

Urban Design in Poor Peripheral Neighborhoods

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URBAN DESIGN IN POOR PERIPHERAL NEIGHBOURHOODS

During the second half of the 20th century, a new urban order was born and appears in cities with dimensions unknown until then. Accelerated urbanization has spread out planet-wide, bringing about the problems arising from the absence of an urban structure adapted to such new situation. Such problems are common to nearly every country, and the difference among them in no other than the magnitude with which they appear.

In Brazil such problems are reaching alarming rates, which drives our attention to the necessity of going in search of new city-planning solutions consistent with the country's actual conditions, so as to counter the serious damages to the urban environment and the high deterioration of life quality for the citizens.

The reality of the spaces in the Brazilian cities implies a search for appropriate paths to develop and apply the concepts of urban design, in areas where the traditional notion of urban space is different from that voiced by Classic City planning. We have taken as object of analysis a task now in the process of development: the Guarapiranga Basin Environmental Sanitation Program, conducted in the São Paulo Metropolitan Region, where models of urban qualification for a differentiated area of the city have been utilized in the projects and works of shantytown urbanization and urban/environmental recuperation within that region's real estate/housing developments.

The guideline of the work points toward incorporating to the "formal" city such spaces as considered 'informal' and temporary, bearing in mind that so far they are special spaces which have not been the object of any professional practice of urban design, but that bearing in mind Brazil's reality in terms of urban situation must be construed as one of the challenges for the practices of urban design.

In the new urban reality of the cities concentrating a plurality of new kinds of services, the search for innovating forms of operating and actuating urban design are mandatory if we think of the discouraging results up to now observed. Our interest is to deal with the urbanization of deteriorated peripheral areas within the Guarapiranga water basin, beginning with the restoration and upgrading of traditional elements of the urban morphology, such as plazas and recreation areas.

CHARACTERIZATION OF THE GUARAPIRANGA BASIN

Stretching over a 630 sq. km area located in the southwest portion of the Greater São Paulo — RMSP — it comprises part of the territory of the municipalities of São Paulo, Embu, Itapeverica da Serra, the entire Embu-Guaçu area and small portions of other

municipalities — Cotia, São Lourenço da Serra and Jquitiba. There live around 600 thousand people mainly concentrated in urbanized areas of poor housing standards. The dam, constructed in 1906 and originally intended to regularize flows in order to generate power at the Parnaíba plant on the Tietê river, has acquired new functions, originated by the global planning for, and utilization of, the water resources of the Higher Tietê basin. Its accumulation capacity is around 180 million cubic meters and SABESP - São Paulo's Basic Sanitation Company — draws 11.0m³/s of water for the consumption of a population estimated at 3 million inhabitants (20% of the Greater São Paulo). Guarapiranga is the second largest producer of water in this region. It is also a bulwark of wildlife in the Atlantic Woodland, extremely important as a transition between these areas and those already urbanized.

Such area is under special regulations created by the State Government to secure protection to the reservoirs of the São Paulo Capital. If, on the one hand, it has contained the industrial activity and the rush of high-rise construction within the basin, on the other it has favored a drop in the market value of the land, which unwillingly brought about uncontrolled urbanization, characterized by a significant number of slums and underhand real estate developments, a density increase much above that compatible with the preservation of the reservoir and not supported by any infrastructure of services.

Beginning at the sixties, the invasion by the urban wave has soared to frightful levels; driven by the labor demand for the large-scale economic activities developed in nearby areas, large masses of people moved into the region, occupying unfavorable areas; now approximately 18% of the basin's population live in shanties. The Municipality of São Paulo alone has 180 plus shantytowns and the number of legal proceedings in the São Paulo City Government dealing with stealthy real estate developments is approaching no less than 200, involving a population of around 140,000. Such occupation process is accountable for the problems peculiar to such form of urban occupation: flooding-prone areas, landslides, house drainage and disposal of garbage in the stream waters flowing into the dam, increasing siltage.

The impact of such process shows gradual deterioration of the water quality in the tributaries and in the dam's own waters, which endangers any future utilization of this reservoir to supply the Greater São Paulo area. In view of the extremely high costs involved in the search for new reservoirs for water and the recurring financial limitations from the Government, who does not accept the possibility of being encumbered with the transfer of the populations from that area to other sites, it was preferred to draw up a program of interventions enabling mitigation of the adverse consequences of the occupation of the grounds, and then define and operate devices for rearranging such picture.

THE GUARAPIRANGA PROGRAM

Starting from such picture to achieve the intended purpose, a program was developed beginning with a plurality of assumptions basic for its success, therefore extremely complex, relying on the participation of several public bodies responsible for the management of the different problems identified. The Guarapiranga Program is coordinated by the São Paulo State Government and has as executors SABESP, The State Company of Housing and Urban Development — CDHU, the State Department of Environmental Affairs and the Government of the City of São Paulo, through its Department of Housing and Urban Development - SEHAB. The resulting institutional array is rather complex as, to the extent that the challenge represented by a joint work is imposed on bodies with their own styles of action, their traditional working procedures shall have to be disrupted, with the establishment of a new culture of integrated work.

