It incorporates an area of 50,211 km2 with a population of more than 2.2 million divided in 14 municipalities (CB, 1991:14). As will be explained later, these municipalities house low income residents who do not have access to land, housing and urban commodities in the capital. Since squatting brings a lot of uncertainty and the cost of renting goes beyond income possibilities, the periphery became the only alternative for housing accommodation for lower income groups. According to Oliveira, "in the municipality of Luziania - a city located just a few km away from the border of the Federal District, the population has reached 80,000 inhabitants with an increase of more than 600 % during the last decade" (Oliveira 1983:154 cited from Barbosa Ferreira, 1985:55). In Luziânia, the rural population decreased by 87.6 % while the urban population grew 2,590 % in the period 1960-90. 60 % of the new comers had first lived in Brasilia during a period of time (CB, 1991:18). Oliveira (1983, 1987) points out that since 1956 a series of publicly and privately sponsored land subdivision projects in Luziania has been carried out, creating possibilities for housing accommodation to a population equivalent to 1,500,000 inhabitants, precisely the population of Brasilia in 1985 (Paviani, 1985:76; Oliveira, 1987:135).

The fact is that most of the municipalities of the "Entorno", display a vicious circle of dependency and have been transformed into distant dormitory cities of very low income residents. Their income in 90% of cases was situated below 2 minimum wages, (US$ 76 in 1992) (CB, 1992:02). Although the interurban bus tariffs between Brasilia and the Entorno are some of the highest in Brazil, 60,000 people commute everyday from the "Entorno" in order to work, to do private businesses or to solve private matters, to search medical treatment (60 % of the patients accepted by the Hospitals in Brasilia are not residents of the city) and leisure and for other reasons (CB, 1991a:10/15) with a visible concentration towards the Plano Piloto.

As a whole, the 14 municipalities of the "Entorno" face very similar problems and they are confronted with urban growth on a scale not known elsewhere in Brazil. On the one hand, a significant proportion of agricultural land is transformed into urban land subdivision projects, stimulating land

speculation and suburbanization. On the other hand, there is a process of change in the tenure of agricultural land; in other words, a continuous decrease of small properties and a significant increase of large properties, provide evidence of land monopoly in the hands of a few large land owners (Barbosa Ferreira, 1987). As seen in other parts of Brazil, a series of conflicts between these landowners and small farmers have been registered in Unaí resulting in violence, intimidation, murder of peasant leaders and literal eviction. A number of landless farmers are coming to the cities but have not been incorporated in productive activities due to the incapability of these municipalities to implement programs to absorb the available labour force.

The commercial sector of these municipalities has also not been able to compete with Brasilia and most of the mayors of these municipalities point out the low capacity to generate income in their localities and the poor revenue generation through taxation on commercial transactions and on land property. Brasilia continues to be the place of shopping and the source of employment.

It is obvious that decisions taken within the limits of Brasilia are having a tremendous impact beyond these limits. The peripheral development is creating expectations and stimulates migration from other places of the geo-economic region. The present local government of Brasilia has accepted the task to reverse the existing dependence of the "Entorno" and wishes to strengthen a relationship of mutual gains and balanced development in the exchange of people, goods and services. According to the governor, this is the understanding of the metropolitan and regional projection of Brasilia (CB, 1991:6). It has created a special secretariat of the "Entorno" but only further research will be able to assess the impact of this new policy.

FIGURE 3: THE GEO-ECONOMIC REGION OF BRASILIA A PERIPHERAL URBANIZATION

5. BRASILIA A TERTIARY CITY: THE FOURTH PARADIGM.

According to Costa's Plano Piloto, the city was expected to reach 500,000 inhabitants in a period of 25 years, maintaining its main characteristics as a tertiary city, the national capital and the seat of the federal government. However, the dynamic process of consolidation accompanied by very rapid urban growth resulted in a completely different scenario in the years to follow. The population reached 1,579,000 inhabitants in 1985, three times more than estimated by the initial plan. Costa explained that the people did not want to return to their home land and places of origin despite all the measures planned to facilitate it. He thought and believed that at least one third of the people would return to where they came from; the other third would be absorbed in local activities within the city and the remaining third would be employed in the agricultural sector since it was a population with rural background (Costa, 1984: 21).

Brasilia conformed to rapid the process of urbanization that was observed in the whole country. By the end of the seventies, roughly 70 % of the brazilian population was living in urban areas and the census of 1990 revealed that more than 75 % of the population are actually urban citizens. Unfortunately Costa's plan provided no alternatives for this growth except by mentioning the possibilities of satellite developments which already occurred before the city was inaugurated. Though some of the other plans submitted to the competition, were concerned with an eventual population growth and presented very interesting suggestions and strategies, they were simply forgotten and

ignored.

The population growth rate in the capital was among the highest registered in the country, rising from 140,165 in 1960 to 537,592 inhabitants in 1970, and 1,198,142 inhabitants in 1980. Annual growth rates of 33 % between 1957 and 1964, 14.4 % during the period 1960-70 and 8.15 % in the period 1970-80 were reached (CODEPLAN, 1985:39). The city has actually 1,800,000 inhabitants and is today one of the 10 largest cities of Brazil. Until the end of the Fifties, migration flows were targeted on the axis Rio de Janeiro-São Paulo accompanying the process of industrialization occurring there. The flows shifted towards the central west region because of the construction and development of Brasilia. There was an increase of opportunities offered by the building sector and the state bureaucracy. Since that time the building sector has offered an average annual employment of 46,000 jobs until the beginning of the Eighties when it started to decrease drastically. The tertiary sector as a whole was responsible for 81.4 % of the economically active population in 1982 (CODEPLAN: 1985:52). In terms of the evolution of the job market, the building sector was responsible for 55.3 % of the market during the first decade of Brasilia, while the tertiary sector (commerce & services) created 35,4% of the jobs. During the next decade, the tertiary sector increased its share to 70 % and it currently provides for 80 % of the total existing employment (CB, 1992:6).

Local government measures have emphasised keeping Brasilia as a tertiary city at all costs. Industrialization has been regarded as a deviation from the real functions of the city and employment policies have consequently been subject to a lot of ad hoc and tragic decisions; like the one taken by the federal government to inhibit the expansion of the public sector by prohibiting new employment in the state bureaucracy. Another is example is one of the local government when it decided to decrease construction activities and to freeze the housing sector because it believed that job opportunities and the possibilities of acquiring a piece of land were the main stimuli for migration. These decisions at the end of the Seventies and beginning of the Eighties, had an immediate effect on Brasilia and its periphery: overcrowding, suburbanization, squatting, political mobilization for housing, unemployment, etc.

Some attempts were made to create industrial poles in the region of the "entorno" but the decision clashed with the argument that this initiative could jeopardize the functionality of Brasilia as the federal capital. The fear of increasing urban densities in the surroundings of the capital city, and the excessive care when dealing with the issue of industrialization indicated that the government was not really willing to tolerate shifts that could threaten the original designation of the city. "In this scheme, the Plano Piloto could be preserved for some functions of the Federal Government, released from universities (students) and industries (workers) that could be replaced in other urban sites, and this would give it the characteristics of an administrative suburb of a larger conurbation, calm and pleasant, and distant from the daily problems faced by the rest of the country... just like many politicians have idealized the country`s national capital, centre of national decisions" (Cordeiro and Kohlsdorf, 1985: 245).

