



EVALUATION OF INTERVENTIONS FOR URBAN INTEGRATION OF
INFORMAL AREAS

The case of Cantinho do Céu, S. Paulo, Brazil

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Extended Abstract

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Abstract

Urban informality – the result of one of the greatest socio-economic changes during the last five decades: the rapid process of urbanization – has been the solution of shelter of the majority of the urban poor. Essentially for economic reasons, people have been migrating to large urban areas, due to a greater range of job opportunities and seeking for a better life condition. However, cities' infrastructure has proven itself unable to meet the needs of the huge masses of people.

Urban populations have increased explosively in the past 50 years, and will continue to do so for at least the next 30 years as the number of urban poor increases and as people continue to be displaced from rural areas. So in all probability the majority of these new residents will eke out an informal living and will live in slums. Efforts to improve the living conditions of slum dwellers, especially within developing countries, have been made. In fact, urban informality has turned out to be one of the most important challenges of the century.

Is it possible to integrate informal areas within formal city? Which are the strategies to overcome urban informality? How is it possible to evaluate the impact of an intervention of this nature? This thesis aims to contribute to the clarification of these issues.

The report starts with the construction of a theoretical framework in order to reflect about the different strategies of socio-urban integration of informal areas and to understand the origins of the phenomenon. Once the first approach has been made, it aims to describe the specific condition of Brazilian metropolises, in particular case the city of São Paulo. It then seeks to understand what are the most important factors to consider in a strategy of this nature, and propose an approach of an evaluating methodology for a socio-territorial intervention.

This methodology is then applied to a case study, in the metropolis of São Paulo – Cantinho do Céu urbanization project – not only to describe the main changes but also to identify the positive and negative impacts, in order to conclude which are its main strengths and limitations.

Key Words: urban informality, social and urban integration, evaluation methodology, Cantinho do Céu urbanization project.

1. Introduction

This research aims to identify the key aspects that define the universe of strategies for urban integration of informal areas in order to develop a methodology able to evaluate the impact of a given social and urban intervention. To achieve these purposes it was considered important to define the following phases of research:

1. Understand the origins of the informal urban areas;
2. Build a theoretical framework capable of reflecting the different strategies for urban integration of informal areas;
3. Identify, describe and systematize the strategies historically followed in addressing urban informality in Brazilian metropolitan areas, specifically the case of the city of São Paulo;
4. Application of the evaluation methodology to a case study in the metropolis of São Paulo.

Understanding this phenomenon, as well as the projects that have been developed in this context, constitutes a relevant learning about the most recent and controversial social and urban transformations.

This study comprises two research variables: theoretical research, which is related to the literature judged most relevant, and practical research, that consists in the fieldwork carried out during the analysis of the case study.

The theoretical research intendeds to develop goals number 1, 2, and 3, as described above. The scientific literature selected will be an essential tool to understand the phenomenon of urban informality and systematize the many policies and integration strategies that have been practised through History, focusing on the particular case of Brazilian cities. Research, systematization and discussion of the scientific literature will, therefore, be the first step to approach the theme. Once this discussion is started, it is possible to build an evaluation methodology so that the integration strategies can be analysed in qualitative terms.

The practice will consolidate the purpose of this research since it is by the observation of a case study that the evaluation model developed will be applied. Thus, this methodological variable inaugurates a new stage of work - the goal 4 - which consists in the development of an evaluation model based on the work done by NGO's about urban informality and social and urban exclusion, complemented with the knowledge acquired in events about precarious social housing. The second phase of the research practice - goal 5 - focuses specifically on the case study and the application of the evaluation model. As a result, this study intends to analyse the urban operation held at Cantinho do Céu - an informal urban area localized in the metropolis of São Paulo - through: the examination of the available literature documenting the project; surveys and direct observation and contact with locals, specially with Vera Basália (community leader of Cantinho do Céu)

2. Contextualization

The metropolitan space, along the global urbanization process, has suffered significant changes in its composition and social function. The metropolis is no longer the privileged residential place for the political and cultural elite, it is also the refuge of the masses attracted by urban progress (Turner, 1968). As a result, the cities growth is a historical phenomenon originated by the strong rural-urban migration and high rates of

urban population growth featured by industrialization, in which the better job opportunity was the main attraction and motivation for exodus.