The Program has as central objective to secure the quality of the reservoir water for purposes of supplying the Greater São Paulo; this being so, its base is a circumscribed space unit — the water basin — which implies that the solutions submitted will be bound to choose their objects in a specific and determined manner, supposing a fairly clear-cut characterization of the intended scope.

The program is based on the search for improvement in the quality of the environment which, accordingly, brings to the fore a form of action that must look conciliating between the dual problem of appropriation of natural resources and the limits to this appropriation itself. It should be emphasized that the international financial contributions suppose the establishment of financial and economic recuperation mechanisms intended to guarantee their materialization.

The strategies for action run along two complementary lines: the first endeavors to develop technical, financial and institutional capabilities to manage the basin within environmental sustainable standards, through incentives to the establishment of activities compatible with the protection of the reservoir, public investment mechanisms and a form of management integrating the State/City Governments and the society; the second seeks better quality of life for the nearly 600 thousand people living in the basin through improvements and expansion in the basic sanitation infrastructure, implementation of parks and vegetal restoration of the embankments of both the reservoir and the streams, requalification of urban structures in the areas more densely occupied and under unhealthy conditions, by proposing new public spaces for the development of activities of a collective nature, so as to offer the local population easily accessible entertainment options.

With the purpose of assuring development of the two above-mentioned strategies, the Guarapiranga Program was split in five sub-programs, each formed by a variable number of components:

I. Water and drainage services. Extension of the sewer collection and removal system, serving over and above 80% of the population, and operational improvements in the existing collection systems.

II. Collection and final disposal of garbage. Adaptation and environmental control of the collection, treatment and final disposal of waste in the municipalities of Embu, Itapeçerica da Serra and Embu-Guaçu, and purchase of equipment for cleansing public areas, on behalf of the City Governments of Embu, Itapeçerica da Serra and Embu-Guaçu.

III. Urban recuperation. Urbanization of slum cores; removal and resettlement of the families residing in areas hazardous or deprived of sanitary draining conditions, and appropriate tailoring of the thoroughfare and drainage infrastructure in deteriorated urban areas

IV. Environmental protection. Vegetal restoration of the embankments of the dam and the public rights-of-way, recuperation of bordering woodlands, urban tree planting and implementation of six parks.

V. Basin management. Preparation of studies addressing the organization of the basin management, including a Master Plan for environmental development and protection of the basin territory; environmental education and imparting of technical capability for management, and operation of such management by strengthening an integrated inspection and creating a management information system for the basin.

CITY RECUPERATION OF PERIPHERAL SPACES- THE EXPERIENCE OF THE SÃO PAULO CITY GOVERNMENT

The work of urban recuperation developed by the São Paulo City Government addresses the urbanization of shantytowns, the tailoring of thoroughfare and drainage infrastructures to the needs of low income housing developments, usually located in the neighbourhood of slums, removal and resettlement of the populations affected by such interventions.

The urbanization of shantytowns encompasses a significant portion of the Guarapiranga recuperation plan, insofar as the result of the interventions will go a long way into solving the problems of sanitary infrastructure, thoroughfare network, soil consolidation of the land, unhealthiness of the housing units and also that of the demand for urban equipment and furniture, configuring at the end of the works a new neighbourhood, socially integrated into the City.

Shantytown urbanization includes the following interventions:

- Implementation of a sewage collection network system in all the housing units.
- Restoration of the main thoroughfare system, securing easy access routes for garbage collection trucks, with paving and implementation of a thoroughfare drainage system, endeavoring to avoid the disposal of sediments and solid waste, which results in the silting of the reservoir.
- Elimination of the hazardous areas through soil consolidation works or removal/rearrangement of housing units.
- Improvement of the conditions for access to the housing units through the construction of floors, ramps and stairs.
- Definition of attributions, execution of the required works and provision of public equipment for determination of the project-provided common areas, which means that all of the areas under consideration are specifically intended for common use by, and common interest for, the tenants, so as to avoid new invasions; urban treatment/landscaping of the areas remaining form the work-sites.
- Elimination, whenever possible, of housing with highly unhealthy conditions, whether due to the precariousness of the construction, or because of the location.
- Reconstruction of the housing which, owing to the precariousness of construction, may have been affected by the works.

The central effort of the urbanization process deals with integrating the slum into the neighbourhood's thoroughfare network, so as to consolidate the present occupation through rearrangement of spaces with a minimal movement of families.