The private sector has exerted pressure to create opportunities for industrial activities within Brasilia but the industrial sector in general has been characterized by micro, small and medium-sized enterprises situated in specific locations. These economic activities are mostly related to the construction sector and basic consumption goods, with a predominance of food, metallurgy, non metallic minerals, diverse services, printing publication and furniture production. While the public sector currently accounts for 80 % of the jobs, the informal sector is the only one that is really growing, with 67 % of growth registered in the period 1976-89. It currently accounts for almost 40 % of the economy of Brasilia (CB, 1992:06).

Unemployment is growing and according to the latest indicators, 15.2 % of the EAP is unemployed.

This reinforced the idea that a tertiary city cannot to generate sufficient employment to give it a sustainable basis. More and more it becomes evident that Brasilia cannot sustain itself if it continuously depends on this type of production activity, commerce and a generous federal subsidies. Two thirds of the 1993 local government budget, which amounted to US$ 716,000.00 are derived from transfers of the federal government and only one third is acquired through revenue collection (CB, 1992:06).

Recently, the government has created an Economic Development Council and launched an Economic Development Council (PRODECON) in order to stimulate the production of manufactured goods and services and to change the present dependency of Brasilia on imports (85 % of the goods & products consumed in the city are imported from other states) (CB, 1992). However, any initiative within the limits of Brasilia will fail if it is not connected with the development policies addressed to the peripheral municipalities which give Brasilia a metropolitan dimension.

6. EMERGENCE OF SQUATTER SETTLEMENTS: EARLY CONFLICTS WITH PLANNING.

The existence of low income settlements (labour camps - **acampamentos** and squatter settlements - **invasões** within the urban factory of the new capital) was not accepted by the authorities and the planning team. Several of these settlements were bulldozed off and residents evicted to recently created satellite cities before the inauguration of the city. These towns were only planned to exist after the moment that the Plano Piloto would be fully occupied. However, political decisions taken by the government, sustained by the technical team, laid the basis for the development of a continuous slum clearance program that accompanied the development of the city from that moment onwards.

In the words of Lucio Costa, "the NOVACAP - the city development corporation, Israel Pinheiro -the project manager, and the others decided to proceed like that because there were favelas surrounding every construction site in the city which involved the families of the workers". The creation of peripheral settlements where individual plots were provided, and where the population could be accommodated in one way or another, was derived from this decision. As a consequence, these sites became towns, the so called satellite cities that took the place of the satellite cities that were planned to exist" (Costa, 1984: 26).

Before the official inauguration of the city, three satellite cities had already been planned and implemented: Taguatinga (1958), Gama (1960), and Sobradinho (1960). Two old historical villages already existed and gained the status of satellite city in the following years: Brazlandia (1933) and Planaltina (1859); for their location, see **Figure II**. The selection of Taguatinga was decided on in 1958, after a site visit of president Kubitschek who was confronted there with a demonstration for housing carried out by the residents of squatter settlements. This marked the beginning of a long struggle by the urban poor to achieve their rights to stay in the city which they helped to build and to consolidate. Other squatter areas received less lenient treatment and wherever resistance occurred, a group of social workers and sometimes special police forces were activated to convince residents to move to the new sites. In the labour camps, conflicts over better lodging, food and respect of labour rights, started to take place as well. At that moment, clear contradictions were revealed between the interests of the State and the mass of workers constructing the city. Sometimes, violence broke out with losses of human lives.

In this period, there was already an incipient popular organization that organized a long resistance against eviction in Cidade Livre (Free City). Despite the fact that this wooden town had a provisional character, it already had all the features of a small size city: water, electricity, houses, commerce,

shops, banks, hotels, a population of approximately 60,000 inhabitants. It was already surrounded by flourishing squatter settlements which continuously received newcomers who were attracted by the construction of the capital. The government attempted to demolish the city, shacks were burned down and residents were continuously intimidated, but a long resistance was organized and legalization by the name of Nucleo Bandeirante was finally obtained in a federal law of 1961 (for location, see **Figure II**). This achievement represents the first real physical intervention of social and political forces in the land occupation process foreseen by the original plan. A popular residential area within the limits of the Plano Piloto was imposed on planners and authorities by mechanisms that they could not the control.

However, planning strategies became more sophisticated and slum clearance policies got stronger in order to safeguard the purism of the Plano Piloto. The goal was to protect the Federal Government from delicate political situations caused by confrontation with popular forces. The government had to tolerate the existence of the remaining labour camps and several other squatter areas, because it had no policy on programs to provide housing on a short term basis to everyone in need.

During the first years, there were some experiments with low cost housing projects. Two blocks of low rise row houses, composed of several one and two storey houses were designed by Niemeyer and implemented in the South wing of the Plano Piloto. Some popular housing units (superblocks) were also implemented with three storey apartment buildings in this wing and in the satellite city of Cruzeiro. Manipulation and clientage was used to allocate the houses and apartments, excluding the most needy groups of low ranked public servants. The construction of residential areas specifically designed for a special social group was the first contradiction with the discourse of Costa and Niemeyer and with the basic premises of the Plano Piloto. The early social stratification in the use of the space in the Plano Piloto, which became sharper over the years, was not a distortion of any kind but the result of conscious planning decisions.

Before December 1960, the Popular Housing Foundation (FCP), the predecessor of the Housing National Bank (BNH), sponsored the construction of 1,520 popular housing units (maximum of 70 m2 per unit) in Brasilia , spread amongst 4 different settlements (Azevedo & Gama de Andrade, 1982:37) including the first compound of 500 low income houses ever built in the capital. This figure represented 9 % of the total number of houses sponsored by the FCP until that time. Given the fact that the city was inaugurated with 3,500 units ready to be occupied, then we may assume that an estimated population of 25,000 inhabitants was accommodated in government sponsored housing units. This was equal to about 17 % of the population of the city registered by the 1960 census. The majority of inhabitants was living in shacks situated in provisional settlements, labour camps, squatter areas and in the recently created satellite towns.

In 1962, the Social Housing Agency (SHIS) was created with the task of financing and promoting popular housing schemes which were built in Taguatinga, Gama, Sobradinho and in the North Wing of the Plano Piloto. SHIS became an active government agency taking responsibility for the local implementation of the national housing policy sponsored by the BNH. As the BNH grew, housing production increased to 20,000 units (1964-1970) and investments were made in basic infrastructure through loans provided by the BNH, serving a population of 300,000 people (Acrópole, 1960). However, the critical housing shortage remained unsolved. The squatter settlements continued to grow since the government housing projects were incapable of meeting those in greatest need.

7. MASSIVE EVICTIONS: POLICE OR POLICIES?

Between June 1968 and June 1970, the government decided to tackle the problem of the provisional settlements. It created a special committee to supervise all activities related to these settlements; it

set up a cadastre and undertook massive evictions and resettlements during this period. The goal was to clear out inconvenient residents from the Plano Piloto and to concentrate the squatters in strategic and controlled locations. The residents of 9,248 shacks situated in 100 different settlements were transferred to other squatter settlements and to different satellite cities without any selection criteria for relocation and disregarding the fact that the majority was working and living in the Plano Piloto and it`s region (SG, 1981). A number of 3,312 shacks located in 28 labour camps was allowed to stay but under very strict supervision. No repairs, replacements or changes in the wooden structure of these shacks was allowed.