However, if the city is synonym of new opportunities for some, for others it means a real struggle from day to day. Not always, or perhaps never, the city structure managed to address the demand of a mass population so far above its capacities, generating poverty and unequal access of the urban space. Thus, the city is the residence option for a growing number of poor people that determine much of its physical growth (Turner, 1968). It is in this context that urban informality, one of the negative consequences of urban growth, where millions of people, today, find their shelter. Reflecting about city and its informality is an urgent practise and makes it one of the most important issues of this century.

The informal occupation is, at its most basic definition, the most immediate answer of shelter for those who have fewer resources (Turner, 1968). But it is worthwhile to highlight that informality is a response to the demand for low cost housing towards the lack of other alternatives. The proliferation of informality is, therefore, a consequence of the mismatch between demand and supply that does not consider the social and economic needs of a population segment with lower resources.

Not only in Europe but also in developing countries, the growth of cities comes from a rural migration combined with a population growth explosion, however, it is important to underline that such events have occurred in different historical periods and in a very different social and economic framework. In Europe, it was during the late nineteenth and early twentieth century, along the process of industrial transformation, that the question of migration and urbanization has acquired great prominence. The process of urbanization in underdeveloped countries recapitulates the history of Europe and North America, in the nineteenth and early twentieth century, although in quite different context (Davis, 2006).

In fact, in the countries where the capitalist process was already well established, as it is the case of Europe, the resolution of the housing problem experienced greater government intervention by the provision of housing for the lower classes. In developing countries, however, the urgent shelter demand finds its resolution in auto-construction and illegal occupation, generalizing urban informality (Gonçalves, Alves & Silva, 2010).

3. Urban informality and integration strategies

Despite the many different characteristics of informal settlements, there are several common aspects that make informal occupation a global phenomenon. Whatever its composition, informal areas are characterized, depending on their degree of consolidation, by the lack of urban infrastructure, social exclusion, urban poverty and illegal nature (Wegelin, 2009).

Throughout human history there was a varied set of thoughts and actions related to the integration and improvement of living conditions in informal urban areas, nevertheless it is possible to define these strategies into two major fields: the demolition of informal areas and consequent relocation of their inhabitants through provision housing programs and, most recently, strategies to improve these neighbourhoods. Thus, removal, relocation and improvement are the three key concepts to define the universe of integration strategies of informal urban areas.

Housing provision by the government was the most common strategy to deal with urban informality during the decades 1950's to 1970's and its main purpose was the elimination of informal areas and consequent relocation of its inhabitants (Wekesa, Stein & Otieno, 2010; Abbott, 2002). This type of strategies not only was an extremely expensive measure but also generated all kinds of conflicts (Turner, 1968), proving to be ineffective.

Due to the failure of governmental housing provision, another strategy arises during the 70's, based on the allocation of land, provided with the basic infrastructure, for the most vulnerable in which the construction of the house is at the discretion of each family (Csir, in 2000 Wekesa et al., 2010). Thus, the proprietary was able to build its house, at its own pace, according to its financial capacity. However, this policy hardly improved living conditions of the urban poor (Werma & Keivani, 2001 in Wekesa et al., 2010). Not only this type of strategy failed to aim the needy people, for there were many low-income families who were eliminated in the selection phase, but also reproduces the same problem as always: the allocation of land far from the city centre and without the necessary urban infrastructure, specially when it comes to public transport (Wekesa et al., 2010).