Furthermore was considered, as basic assumption, the necessity to create among the target-population the consciousness of, and sensitiveness to, the positive impact of the interventions for the community. The projects, now prepared, were exhaustively discussed with the population in order to avoid that the solutions proposed may conflict with their aspirations, expectations and form of appropriating the urban space.

The welfare work developed by the São Paulo City Government team, jointly with the project team, has a decisive role at this stage. Such work is based on instances of collective organization of the communities that participate at the different phases of preparation of the projects and, subsequently, the implementation of the works.

After 5 years' work, results may now to be observed, pointing to the constitution of a new form of acting within the scope of public



Fig. 1. Jardim Esmeralda before intervention.

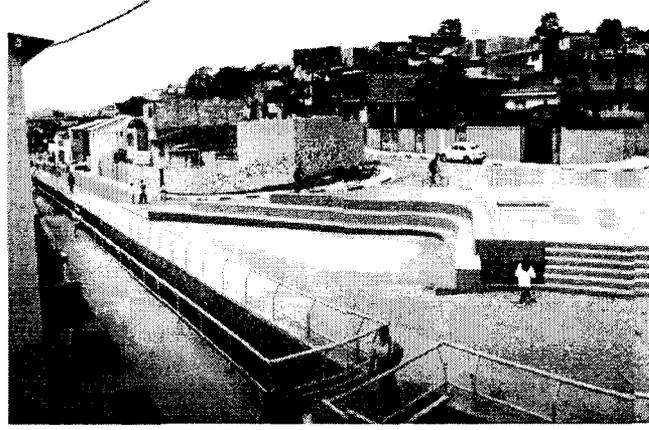


Fig. 3. Jardim Iporanga recreation areas.



Fig. 2. Jardim Esmeralda after intervention.

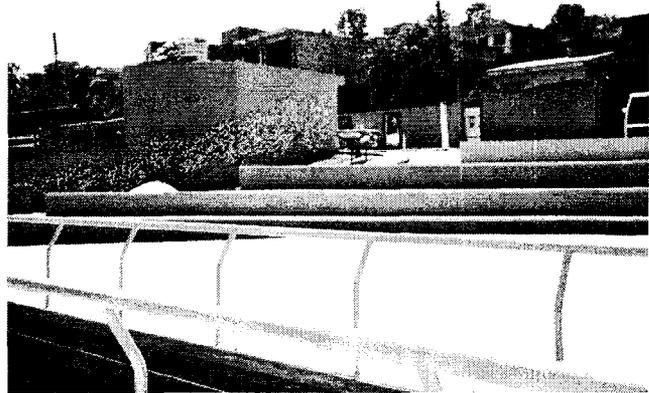


Fig. 4. Jardim Iporanga recreation areas.

administration, with innovating characteristics and serving as basis for future actions to handle environmental matters.

In the specific instance of the Guarapiranga Program and its interventions in the slum cores, it is not possible to dissociate the improvement in life quality for the population from the imperative of reducing the dumping of pollutant loads into the reservoir.

As function of the painful social poverty conditions common in the area of the water basin — which shows the lowest family income averages in the Municipality of São Paulo — a perverse relationship was established between this urban poverty background and the preservation conditions of the reservoir. Considering the irreversible character of such occupation, the solution for its most serious aspects is an obligation to be fulfilled for an upgrading in the quality of the basin waters.

The projects developed for the slums contemplate, through physical actions, space rearrangement of the cores bearing in mind the environmental requirements and, through participation of the inhabitants themselves throughout the intervention process, the setting of clear-cut relations in urban life and environment preservation.

The result of the physical interventions in the urban and environmental recuperation spheres is the integration of the slum cores into the City's urban mesh, in the form of new, basic infrastructure-equipped neighbourhoods.

In the cores already urbanized, the development of a program of public information and environmental education calls the tenant to participate at the preservation of the investments made in his/her area and also, within a larger scope, the preservation of the reservoir, thus defining a change of status from inhabitantship to participating citizenship, with all of the duties and rights encompassed by such

concept. The attitude of the population — strengthening of community relationship and improvement in the housing promoted by the tenants themselves — points out to advancements towards the final objective contemplated. Such condition is essential in order that the gains achieved at the end of the works phase may be safely maintained for the future.

THE PROJECT CHALLENGE

The complexity of the questions faced, coupled with the possibilities of urban restructuring of an area of the city demanding differentiated city-planning solutions — being a picture made by elements shaped differently from those usually known by the city-planning tradition, has placed us before the possibility of an action in the nature of city-planning architecture.

Several architecture offices were invited to develop slum urbanization projects with the purpose of addressing several project matters. The city-planning proposal should submit solutions for the problems of stability, sanitation and access possibilities. Nevertheless, the central aspect faced by the projects dealt with the need to articulate spaces and equipment capable of favoring social interaction, capable of recovering cultural roots in each group, foregone as a result of the dilution of its original cultural identity, in the dispersion and anonymity imposed by the big city. Similarly, the structuring of new spaces of interaction should stimulate collective solidarity and organization, in a process of construction of identity in each settlement, and building of the citizenship of its components at a new level: that of full-fledged, recognized inhabitant of the city, as much so as any others.