In the beginning of the Seventies, a Slum clearance Commission was formed (CEI -Comissão de Erradicação de Invasões). It controlled labour camps and squatter settlements through systematic inspections and set up a series of measures for massive evictions. CEI was responsible for one of the most spectacular actions regarding low income housing in the history of the city. Residents of a huge squatter settlement located on the fringe of Nucleo Bandeirante (IAPI, Vila Querosene, Vila Tenório, etc.) were evicted to a newly created satellite city designed for the main purpose of housing all squatter residents of Brasilia. Located next to Taguatinga, 35 km from Plano Piloto, there was a large land development project with 21,792 residential plots and with minimal basic infrastructure. Named after the commission, it was called **Cei**landia. By 1972, 80,000 people had been resettled (SG, 1981; Acioly et al, 1984).

In this period the military regime engaged in extremely radical procedures, and established stronger centralization of planning and decision making with no possibilities for democratic participation. In Brasilia, this was more visible than in any other city.

The following years demonstrated that slum clearance policies could not solve the dilemma of housing the poor, nor could strict surveillance and control mechanisms over "invasoes" and "acampamentos" stop these settlements from growing.

By the mid Seventies, a number of issues became more evident. First, the design concept of the Plano Piloto, rigidly regulated by building and land use laws, inhibited the housing sector by causing an absurd rise in the costs of land and construction. The area became too expensive for low income residents. The assumptions of the Plano Piloto were preserved and reinforced by the planning authorities, leaving some chances for land subdivision and increase in urban densities. These are two most common mechanism used by low income groups to find access to housing in the majority of Brazilian cities and in the Developing World.

This was pointed out by Brandão's (1976: 19) study of the housing sector in Brasilia: "On one hand, the high levels of qualification of space, specialization of functions, spatial dimensions and urbanistic requirements for land occupation as well as the resulting costs have become mechanisms to inhibit the possibility of the poor population to live in the Plano Piloto. On the other hand, it has created constraints for middle income groups to cope with the housing standards established within the plan" (Acioly, Andrade and Silva, 1986: 6). Indeed, during the Seventies, some satellite cities like Guará and Nucleo Bandeirante, received an influx of new comers. Families who could not cope with the high costs of housing in the Plano Piloto, moved towards the nearest satellite cities expelling economically weaker groups from these sites and definitely materializing a continuous displacement process. "It is worth noting the extreme situation in Guará where practically 100 % of the existing housing stock had been subject to at least one commercial transaction and more than 50 % of the apartments were rented in 1976" (Gonzalez, 1985: 95).

The circulation and transportation system derived from Costa's Plano Piloto combined with the resulting architectural and urbanistic standards were efficient instruments of reinforcing a social,

economic and spatial segregation to a degree not experienced in any other Brazilian cities. The poorest are increasingly living in the remotest locations (Wright, 1987:198).

Second, a significant amount of government sponsored housing projects addressed to the popular sector, never reached the poor despite the number of housing units produced by the government's Social Housing Agency - SHIS. SHIS had become the leading housing agency of the National Housing Finance System (SFH) in terms of the number of constructed units. SHIS was mainly concerned with conventional housing projects and had already built 58,024 housing units before the end of the Seventies (JBr, 1980). In 1979-80 alone it constructed 14,400 houses in Ceilândia and according to Gonzalez, the amount of housing produced by SHIS reached 65,952 units after the inclusion of the P-Norte extension of Ceilandia (Gonzalez, 1985: 83). However, the poorest groups were never able to meet the income requirements established by the programs and therefore were not included as a target group of the projects. This was not so much a peculiarity of Brasilia but rather a failure of the National Popular Housing Plan - PLANHAP designed and sponsored by the BNH (1964-86). According to Bolaffi (1986: 24), from the total resources collected through compulsory savings of the economically active population by one of the (once) largest housing finance institutions in the world, only 18 % was invested in the construction of houses addressed to families earning less than 5 minimum wages (5 x US$ 55.30 in december 1986). In fact, out of the 4.5 million houses produced by the BNH, only 33.6 % reached the popular sector while 48.8 % was allocated to the middle class and high income groups (Azevedo, 1988:116). This is a clear contradiction with the social objectives of the bank given the much higher cost per unit in comparison with the units built for the popular sector. "The large scale production of housing, which was the basis of a policy for employment generation and for capital accumulation by the building sector, was not able to sustain itself as a policy nor was it able to solve the problem of housing the poor" (Acioly, 1987: 7).

Third, the economic difficulties due to high rates of inflation, and the decrease of project & building activities in the city caused a serious decline in the building sector, restrained employment opportunities and increased the economic difficulties of low income families. There were indications that the increase of densities in existing squatter settlements and the proliferation of others were linked to this process.

Fourth, private developers begun to offer plots in illegal land urban/rural subdivision schemes at prices only affordable by middle income groups. These were known as condominiums which were realized on agricultural land that was not yet subject to expropriation by the government. These developments threatened environmentally protected areas situated in crucial hydrological basin of water courses that guaranteed the future water supply of the city. At the same time they decreased the already insufficient amount of agricultural land needed to meet the needs of the growing population.

Fifth, the lack of suitable employment policies and appropriate housing programs to meet the needs and diversity of a growing low income sector, caused the appearance of an informal housing and employment market. The informal sector was estimated to consist of 150,000 workers (Paviani, 1985: 76). From the point of view of housing, not only were squatter settlements and labour camps growing but there was also overcrowding of residential plots in all the satellite cities. The practice of subletting rooms & houses allowed the emergence of a new category of low income residents (o inquilino de fundo de lote) - tenants who occupy rooms & houses located in the backyards of plots. Studies revealed that by the mid seventies, 50 % of the population was already living in rented accommodations (Gonzalez, 1985: 96). The SHIS cadastre, founded in september 1984, registered 90,437 families in need of a house from which 67,647 (74.8 %) were living in rented houses and in 1986. Estimates revealed that 60,000 families were living in overcrowded plots in the satellite cities (Acioly et al: 1986:05). By 1987, the Government of Brasilia assumed publicly that the population

living in rented accommodations could possibly reach 150,000 families, which means an estimated population of 750,000 inhabitants, or almost half of the capital's total population in that year. This phenomenon makes Brasilia look like any other city in the developing world.

Finally, the effort made by the government to maintain the city as an "administrative metropolis", became on one hand an indirect stimulus for the development of informal mechanisms of income generation. On the other hand, the development process taking place in the satellite cities showed that, sooner or later, the functional characteristics of Brasilia would have to be revised. The central role played by the Plano Piloto in the job market and in the supply of urban services and facilities, would necessarily have to be changed.

8. A MASTER PLAN AND THE RISE OF RESIDENTS` ASSOCIATIONS.

Three issues emerged by the end of the Seventies which influenced the housing sector drastically: a master plan; a political decision to decrease and freeze housing production, and the rise of residents'associations.

A comprehensive master plan was designed and approved in 1978 and for the first time the problems of Brasilia were treated in a more global view. Instead of referring only to the problems of the Plano Piloto, the plan was concerned with the satellite cities and with existing vacant land not yet with a use specified in the Federal District. There were also some considerations over the geo-economic region and the adjacent municipalities.