At the same time (during the 70's), along with the policy of allocation of land, appears another solution for the integration of informal urban areas based on the improvement of these type of areas (Wekesa et al, 2010;. Wegelin, 2009). In spite of existing numerous methodologies in this field, the urbanization of informal areas is characterized by the following set of actions: implementation or improvement of basic infrastructure, for example: access to safe water, sanitation, garbage collection, roads, drainage system, electricity, public light, communication network; removal or mitigation of environmental risk areas; stimulate communities' preservation and space management; construction or rehabilitation of community spaces, ex.: clinics, nursing stations, etc.; legalization; housing improvements; relocation of the eventual displaced residents (UN-Habitat, 2006).

As Abbott (2002) argues, the strategy of informal areas improvement is, nowadays, a common practice and a mechanism by which poor urban dwellers can truly improve their living conditions. The current practice has, indeed, favoured policies based on what poor people have accomplished by themselves (Sengupta, 2009).

4. An approach to the Brazilian metropolises - the specific case of São Paulo

In the case of São Paulo, and most of the Brazilian cities, is during the late nineteenth and early twentieth century – along the transition of an agrarian Brazil into an urban-industrial exporter force - that the main changes in the social and spatial relations are reproduced, "the irregular situation of most occupations in the city of São Paulo is characteristic of the urbanization process in Brazil and had its origin in the historical process of transformation of land into private property, this is, the capitalist production of space" (Tone & Ferrara, 2010: 312).

The first waves of growth of the Brazilian cities, during the 19th to the 20th century, have confirmed an urbanization process promoted by the Government in favour of the dominant social classes, generating a significant exclusion and spatial segregation (Ferreira, 2005). As a result of the insufficient government participation, in ensuring minimum housing conditions for the most vulnerable urban population, the social classes with the lowest incomes have found in auto-construction and illegal occupation of land the solution to inhabit the city. Therefore, the metropolis of São Paulo has been consolidated in a fragmented way and under extreme social and spatial inequality (TONE & FERRARA, 2010).

The universe of strategies of social and urban integration of informal areas, in the Brazilian metropolises, has been quite broad. Table 1 summarizes, in a theoretical way, the different practises that have been developed in the recent years, and Table 2 provides some practical examples.

Table 1 – Summary of the different strategies to address informality in Brazil. Source: Author

PUBLIC HOUSING POLICIES

The public housing policies consist in the provision of housing through the relocation of informal areas dwellers. Generally, this type of initiatives is commonly featured by public organs and, therefore, tends to vary a lot from location to location. In Brazil, although uncommon these days, there are still some actions of this nature.

SLUM UPGRADING

Slum upgrading is currently a very common practice in Brazil. In general, such programs are promoted by municipalities, in each state, and funded by NGOs (and usually sponsored by other entities) involving all types of professionals needed to plan urbanization. Actions carried out typically include: installing or improving basic infrastructure, removal or mitigation of environmental hazards, regularizing security of tenure, home improvement, relocation/compensation for the small number of residents dislocated by the improvements.

COMMUNITY PROJECTS

Given the existing urban informality in Brazilian metropolises there is a major social mobilization committed to improve life quality of slum dwellers. It is in this context that community projects are organized as well as other movements in the defence of social and urban integration of the informal areas and slum dwellers. The universe of community projects is wide and may and can vary from pacification policies, social integration, and even house improvement in slums.

Table 2 – Practical examples of the different strategies to address informality in Brazil. Source: Author