The intervention proposals, from the identification of the charac-

teristics, demands and expectations of each group, have exploited the topographic configuration, the existing, spontaneous urban and architectural morphologies, as well as those of such areas as still available, with a view to creating an articulated whole, where each tenant would enjoy the minimum essential urban infrastructure services, a definite address and new collective spaces, where he/she could hold the rites and follow processes of social life and citizenship.

To the extent that each slum, based on its physical/spatial contours and the characteristics of its inhabitants was understood and in the interventions treated, as a small village, with its own identity and reference, concrete possibilities were established for progress in the social organization of the spaces and control of any eventual unsociable acts.

The grading of the architectural and constructive housing standards found in the shantytowns ranges from extremely precarious to fair, and thereby sets forth a reasonable level of integration between the slums and their surroundings, insofar as there are no great differences or abrupt inequalities to clearly mark where in fact the slums have begun, or determine the remaining existing housing developments.

Within this context, which facilitates the acceptance of the slum by its neighbourhood, the city-planning approach consolidates the intended reciprocity, to the extent that it induces the construction of the urban identity of each shantytown, thus paving the way for its final integration, in its capacity as significant urban and social fact.

The implementation in the settlements of minimal standards acceptable from the point of view of easy access, welfare services and infrastructure, improvement of the housing standard in itself and regularization of the real estate status are inseparable parts of the strategies and proposals for the intended urban recuperation. And it shall produce, as one of its effects, the incorporation to the adjoining neighbourhoods. As such, they shall interact with the elements that structure the neighbourhoods, shopping malls and service centers, urban bus stations, concourses and other urban elements which represent a functional and symbolic value for the local populations.

FINAL COMMENTS

The above submission of the Guarapiranga Basin Environmental Sanitation Program and its proposals and achievements over the latest five years, is the fruit of experience at the head of the coordination of the activities, which are incumbent on the São Paulo City Government through its department of Housing and Urban Development, within the general scope of the work expected to be performed.

The contribution brought us by such experience is twofold: the first is related to the general scope of the Program, which represents an alternative for acting in the planning of actions in search of solutions for the City's problems. Once a clear-cut definition is made

of an area for action, in this instance the Guarapiranga basin, and work is made with a central objective — ridding the reservoir's waters from pollution and controlling their quality — the limits of the action are established and all of their faces must necessarily start from these assumptions. Again in this instance we shall compound another element, to be emphasized, and this is the integration of activities among different bodies at different levels of power, also something new in terms of public bodies. All such unprecedented elements, coupled with the fact that the environmental component, coming to the fore as principal actor in the Program, which is also a new experience, has permitted the paths followed to lead to new directions in the planning of cities at more general levels. The second instance to be dealt with checks on the possibilities of urban design for peripheral areas.

With regard to the interventions of the Guarapiranga Program, our object is different, as these are non-structured spaces, where no preceding references exist susceptible of arousing the interest of the population. The idea is, through project possibilities, to create such spaces, using morpho elements of traditional city planning. It is such possibility that shows all the work of slum urbanization, inasmuch it seems to us to be one of the challenges to be faced by a revisited city-planning discipline, which should respond to the problems presented by our cities.

Contrary to the traditional urban spaces, where the design proposals seek to reconcile the populations with the public spaces, in the case of the Guarapiranga Program such reconciliation must be sought as from the creation of the new spaces. This is our challenge.

REFERENCES

- COBRAPE - Companhia Brasileira de Projetos e Empreendimentos. *Programa de Saneamento Ambiental em Áreas Metropolitanas - Bacia do Guarapiranga*. São Paulo: COBRAPE, 1991.
- COBRAPE - Companhia Brasileira de Projetos e Empreendimentos. *Programa de Saneamento Ambiental em Áreas Metropolitanas - Bacia do Guarapiranga*. Vol. 1 to 4. São Paulo: COBRAPE, 1991.
- COBRAPE - Companhia Brasileira de Projetos e Empreendimentos. *Programa de Saneamento Ambiental em Áreas Metropolitanas - Bacia do Guarapiranga. Study of Environmental Impact*. São Paulo: COBRAPE, 1992.
- Krier, Robert. *L'espace de la ville*. Brussels: Archives d'architecture moderne, 1975.
- Lamas, José M. Ressano Garcia. *Morfologia Urbana e Desenho da Cidade*. Lisbon: Calouste Gulbenkin Foundation - National Science and Technology Investigation Board, 1992.
- Rossi, Aldo. *A Arquitetura da Cidade*. São Paulo: Ed. Martins Fontes, 1995.