PEOT - Expansion and Territorial Organization Plan of the Federal District (see **Figure III**) had a macro structural character and provided the public administration with a series of guidelines to orient the process of occupation of the territory through the development of a linear and polynuclear city. It was based on two important parameters: the extreme concentration of activities in the Plano Piloto would demand a sustainable response from the local government and the new settlements within the Paranoá basin would face a series of environmental restrictions. The plan presented three alternatives of occupation: one through the development of isolated satellite cities; another through the development of new human settlements in the Western axis towards Taguatinga and Ceilandia and the last and selected option of development towards the South, along the Taguatinga-Gama axis (GDF, 1977; Nogueira Batista, 1984; Cordeiro et al: 1985). PEOT can be summarized as a broad land use regulation plan which would guide urban development towards the Southwest, locating new residential areas far from the Plano Piloto but connecting them through a network of mass transportation system and incorporating the recent peripheral developments taking place in Luziânia. By the time of plan implementation, the urban network of Brasilia was already composed of 8 satellite cities.

FIGURE 4: THE MASTER PLAN PEOT

The plan proposed another called Samambaia which was inaugurated in 1989 and a new urban expansion called Aguas Claras projected for inauguration in 1993. PEOT had a strong sanitary basis with a series of technical arguments against new urban settlements within the hydrologic basin of the Paranoá lake, especially because the lake was already presenting high degrees of pollution and the existing network was incapable of supporting an increase of population in this location. It is worthwhile mentioning that the public water & sanitation company-CAESB became the guardian of PEOT and was quite effective in preparing strategic plans based on conventional sewerage treatment

and water collection systems. It did not tolerate any discussion of decentralized treatment systems nor any alternatives of water supply like bore holes. The plan was based on the basic assumption, formulated by CAESB, that the capacity of the existing sources of water supply could only meet a projected population of 2,5 Million inhabitants. The sanitary argument became an effective instrument to perpetuate a process of social and spatial segregation and although it was never very explicit, it was used as a political instrument to preserve Brasilia as the national political administrative capital (Acioly, 1987a). In this respect, PEOT reinforced the trend of development of human settlements as far as possible from the Plano Piloto. The **"Preservationism"** towards this site became much stronger inside the planning apparatus and seemed to have guided a series of administrative and political decisions in the following years.

The land use control regulations established by PEOT ignored completely the existence of "illegal" low income settlements and their social and economic dimensions but it stimulated measures and control mechanisms to stop the growth of these settlements. This initiative had drastic effects in the low income housing sector by putting an extra pressure on supply .... within these settlements since they represented a large informal housing sector and the only one alternative for housing out of governmental circuits. The possibilities for housing accommodation in this sector was becoming very scarce and because formal housing production was declining there only two alternatives left to the poor: to invade public vacant land or to share accommodations in residential plots in satellite cities. The growth of an informal rental sector in the satellite cities seems to be linked with the enforcement mechanisms of PEOT and with the decrease of activities in the housing and building sector.

A political decision taken by the local government reinforced this process. There was a belief that the increase of migration towards Brasilia, and consequently the growth of squatter settlements was related to the amount of government sponsored housing projects. It was generally accepted within Local Government that the existence of easier mechanisms to apply for a house motivated people to migrate to Brasilia (JBr, 1980:06). Consequently, between 1978 and 1982, not a single housing program was addressed to the popular sector. This had serious consequences that were never evaluated.

By 1978, there were still 50,000 families living in squatter settlements according to the secretary of social affairs (JBr, 1981:06) but thereafter the number of squatter residents decreased. After Ceilândia (1971) was implemented, there were still 3,456 remaining shacks but in 1980 this number had decreased to 2,012 shacks divided in 24 squatter settlements plus 859 shacks situated in different labour camps. This was clear evidence that large scale evictions and resettlement projects could not extinguish completely the phenomenon of illegal land occupation.

From the new point of the population, a process of reorganization took place within several residential areas and consequently a number of residents` associations were created in the squatter settlements and labour camps. Political parties such as the PT-Labour Party, PDT-Social Democrats, the progressive church movement and professional organizations such as the Order of Lawyers and the Architects' Union started to be involved with community organizations and popular mobilization. Housing, employment and decent salaries were catalytic factors but the background issue was democratization and political rights. This phenomenon also occurred in Rio de Janeiro, São Paulo, Porto Alegre and most state capitals of Brazil.

The homeless demanded the development of public programs which could give them access to housing, land and fair credit systems. Squatters often demanded legalization of tenure or implementation of basic infrastructure. Demonstrations for housing started to occur and extremist actions were undertaken like mass invasions of vacant public & private land which "threatened the most elementary basis of property and social order", according to the editorials of several important

national newspapers.

Examples of this phenomenon include the case of Vila Paranoá, the residents of Ceilândia and the residents of the squatter settlements of Chaparral and Vila do Areal located in Taguatinga.

Paranoá was a former labour camp built in order to provide housing accommodation to those involved in the construction of the dam of the lake. After the work was done, a number of families were allowed to remain and over the years a process of growth started to take place outside the limits of the labour camp. Several collective invasions took place in 1972, 73, 74, 81 and 1986. In 1969, there were 187 shacks with an estimated population of 1,000 inhabitants but after the invasion of 81, it became the largest and most populated squatter settlement in Brasilia. A study made afterwards registered 2,650 shacks (Acioly et al, 1984) and later a government cadastre registered 3,686 families with an estimated population of 15,000 inhabitants. In 1979, the residents' association was founded and a process of community organization was launched by a group of young community builders who were supported by the PT and the catholic church. They aimed to mobilize the inhabitants in order to struggle for the legalization of tenure, the implementation of water supply standposts and better facilities such as schools, health centre, public telephone, public transport and so on. With their election to the board of direction of the association in 1984, they started to receive political support and technical assistance by a number of professionals and organizations. They were able to carry out a very interesting program of community organization in which the author happened to participate as a technical advisor. The settlement was divided into blocks and through the presentation of a audio-visual programs, local workshops and sectoral meetings key issues were discussed and local representatives were elected. The response of the government was often violent, with constant demolition of shacks, intimidation and total neglect of the population is needs and even attempts to coopt community leaders. The area was in an excellent location, situated between two high income residential areas that were served by high standards of infrastructure but the government's sought to evict the residents based on the arguments that there were too many environmental restrictions and serious difficulties in implementing a water supply system in that site. Overcrowding increased, subletting and renting became a good source of income, the school was forced to create more shifts to provide rooms for the new children, skin and lung diseases became more frequent and the difficulties became more critical as the number of inhabitants increased abruptly. There was water only available through 1 public water standpost and water vendors who collected water from a natural mine located 2 km away. It was a long struggle but the mobilization of the inhabitants resulted in the increased of water standposts, a new school, a health centre, more public telephones and bus lines and in 1988, the government finally capitulated and approved settlement on the site. 5,600 families, or 31,360 inhabitants with incomes under 3 minimum wages would become the new residents of another satellite city (Paranoá, 1988) imposed on the planning agencies by social and political forces that they were trying to manipulate.

In the satellite cities , residents` associations were also formed but uniquely in every satellite city a tenants` association was formed and by the mid-Eighties they were organized into a Union of Residents' Associations of Brasilia. The tenants' associations were very well organized and kept their own cadastre based on the membership registration and place of living. The president of the tenants's organization of Ceilândia claimed to have 30,000 registered members and elected representatives in every block of the city.

These movements indicated that government policies were incapable of responding to the needs of the low income population. The population did not have any kind of

dialogue with the planners, nor were they able to give any input in the design of these policies, programs and projects.