PROGRAM	START DATE	TYPE OF INTERVENTION	LOCAL OF PRACTISE	PROMOTERS	GOALS
PMCMV	2009	1	Brazil	Federal Government	Produção de unidades habitacionais para a população de renda de 0 a 10 salários mínimos.
PAC	2007	2	Brazil	Federal Government	Promover o planejamento e a execução de obras de infraestrutura social, urbana, logística, e energética.
PMSP	2005	2	Municipality of S. Paulo	Municipality's government of S. Paulo	Urbanização de assentamentos precários decorrentes da expansão periférica e irregular nas margens das represas de abastecimento de água.
TETO	2006*	3	Brasil e outros países da América latina	ONG Teto	Fomento ao desenvolvimento comunitário e geração de soluções para comunidades fragilizadas sobretudo a nível habitacional.
UPP	2008	3	Município do Rio de Janeiro	Secretaria Estadual de segurança do Rio de Janeiro	Desarticulação de grupos organizados e pacificação de favelas dominadas pelo crime organizado e tráfico de drogas.
MDF	1985	4	Município de S. Paulo	Comunidade favelada	Defesa e promoção da cidadania dos favelados.

Conventions: (1) Public housing policy; (2) Slum upgrading; (3) Community projects; (4) Social mobilization.

(PMCMV) Programa Minha Casa Minha Vida; (PAC) Programa de Aceleração do Crescimento; (PMSP) Programa Mananciais de São Paulo; (UPP) Unidade de Policia Pacificadora; (MDF) Movimento de Defesa do Favelado.

5. Developing an evaluation methodology

The evaluation methodology is divided into two steps: 1 – evaluation of the urban condition before intervention and 2 - evaluation of the urban condition after intervention, both with different analysis processes. However, it were set six dimensions, common to both phases, that characterize an operation of this nature and define its main fields of activity:

1. Housing: The housing problem, a consequence of the urbanization and population growth, recognizes the denial of minimum living conditions for the most vulnerable populations since the era of

industrialization until the present day. Thus, integrating informal urban areas in the context of formal city means ensuring legal and healthy living conditions for all city users.

2. Infrastructural: the urban infrastructure sustains all human activities and is defined by the opportunity to access the services and infrastructure needed for social reproduction (Sola-Morales, 1997; Maricato, 1997). Ensuring quality of life lies not only in access to quality housing also means access to services básicos¹⁰, public transportation and the urban facilities.

3. Social: Slum dweller are often stigmatized in many ways - from employment, the opportunity to financial credit, education, etc. opportunities access - which difficult the process social and urban inclusion. It is for this reason that the social dimension is a determining factor for the integration of informal areas to ensure a successful operation.

4. Environmental: Nowadays, sustainable development is a major concern. Reflecting on city planning, and informal areas, means, or at least should mean, a better management of the resources. In this sense, it is worth considering environmental issues in the assessment of urban operations.

5. Economic: The urban space, while supporting social and economic relations, contains a very diverse world of opportunities for employment and income. Therefore it is necessary to ensure safe economic conditions for the development of all these activities to all city users.

6. Governance: Governance is understood as the act of managing and is a key activity for the maintenance of cities and to insure a good management of economic, environmental, social and urban resources. Thus, the space management is important to provide urban and environmental quality; to promote a social and urban development; and to guarantee a safe environment.

It was established a set of indicators and effects (see figure 4), organised according to the six dimensions, as described before, in order to convey a level of satisfaction to each theme and to enable the comparison between the different dimensions before and after intervention. It was also considered relevant to assess the fulfilment of the objectives proposed by the intervention. Figure 3 describes the evaluation process of the two phases: ante-intervention and post-intervention.

Figure 3 – Description of the two phases of the evaluation process. Source: Author.

PHASE 1: BEFORE	PHASE 2: AFTER	
INDICATORS EVALUATION	PROGRAMME FULLFILMENT	+ MARGINAL EFFECTS EVALUATION
<p>It was compiled a list of 17 indicators for assessing and defining an overview of the state of the region before the intervention. The 17 indicators are organized according to six dimensions. Each indicator must be evaluated from 0 to 2.</p>	<p>The evaluation of the program fulfilment consists in the enumeration of the proposed goals for a given project intervention and its evaluation from 0 to 2. Depending on the sum of the qualification of all goals, it will be possible to determine the compliance rate of the program.</p>	<p>It was compiled a list of 19 marginal/indirect effects to assess the impacts, either positive or negative, of an intervention. The 19 effects are organized according to the six dimensions. effect must be evaluated from 0 to 2.</p>
<p>Classification scale: (0) Not satisfied; (1) Satisfies; (2) Fully satisfies.</p>	<p>Classification scale: (0) Non-compliance; (1) Partial compliance; (2) Full compliance.</p>	<p>Classification scale: (0) Not satisfied; (1) Satisfies; (2) Fully Satisfies.</p>

Figure 4 –Definition of indicators and effects from the evaluation matrix. Source: Author.

H	I	S	A	E	G	INDICATORS	
X						a)	Quality of housing
X						b)	Population density
X						c)	Legal residence
	X					d)	Existence/Connection with Basic services
	X					e)	Existence / utility of equipment and public spaces
	X					f)	Mode of transportation
		X				g)	Community organization and social institutions insertion
			X			h)	Treated wastewater
			X			i)	Garbage collection
			X			j)	Housing locates in hazardous areas
				X		l)	Existence of local trade
		X		X		m)	Employment opportunities
			X		X	n)	Maintenance of space
			X		X	o)	Space surveillance
		X			X	p)	Security environment
			X		X	q)	Urban planning
H	I	S	A	E	G	MARGINAL EFFECTS	
X				X		a)	Valuation of housing/property
X						b)	Lower population densification
X						c)	Security tenure of property
	X					d)	Connection to basic services
	X					e)	Existence / utility of equipment and public spaces
	X					f)	Mode of transportation
		X				g)	Population substitution
X		X				h)	Population resettlement
		X				i)	Civic participation
		X				j)	Community organization and social institutions insertion
			X			l)	Treated wastewater
			X			m)	Garbage collection
X			X			n)	Housing located in hazardous areas
				X		o)	Boost local commerce
		X		X		p)	Employment opportunities
			X		X	q)	Space maintenance
			X		X	r)	Space surveillance
		X			X	s)	Promoting security framework
			X		X	t)	Urban planning

6. An exercise of evaluation: the Cantinho do Céu, São Paulo, Brazil

The complex of Cantinho do Céu consists in three residential allotments: Residencial dos Lagos, Cantinho do Céu and Residencial das Gaivotas, and is located in the south of the city of São Paulo, in the district of Grajaú, next to the Billings dam. The intervention proposed for this area consists in an urban and environmental rehabilitation policy of an informal settlement and was headed by the Municipality of São Paulo through the Mananciais Programme (PMS) (FRANÇA & BARDA, 2012; PARQUE CANTINHO DO CÉU, 2014). The project was showed in both national and international media and has been subject of numerous exhibitions, magazines and articles and focused on the architectural discussion.

The resident community consists in about 34,400 inhabitants and covers an area of 150 ha with significant deficiencies in basic infrastructure (FRANCE & BARDA, 2012; PCC, 2014). The urban quality of Cantinho do Céu complex reflects the general characteristics of the peripheral landscape of big Brazilian cities (FRANCE & BARDA, 2012), and the neighbourhood is composed, in most cases, by masonry dwellings occupied by low-income families and features two types of urban consolidation: a) irregular sell of property, b) the typical illegal occupation of slum (FRANCE & BARDA, 2012). Although about 50% of the population was

born in São Paulo, most of the households' leaders are from the northeastern of Brazil, which proves the intense internal migration, and consequent growth of cities.

The project aims to valorise the public and collective space by respecting what the community had already achieved. As a result, the enhancement of public spaces - streets, alleys, squares, and parks - is the main tool for space qualification.

The urbanization of the Cantinho do Céu, according to current Brazilian law, proposed the removal of dwellings located in hazardous areas and/or un areas of permanent preservation (APP¹). The urbanization process consisted in the implementation of the necessary basic infrastructure such as: a) the system of sewage collection; b) the distribution system of drinking water; c) the drainage system; d) the road system; e) the paving. In addition, the project has proposed the implementation of a 7km Park area.