A number of aspects can be pinpointed as indicators of a complex housing problem: the increasing costs of housing and the growth of illegal settlements; the increased overcrowding of residential plots in satellite cities; the transformation of spaces of the commercial sectors of the superblocks into housing units; the appearances of several two and three store apartment buildings constructed along the W3 commercial avenue which showed visible violations of the zoning regulations within the Plano Piloto; the appearance of squatters on vacant land within the Plano Piloto; the high costs of land registered in the public auction carried out by the government; the increase in private and illegal land subdivision projects implemented on agricultural land and addressed to middle income groups; the city wide political struggles for housing and the fast growth of informal job and housing markets. These issue attested that a shift in governmental policies was urgent and necessary. A side effect of the restrictive policies of the government also became visible just outside the limits of the Federal District, particularly in the cities of Luziânia and Santo Antonio Descoberto. The appearance of private housing development projects and the BNH conventional housing projects in the peripheral municipalities had filled the gap in housing supply for the urban poor of Brasilia but it was literally expelling them to even farther locations, very distant from the city core, urban facilities, employment places and urban services in general. The existing road network covered vast areas and long distances and made these peripheral developments possible. A transportation system reinforced this trend and imposed long daily trips and very high transportation tariffs on the urban poor. "The result was a social and spatial segregation comparable only to South Africa" (Galbinsky, 1987:168).

9. HOUSING THE POOR: A NEW APPROACH

In 1982, the governor was replaced by the president and a housing program was designed for the residents of labour camps and squatter areas, called PAPE-Programa de Assentamento Populacional de Emergencia. An independent planning and implementation unit was created with the task of coordinating the implementation of the program and developing specific strategies related to low income housing. It was called GEPAFI - Grupo Executivo de Assentamento de Favelas e Invasoes. The appearance of an independent unit in the institutional framework of the Government underpinned the need for an institutional reform; the stagnation of the Social Housing Agency-SHIS and the urgent need for a radical change in public policies, especially those affecting the housing and employment sector.

The unit carried out a social-economic survey and registered about 18,000 families, an estimated population of 90,000 inhabitants living in 89 settlements. The cadastre provided the social and economic profile of the inhabitants through household surveys and aerial photographs the physical characteristics of the sites (GEPAFI, 1984).

Despite all the measures to freeze housing production and to control the growth of illegal settlements, the results of the census showed the increase of settlements and of the squatter population confirming the failure of the decisions taken by the former government.

PAPE had an ambitious goal to allocate 20,000 serviced plots and to build 20,000 core house units during the term of the governor but GEPAFI could only implement seven projects in the different satellite cities, with a total of 8,329 plots that reached 48% of the target population in less than three years (Acioly, 1987a). The program advocated the principle of settlement upgrading for the first time in the history of the city. Even though several squatter settlements were relocated from their original sites, GEPAFI took always into consideration the satellite cities where they were located in order to optimize the existing infrastructure and to maintain the existing linkages of the residents with services

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and facilities and with their places of employment (GEPAFI, 1983; 1983a)

Although this approach had been used before in other cities of Brazil and had been discussed in specialized international literature, the settlement upgrading strategy and the gradual development approach applied by GEPAFI can be considered as a very innovative way of dealing with low income housing in Brasilia.

On one hand, GEPAFI stimulated the self-initiative of the residents in the solution and the improvement of their housing conditions, and established a clear concept of housing as a process. The brick masonry core house approach favoured the involvement of the residents and allowed every individual household to play a role in the process of housing improvement (GEPAFI, 1984: 65). The house owner and his family were expected to take steps in the gradual process of improvement which would depend on availability of time and financial resources. The neighbourhood organizations were also stimulated to play a more active role but on the other hand, the operation of PAPE and its planning process can be characterized as a typical top-down approach. Whenever residents' participation occurred, it was restricted to the implementation phase, and in the allocation of plots, during consultations and community meetings. Anyhow, Residents' associations took advantage of this fact and were able to influence some decisions at this level.

Some relevant aspects were introduced by PAPE. The emphasis on localized solutions of human settlements was a clear contradiction with the urban development strategy proposed by PEOT. This duality generated internal conflicts of interests among the public agencies involved with urban development, but it also provided an excellent opening for political bargaining so. The Residents' associations were able to request individual and specific solutions for their localities.

From the point of view of the building sector, PAPE caused a positive impact through the provision of employment for several building contractors increasing job opportunities in this stagnant sector.

There was also an indirect impact of PAPE in the low income housing market through the allocation of 8,329 plots in different locations within a short period of time and at very high subsidizes. The plots had a standard size of 120-140 m^2 and a fixed price of US$ 190.00 per plot established by the Real Estate Company of the government. The total cost per unit would reach a maximum value of US$ 2,196.00 including the plot, a core house of 30 m^2 and basic infrastructure like water, electricity and septic tanks.

With PAPE (1983-85), the government had finally formulated a housing policy with clear strategies that generated programs and projects addressed to the informal settlements. Some attempts were made to diversify the programs. The SHIS was implementing 2,279 residential units spread among low and high rise schemes within the scope of the special housing program for public employees. Samambaia was in its final stages of plan formulation and a serviced plot development was under implementation in Ceilândia which would offer 5,600 plots for tenants of Ceilândia and Taguatinga. Despite all this, PAPE should be seen as the an isolated initiative of the government because it was totally disconnected from the global housing policy and urban development strategy of the government. A policy that could simultaneously increase the housing supply among the different income groups (the tenants, public servants, middle income families) and be complemented by supporting programs for income generation, job creation, credit systems, etc. did not exist.

The very end of PAPE coincides with mass invasions that took place in Taguatinga (Boca da Mata) and in Planaltina (Vila Tancredo), which were sites formerly occupied by families already relocated to

projects implemented by PAPE. The tenants started to carry out marches and public demonstration in front of the main office of the local government. They also undertook symbolic occupations of the plots of Samambaia threatening that they were determined to become squatters if this was the only prerequisite to be selected as a target group of government housing projects.   The last mass invasion of Paranoá lead by tenants of that settlement gave signs that the problem had reached a critical phase.

10. EVIDENCE FROM THE GRASSROOTS AND PROJECT LEVEL

In 1986, a household survey was conducted in two projects implemented within the scope of PAPE. The survey was part of an evaluation research project in which the author looked at the physical and economic consolidation of the settlements. As an architect I also had a particular interest in analyzing the role played by the urban layout design, the costs of project standards and the settlement development strategy within the consolidation process (Acioly, 1987b). The research provided evidence that help to explain the effects of governmental policies and the process of social mobility of the urban poor in Brasilia.

The survey was conducted in the first and last project implemented by GEPAFI. Itamaraca was an old squatter area located on the fringe of Gama and was the first squatter upgrading project ever implemented (1983) in Brasilia covering 452 families. Candangolandia, was the oldest labour camp in Brasilia located on the fringe of Núcleo Bandeirante. The project was implemented during 1985 and covered a total of 2,236 families from 4 labour camps and 15 squatter settlements situated in the nearby areas. The survey consisted of a sample of 304 cases, more than 11 % of the total number of households.

Immediately after plot occupation the residents embarked on a number of strategies to expand the minimal core house households conditions. During the last phase of PAPE, the local newspapers frequently published about the rapid physical transformations occurring in all settlements sponsored by PAPE. The headlines were that these sites had been hijacked by vested interests and middle income groups. This becomes an important issue if one looks at the historical displacement process of the urban poor that has accompanied the development of Brasilia.

In the case of Itamaraca, the survey revealed that after 3 years of project implementation out of ten families two were new comers which represents a displacement rate of 20%. These families were organized in a committee assisted by a lawyer and according to the leader of the group the total number of newcomers was even higher than what the survey revealed. It was not possible to collect more empirical evidence because of the fear of retaliation and legal measures of the government since the commercial transactions of PAPE houses and plots were illegal. The majority of newcomers were former tenants living in the city of Gama. We can assume that the original residents took advantage of a speculative housing market and sold their units for a good price, sufficient to buy a larger plot and invest in the construction of a house on the periphery, where the prices were quite attractive. Both Oliveira and Paviani confirm in their studies that a great majority of the households interviewed in two different settlements situated in Luziânia had lived before in one or two locations in Brasilia (Oliveira, 1987; Paviani, 1987). In Pedregal, 80 % indicated a past residence in Gama or Taguatinga (Paviani, 1987:45). But the question remains without a convincing answer if one considers that 20 % of the 1,900 families registered in Boca da Mata, a remaining squatter settlement of PAPE situated in Taguatinga, were not going to be included in the resettlement program of Samambaia due to the fact that plots and/or houses had been allocated to them in former government housing programs. Their names were registered in the lists of house owners of SHIS or plot owners of TERRACAP, the real estate public company (CB, 1989:20). Had the target residents of PAPE returned back to the condition of squatter residents? This remains a key issue in Brasilia and clarification requires

systematic and continuous research that will definitely trace back the trajection of the urban poor.

That commercial transactions would occur at a large scale in PAPE's projects was predictable considering the city wide policy context: the pointed character of the program; the suppressed housing market and the high demand for housing which caused an extra pressure on the existing housing stock and raised the costs of renting to unaffordable limits; housing transactions which yielded high profits deals and a speculative land market due to the public monopoly over the land stock.

The same process was found in Candangolândia but the survey revealed a much lower rate of displacement after 18 months of project implementation. However it predicted a even more rapid and radical transformation in comparison to other PAPE projects. Not given the favourable location of the project, its accessibility and its proximity to job locations and the high standards of infrastructure offered by the Plano Piloto (Acioly, 1987b).

A comparison of the value of a low income plot sold in a real estate public auction in 1986 and the prices asked in the informal market of Candangolândia revealed that the plots in this location were actually sold 98% above the initial costs specified by the project. That resulted in a cost of US$ 76.00 per m^2, a value that is higher than in the developed high income residential areas of the Southern shore of the Paranoá lake (Acioly, 1987:24). A recent advertisement in the local newspaper reveals that there are even brokers operating "in loco". There is an offer for a three bedroom house for US 23,474.00, which means an actual price of US$ 180.57 per m^2 for a house of about 65 m^2 and a plot of 130 m^2 (CB, 1992c). When this is compared with the offers for the Southern Lake residential area, published in the same newspaper, one comes to the conclusion that this disparity is slowly disappearing as the government develops other areas and increases housing supply among the different sectors of the population. However, the difference is not that great. The price per m^2 in the Southern Lake residential area is 40-50 % above the costs of Candangolândia and 84 % above Samambaia. There was a clear increase in the value of the land in the settlement, of almost 60 % over a 6 years period. This was caused by the continuous governmental intervention in the settlement through infrastructure improvements like asphalt pavements, drainage system, school buildings, extra housing construction, water supply renewal and the sale of commercial plots in the settlement (CB, 1992a; 1992b). The actual physical profile of Candangolândia and the high standards of improvements to a significant number of houses (including vertical extensions) suggests that a large proportion of the original residents were no longer living in the area after 6 years since the first household survey was carried out. Recent interviews with some of the original residents already confirm this trend.

The survey also revealed that other factors were also involved: the urban layout design and infrastructure standards and recurrent housing expenditures. The urban layout designs of both settlements were very inefficient, squandering resources by allocating large proportions of land to green spaces and the circulation system. The morphological structures also failed to provide an optimal use of the infrastructure networks, resulting in very costly projects. The costs of housing expenditures (land taxation, water, electricity & transportation) was reaching the critical point 20-25% of the family income in 1986, without taking into account the monthly mortgage payment (a maximum of 10% of the minimum wage (MW)). The majority of the families earned less than 3 MW, (US$ 165.90). In other words, to achieve full cost recovery, 30% of family income had to be committed to housing expenditures.

In Candangolândia, it could be anticipated that the continuous heavy infrastructure investments undertaken by the government would raise recurrent housing expenditures to levels that the inhabitants would have difficulties in coping with. Despite the unsuitable project standards, many of

the constraints faced by the urban poor seem to be related to the land issue, which lies at the heart of the paradox of Brasilia. Expectations that public ownership of land would result in a planning process and public policies that guaranteed the social use of land and the access to shelter and basic infrastructure by the most vulnerable social groups, as achieved in Camberra and the municipalities of Holland and Sweden, were not realized in the case of Brasilia (McAuslan, 1985)

Rather, the government's Real Estate Company (TERRACAP), was and continues to be the main perpetrator of land speculation. Until today, the only land policy or land allocation program implemented by the government consists on periodical public auctions carried out by TERRACAP. In 1986, plots were sold at prices 400 to 600 % above the initial values stipulated in the auctions. The urban poor, were automatically excluded from these procedures because they simply cannot fulfil the legal requirements to participate in the auction, e.g. down payments and financial requirements, declarations of official/legal source of income, the employment status, etc.

The experience of PAPE reveals a series of disparities relating to land and housing markets the project level, it shared that a particular housing and settlement development strategy can become an instrument for income generation for the urban poor. It also highlighted the close link between housing and income and employment, issues that have been disregarded by all government sponsored programs implemented in Brasilia. Gradual development and the process of settlement consolidation made possible the emergence of self-generated activities related to housing improvements and the acquisition of building materials. It stimulated the appearance of small size building material firms, informal credit systems and investments for housing improvements financed by the private savings of the inhabitants. However all of these were incidental effects which were neither predicted by PAPE nor considered within any follow-up assistance program.

When asked about government policies the residents clearly opted for non conventional housing programs with a strong preference for supporting programs like building materials and credit systems. The residents seemed to be more aware about their problems than planners credit, but they were also unfamiliar with a number of urban and housing policy issues. They were historically excluded from any kind of negotiation or interaction with the government. Perhaps this will change as democratization deepens in the country.

11. DEMOCRATIZATION: THE REVIVAL OF THE FIRST TWO PARADIGMS

In 1985 the military regime was replaced by a new national civilian government and the governor of Brasilia was replaced. A traditional and experienced politician identified with the idealism of Kubitschek took office and announced a series of institutional and policy reforms. He recognized the representativeness of political and popular movements organized in political parties, unions, associations, professional institutions and NGOs, especially those traditionally involved in urban problems. The governor invited them to join an advisory council which would help to formulate political and governmental programs. Despite institutional reforms, policy reformulation and shifts in public intervention, this step was more a strategy to achieve popular legitimization of the planning process.

The return of Oscar Niemeyer and Lucio Costa to Brasilia as special advisors to the governor occurred at the start of the period of democratic transition. They seem to have influenced the nomination of senior officers in many key positions of the planning departments of the government including the CAU-Council of Architecture and Urbanism, an advisory board nominated by the governor whose main task was to approve all projects within the limits of the Federal District. Both Costa and Niemeyer had

been absent from Brasilia for many years and were not familiar with the complexity of the urban network of the city; nor with the different policies and the experience already accumulated over the years by a great number of professionals working and living in the city during the most critical moments of its history. Niemeyer announced in the local newspaper that a few days of work on his drafting table would solve many of the problems of Brasilia. He visited several sites with the governor to announce his latest creations and designs to solve a diversity of problems. Despite the protest of the Architects' Union and the Institute of Architects, he received a large number of commissions. In the period 1985-92, he has been assigned to design 8 large and important buildings in the city (CB, 1992c).