The urbanization activity started in 2008 but was never completed due to the change of the Mayor of São Paulo in 2012. For this reason, it was only constructed 1.5 km from the 7km predicted Park area and not all the dwellings located in hazardous areas and/or APP were removed. Only 518 households were removed and the policy of resettlement consisted in two options: either receives the value of the old house as compensation or to buy a new house in the area with the same amount.

It is possible to identify three project stages: preparation, execution and, finally, maintenance. The first step consisted in: a) organize the first meetings to present the project to the community; b) submit and track construction schedule; c) transfer the families whose housing was removed. The second stage aims to: a) implement the infrastructure and connect the houses to the basic services; b) implement the park and its leisure and social equipment's. The third and final step is to preserve the space and the built environment.

The project defined two major methodologies: a) the execution of urbanization works by stages; b) the community involvement by discussing the project choices. Both complement each other and are successfully achieved through the implementation of a vast social program in order to stimulate the dialogue between professionals and community.

The application of the developed evaluation matrix consists on the analysis of three key elements: indicators, marginal effects, and objects fulfilment. The evaluations assigned to each component are shown in Table 5, 6 and 7.

Table 5 - Results of the evaluation of indicators related to the intervention project in Cantinho do Céu. Source: Author.

DIMENSIONS	INDICATORS																AVERAGE
	a)	b)	c)	d)	e)	f)	g)	h)	i)	j)	l)	m)	n)	o)	p)	q)	
HOUSING	1	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	1
STRUCTURAL	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	0,3(3)
SOCIAL	-	-	-	-	-	-	1	-	-	-	-	1	-	-	0	-	0,6(6)
ENVIRONMENTAL	-	-	-	-	-	-	-	0	0	0	-	-	0	0	-	0	0
ECONOMIC	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	1,5
GOVERNANCE	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0

¹ According to the New Brazilian Forest Code, Law no. 12,651 (2012), the term of Permanent Preservation Areas (APP) refers to the "protected area, covered or not by native vegetation, with the environmental function of preserving water resources, landscape, geological stability and biodiversity, facilitate gene flow of flora and fauna, soil protection and ensure the well-being of human populations."

DIMENSIONS	MARGINAL EFFECTS																			AVERAGE
	a)	b)	c)	d)	e)	f)	g)	h)	i)	j)	l)	m)	n)	o)	p)	q)	r)	s)	t)	
HOUSING	2	2	2	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	-	1,5
STRUCTURAL	-	-	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1,6(6)
SOCIAL	-	-	-	-	-	-	2	1	2	1	-	-	-	-	1	-	-	0	-	1,16(6)
ENVIRONMENTAL	-	-	-	-	-	-	-	-	-	-	2	2	0	-	-	1	1	-	2	1,3(3)
ECONOMIC	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	1,5
GOVERNANCE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0	2	1

Table 6 - Results of the evaluation of marginal effects related to the intervention project in Cantinho do Céu. Source: Author.