Costa, in turn, started to pinpoint the distortions and the changes introduced in his master plan. There was an abrupt focus on the Plano Piloto by of the government. Changes in the road and circulation systems, spatial arrangements, architectural features of the buildings and improvements carried out by residents & users which were not in accordance with the original plan were all considered as distortions and violations of the sacred artifact. The balconies in the apartment blocks were criticized; the changes of style and patterns in the row housing sectors were not appreciated and owners were harassed to demolish iron fences, walls and even extra vertical housing extensions. Shop keepers of the commercial units of the superblocks were requested to demolish their extensions and liberate the open space from their chairs and fences. The house owners who had privatized the green spaces between their houses and the lake shore received a public petition to demolish their fences and to liberate the shore for the entire population. Later on, a bicycle route was implemented with the argument that the shore should be accessible to the whole population and not only to the better off. Unfortunately, the path connected a point to nowhere and the population had no car to reach the location!

Costa was so concerned with his "model" that he criticized the planting of hundreds of palm trees along the residential axis, they were wrongly spaced and planted against his will. He demanded their immediate displacement to the monumental axis and argued that this was a very serious problem (Costa, 1987:122). As pointed out by Turkienicz and Wright, the attitudes of Costa and Niemeyer seem to reflect the paradox of modernity. The modernist rejects tradition struggles to create something real and later on tries to preserve it while everything else is continuously changing. That to be completely modern and a modernist thus ends by being anti-modern (Turkienicz & Wright, 1988:347).

The return of the two prominent architects resuscitated the progressive CIAM model and revived the predominance of technical decisions and the hegemony of an elite of technical expertise over the city. Social, political, economic and structural problems were overshadowed by their emphasis on architectural and urbanistic matters. Never before was the legacy of the CIAMs` recommendations so evident, and with that, the **preservation** of the Plano Squatter became an obsession. All attempts were made to preserve the original concept of the city through sqatter evictions, stricter building regulations, and at last but not least the approval of UNESCO to declare the Plano Piloto patrimony of humanity (1987). The fear that social-political forces and evil capitalistic private speculators would penetrate and make interferences with the "master piece", horrified the planners and the whole planning apparatus of the city.

The housing problem continued to increase and all the experience accumulated by GEPAFI was simply buried. In 1987, SHIS estimated that the housing shortage was about 190,000 units, with 80 % situated among the families earning between 1 and 5 minimum wages (CTC-SENAI, 1987). If correct, an estimated population of 800,000 inhabitants were in need of a house, from which 640,000 belonged to the popular sector. A new Housing Secretariat was created but could do very little given the power of the lustrous planners dominating the urban planning agency although SHIS started to

build its conventional housing projects again in Samambaia and Ceilândia. Some self-help housing projects were implemented with a strong populist component while invasions occurred in many different locations of the city including the Plano Piloto.

Community leaders were coopted and wherever the government did not succeed with this strategy it stimulated the formation of other parallel community organizations in order to weaken the strength of political groups within the settlements. The problem of squatters became a police issue again.

A positive effect of Costa's presence in the city was his analysis of the present situation of the Plano Piloto and his proposal for growth and urban expansion (Costa, 1987).

As the designer of the city he alone could subvert order and persuade the government to implement new residential areas within the hydrological basin of Lake Paranoá. Suddenly, there were no more technical arguments to avoid increases in density in this area. He proposed 6 new residential areas surrounding the Plano Piloto and accepted the settlement of Paranoá and Vila Planalto. The latter was a settlement formerly occupied by 22 labour camps whose remaining inhabitants had been struggling for upgrading and legalization of tenure.

Costa argued that the urban growth of Brasilia had isolated the core from 2/3 of its population (Costa, 1987:118) and proposed the implementation of residential areas along the transportation routes that connect the Plano Piloto to Taguatinga and Ceilandia. He proposed the development of economic housing units (superblocks) composed of 28 high rise three storey apartment buildings addressed to low income residents, which were immediately implemented in 1986. He disregarded the fact that the conventional housing projects and high rise schemes had failed to meet the urban poor's needs. He defended the suitability of flats of 30 and 60 m^2, with communal laundry spaces on the ground floor and collective areas for horticulture as an appropriate housing solution.

Costa argued in favour of the development of industrial poles in the peripheral municipalities in order to create job opportunities which Brasilia could not offer. This would safeguard its primary political and administrative function because "Brasilia is not interested to become a metropolis" (Costa, 1987:121). Unfortunately he was unaware of important trends occurring throughout the city which were more contrary to his predictions. The informal rental market in the satellite cities had already stressed similarities with other Brazilian metropolis and provided evidence that Brasilia was bound to become a city with a metropolitan character. The development of small scale industries and commercial enterprises taking place in several low income residential areas showed that it was just becoming more difficult to keep the city as a strictly administrative paradise. With the election of city representatives for the National

Constitution Assembly, in 1956 it became obvious that the population was willing to participate and in the process, and contribute to the formulation of policies and programs. The centralized planning process that dominated the city along over the years did not allow for the participation of private and individual initiatives. The legacy of CIAM was the rise of a planning process dominated by all powerful planners who ruled over the city in the name of **competent expertise**, just as Le Corbusier desired. Urban design and planning professionals working within the state machine historically neglected the existence of the population and its organizations. In this respect, it is not a surprise to realize that the technical determinism that flourish among planning authorities became a pathway for authoritarian procedures undertaken by the different city governments.

In 1988 the president nominated another governor originally from Luziânia, who was identified with the problems of the peripheral municipalities and very familiar with the dilemmas of Brasilia. Ambitious and with high aspirations, his government undertook programs of heavy infrastructure

investments and housing production during his 18 month term. A large scale program of land occupation was launched (see **Figure 5**) and Samambaia was to become the promised land for the tenant population. Plots of 120 m^2 were demarcated connected to the electricity network and served by public water standposts in vital locations of the city. Self-help housing was strongly stimulated and basic urban services like schools and health centres were implemented. In one year time the city grew from 40,000 inhabitants to a mid-sized city of 250,000 inhabitants. 50 squatter settlements were relocated in o Samambaia and other areas suggested by Lucio Costa, with about 1/2 situated in the Plano Piloto. Vila Paranoá was finally settled and the problem of migration became an important point on the government's agenda. It was reported that the city was receiving 32 migrants per day and the government institutionalized a program called "Return with Dignity". Migrants were registered, given a small allowance and put in a bus back to their place of origin. The problem of the peripheral municipalities, Entorno, became a serious concern and new strategies for spatial planning and land occupation began to be discussed within the planning framework. As a result he became the first city governor democratically elected, winning of 55 % of the votes and 98 % of the votes in Samambaia (VEJA, 1991:23). An ambitious governmental program was than announced and registered by a public notary as a testimony of the true political commitment of the governor. He launched a program that would promote the construction of 100,000 housing units by 1994, 4 new hospitals, a new university, a public transport network including the construction of a railway metro, and the development of a large project with sports and recreational infrastructure that would allow the candidacy of Brasilia to host the Olympic Games in the year 2000.

FIGURE 5: URBAN SETTLEMENTS IN BRASILIA IN 1992

The housing sector was reactivated through a settlement program that allocated land to different economic groups and SHIS became the principal agency of this policy. In the period 19 89-91, 60,000 families were settled through this policy. Semi-served plots were allocated throughout the city and the real estate market became dynamic with private developers and building construction firms playing an important role in the housing production and employment in the satellite towns and in the surroundings of Plano Piloto.

A number of 200 privately developed settlements in rural areas were recognized by the government over 12,000 plots allocated to middle and high income groups located close to the Plano Piloto where the majority worked. A special decree was issued in which the criteria for legalization were established: no environmental risks and official proof that the plan was developed before July 1989.

A master plan called PDOT, Master Plan for Territorial Occupation, was formulated and approved in November 1992. The plan is characterized as a guided land development plan supported by a zoning regulation that determines the different areas for urban expansion, rural development and environmental protection. It emphasized the process of conurbation in the direction of Gama, as previously predicted by PEOT, which is supported by a modern metro public transport system. It pretends to create an articulation with the peripheral municipalities and the geo-economic region of Brasilia but it accepts the basic capital function of Brasilia. PDOT intends to revitalize productive activities and to create a process complementary to the Plano Piloto.

The government argues that the plan will be an important step towards social justice and urban equity in the process of land occupation but the question remains whether the government will be able to implement complementary programs which can effectively alleviate urban poverty. Employment and

income generation seem to the key issues for guaranteeing a positive impact to this general allocation of land but as an administrative city Brasilia has little more to offer. The number of plots on sale in Samambaia already defies the social objectives of the government and gives clear evidence of the dynamic process of displacement that pushes the urban poor towards the periphery of Brasilia and which challenges the basic administrative and political functions of the capital.

It is likely that the metro system will definitely contribute to the process of segregation and will create a sudden process of land valuation along its route and in the satellite towns it serves. The metro is under construction and is expected to be inaugurated in two years, covering 40 Km with 33 stations and terminals in Samambaia and Ceilândia, at a construction cost of US$16 Million per km. It seems that the government assumed job concentration in the Plano Piloto when it planned the metro, thus perpetuating the trend of peripheral development and social and spatial segregation. In addition the metro will cause a process of land occupation which will reinforce this trend.

12. FINAL REMARKS

A critical assessment of the housing policies pursued by the government of Brasilia discloses the vested interests of the Brazilian State and its efforts to safeguard the original function of the city as a political and administrative national capital.

Squatter evictions, resettlement programs and the creation of new urban settlements had been the result of ad hoc decisions since the development of the first satellite town when the city was still a construction site. The city has lacked until recently a long term development plan based on realistic scenarios through which different policies and programs would address solutions to the problems of housing, employment, agrarian production, spatial planning and public transport, etc.

Though, it is remarkable that the local government has been capable of producing more than 100,000 popular housing units over a period of 32 years which were mostly financed by the funds allocated from the city budget. From PAPE onwards and specially after the collapse of the BNH (1986), most housing production has been sustained by local funds.

If one takes into account the number of houses and high rise apartment buildings constructed in the Plano Piloto and in the satellite towns and the total number of plots allocated throughout the city, it becomes difficult to ignore the role of the government in the housing sector. owever, the city has been constantly confronted with the phenomenon of squatters and the latest peripheral developments shows again the poorest groups are not benefitting from government intervention.

Peripheral development should be considered as a result of the monopoly of land ownership by the State and the elitism of the Plano Piloto and some satellite cities and highlights the importance of a land policy. Since the beginning of Brasilia, the City Development Corporation has used the commercialization of land as an instrument to generate funds and bank loans to finance the construction of the city, especially after the creation of the Real Estate government company. No land policy was ever formulated or implemented outside of public auctions. The government was able to be innovative in its rural land allocation program and the development of different types of rural settlements based on long term leases and financial support to small farmers, but it was never capable of implementing any creative solution for urban settlements. It is obvious that land is a commodity with an exchange and capital value which is manipulated by the State and private developers and that the low income population have a clear disadvantage in this respect. The conclusion is that the public land ownership has only contributed to increased social inequalities and spatial segregation.

The stratification of the use of space and the process of displacement of the poorest groups can be divided into three periods. It was first noticed when squatters were evicted from the Plano Piloto and with the development of this area, the low middle income groups started to move out towards the satellite cities. The latest phase is the displacement of the low income residents from these towns towards the distant peripheries. The implementation of PDOT and the metro system will lead to a fourth phase of displacement towards the outskirts of the periphery due to the fact that accessibility will be significantly improved (in time and costs). The costs of land will increase, employment generation in the peripheral municipalities is still uncertain and the Plano Piloto continues to centralize opportunities in terms of job, services and facilities.

This pattern of urban growth results in a linear city with the complexity of a metropolitan area like Rio, São Paulo, Recife, etc. in which the different human settlements maintain a strong functional dependency on each other. The recent efforts to elect Brasilia as one of the members of the select club of 9 metropolitan regions of Brazil has caused a great deal of polemic because of its implicit political consequences. This would imply changes in the territory of jurisprudence of the government and would result in political and administrative autonomy of the satellite cities. Since they represent 2/3 of the total population of Brasilia, there are too many conflicts of interests still to be resolved until they can definitely become autonomous. There is an urgent need to revise this assumption and to look at the effects of the paradigm on a regional scale. In addition, a decentralization of job locations together with the implementation of a program of industrialization and the development of new parameters of urban design and spatial planning must become part of the agenda to be discussed.

The elitism of Plano Piloto is reinforced by the daily practice of planners and urban designers who perpetuate the theoretical background of the city, its urbanistic visions and paradigms. It is possible to identify two antagonistic approaches among the professionals and technicians working within the government planning agencies. On one hand, there is a very conservative modernistic and rationalistic approach that emphasizes the planning parameters of the CIAM and argues in favour of functional zoning of space and arbitrary and rigid land use regulations. On the other hand, there is a more historical, pragmatic and programmatic vision that accepts the dynamics of urban development and the changes in land use patterns according to the evolution of human needs. This approach recognizes the potential role of the informal sectors of employment and housing and has been mostly advocated by those involved with the housing sector.

The case of Brasilia highlights the role played by technicians and professionals working within the State apparatus. They become efficient instruments for realizing policies and plans which are not really dealing with the priority needs and problems of the low income population. Rather they represent the vested interests of political groups that form and sustain the government for which they work. The architects, physical planners and multi disciplinary teams have perpetuated the myth of neutrality and scientific planning and use a progressive discourse with a high degree of altruism in order to legitimize themselves and the planning process.

It is time that urban planners and technicians in general make up their own mind and make a conscious choice. They either work for the benefit and political interests of a minority elite which they often belong to, or they take work in the interest of the majority of the population in order to alter the structure of domination. There is no doubt about the importance of the role of the professionals but it would be too naive to believe that this change of attitude would bring about a structural change. The social use of land and urban equity will be accomplished through conflicts in the political arena and the first election for the house of representatives of Brasilia showed clear evidence of this trend. The urban social-political movements were able to elect representatives which were either former community leaders or local politicians totally compromised with the popular movements. They have gained access to the decision making process which makes Brasilia look like any other city of Brazil an

urban arena of conflicts and political negotiations that affect the physical, social and spatial pattern of the living environment. As a consequence, there is a great possibility that the character of the Brazilian capital will experience several changes which will certainly bring benefits to low income residents.

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