	PROGRAM GOALS	PROPOSED ACTIONS IN CANTINHO DO CÉU	EVALUATIONS (0 a 1)	COMMENTS
a)	Construction of housing units	-	0	- There was no construction of new housing units.
b)	Resettlement of families.	- Registration and mapping of families. - Compensation.	1	- No resettlement of families was secured but the payment of the value of the housing removed by way of compensation.
c)	Land regularization.	- Transfer of property titles to registered families.	2	-
d)	Implementation of water supply and sewage.	- Installation of water mains and sewage.	2	-
e)	Road improvements for vehicles and pedestrians.	- Consolidation of the taxiways car. - Construction of pedestrian walking in the main streets. - Construction of pedestrian deck for the Park.	2	-
f)	Street lighting.	- Installation of street lighting.	2	-
g)	Social monitoring of resident population.	- Community participation in projective and choices throughout the process of project implementation.	2	-
h)	Creation of recreational areas and community centres.	- Build a Park with a wide range of leisure and conviviality.	2	-
l)	Garbage Collection.	- Garbage collection by the Municipality of São Paulo.	2	-
j)	Storm water drainage and streams.	- Installation of drainage system in the aisles. - Implementation of park with grass floor, allowing infiltration of up to 90% water over the dam.	2	-
l)	Preservation of watercourses.	- Removal of dwellings in Area Preserving Permanent. - Construction of the park as a dam preservation strategy and preventing illegal occupation.	0	- There was no overall construction of the park, just 1.5 of 7km. - It was found that the majority of households in risk areas were not removed, only the allotment of Residential Lakes.
m)	Eliminate risk areas.	- Removal of homes located in the hazardous area.	0	-
n)	Environmental education.	- Workshops, lectures and meetings aimed at educating the public and convey notions of preservation and maintenance of the territory were held.	1	- In the post-intervention left this task to be taken seriously as Vera says, the community leader.
o)	Space surveillance.	- The inspection of the space is the responsibility of the Municipality of São Paulo.	1	- The inspection by the City only happens when requested, and there is no practice of regular surveillance.
p)	Space maintenance	- The maintenance of the space is the	1	- Maintenance is performed by a

Table 7 - Results of the evaluation of the program fulfilment of the project in Cantinho do Céu. Source: Author.

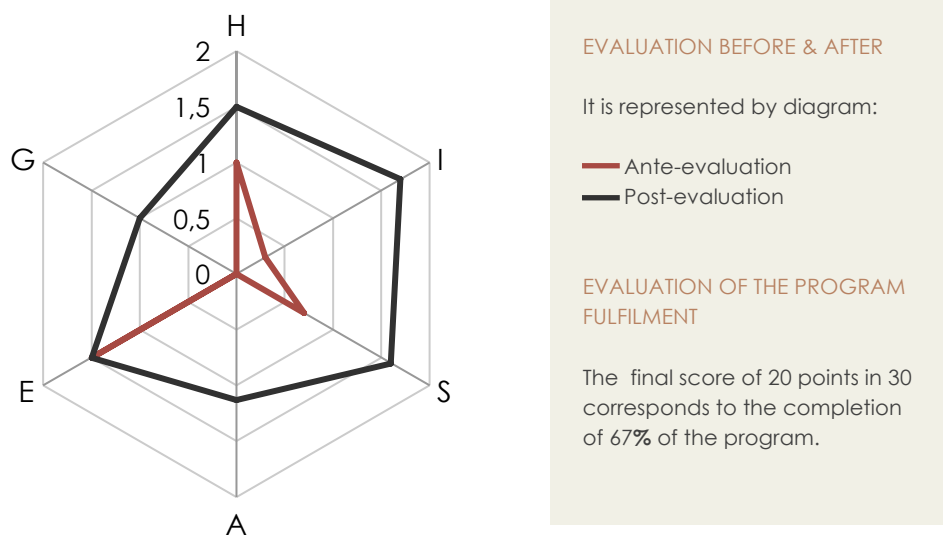
responsibility of the Municipality of São Paulo who hires firm to perform the activity weekly.

team hired by the City, however, the task is not performed properly.

After the final evaluation of both conditions, the previous state and after the intervention, it appears that the major improvements happened in the infrastructural and environmental level, as the Figure 8 illustrates. There were also improvements in other fields of activity (governance, social and housing) except the economical field. In fact, the urbanization project proposed bet essentially on environmental restoration and in the implementation of infrastructure in the neighbourhood and, for this reason, it is natural that the evaluation chart records a more significant improvement in the infrastructural and environmental dimensions.

Regarding the fulfilment of the program, it was proven that only 67% of the proposed goals ere achieved, and the major failures were recorded on three aspects: from the 7km planned extension of Park, only 1.5 km were built; not all dwellings located in a hazardous area were removed; maintenance and monitoring is not entirely practised.

Figure 8 - Final evaluation of the intervention project in Cantinho do Céu. Source: Author.



7. Conclusions

The evolution of theoretical thinking about the integration strategies of informal settlements proves the change of informality status. Instead of total removal of these territories, informality has been commonly addressed, especially nowadays, with rehabilitation programmes due to the recognition of the communities' achievements in solving their own housing problems even if it means informal occupation of the territory. This integration, in turn, can take place in many different ways, from its urban and architectural composition to pacification and police control of informal urban area. The answers are diverse and Brazil has been a very fertile field of experimentation.

In the specific case of Brazil, the lack of an urbanism doctrine has consolidated a space based on the savage laws of the real state market, favouring investments in the elites' neighbourhoods (Ferreira, 2010). As a consequence, the metropolitan space is the stage of a struggle between different social stratum in which the incredible social inequality also determines different powers of acquisition and hence different

possibilities of accessing the city infrastructure and housing, resulting in a segregated urban space (Ferreira, 2010).

This situation led to elect the Cantinho do Céu as an object of study, not only because it is an example of a government policy of slum upgrading, but also because it is a very well know project internationally for its architectural and urban quality. It is on this topic that the second part of this research is developed: the development of an evaluation methodology and its application to the case study in São Paulo.

Firstly, it is interesting to reflect about the methodology adopted. It was concluded that the model is based on a rather small set of indicators, whose analysis is hampered by the difficult access to statistical data for this type of areas. For a better assessment of strategies of this nature, it is considered that a larger set of indicators can provide a more concrete definition of the intervention impacts. In addition, it is also recommended a longer time post-intervention to ascertain the actual impact of the intervention in the territory, as some effects cannot be witnessed until it has passed a long period of time.

However, taking into account the main purpose of this study, it is concluded that the developed methodology is suitable and can transmit, in a first approximation to a given intervention, a good sense of its results and impacts in the territory. Furthermore, the analysis of the program goals fulfilment has proved to be an important contribution and added very relevant information to the qualitative assessment of the intervention.

Regarding the experience of urbanization in Cantinho do Céu it was found that the main failures occurred due to the non-compliance of the overall program:

a) Poor maintenance and poor supervision - currently the Park is abandoned due to the lack of maintenance. As a result the toys are rusted and damaged, vegetation is not cut, the banks are not painted, among other examples, and the community has lost the esteem and desire to attend the Park;

b) Not all dwellings located in a hazardous area were removed. Indeed, three years after the intervention project there are still houses in a risk condition and compromising the environment and the safety of families due to the suspension of Mananciais Programme, which incorporates the urbanization project of the Cantinho do Céu. The annulment of the initiative is related to the change of Mayor of São Paulo and the allegation of "lack of funds";

c) From the 7km extension of Park planned, only 1.5 km was implemented - the resident community of the allotments in which the park was not implemented, is quite unhappy and this resulted in the frequent damage of the Park.

In this particular case it appears that the intervention strategy was more important for a good publicity of municipal policies, and promotion of architectural designers and the others involved, rather than the legitimate fulfilment of the proposed goals.

But even with only 67% of compliance, the changes carried out by the urbanization project proved a significant improvement of living conditions of the Cantinho do Céu inhabitants - "Our neighborhood has changed from water into wine. It was a positive intervention (...) In general, people liked, we are satisfied, (...). We live better, now " said Vera Basália (community leader), during an interview.

It is also important to highlight the community involvement and participation that took place since the beginning of this project, and its positive consequences for: 1 - project acceptance and success post-occupancy and 2 - programmatic adjustment to the population needs.

The dimension of the informality problem in Brazil, and in other developing countries, is far from being solved by urbanization projects of small informal areas, however, these initiatives are operating changes and constitute an important reflection exercise.

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