

Sensitive approach to slum upgrading process: The case of Vale dos Guedes

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ABSTRACT: The article presents the methodology and results of a study that developed guidelines for a sustainable urban requalification proposal to the settlement called Vale dos Guedes, located in Juiz de Fora - MG. The idea has its origin in questions about the way the slum upgrading process has been conducted in Brazil. We started with the assumption that the process of gathering information to the project is generally based on technical issues, while the opinions and perceptions of residents are left on the background. Therefore, this study emphasizes the work on sensitive aspects of the diagnostic process for an urban intervention project, crossing the opinions of local residents with the technical survey, also required to obtain a more complete diagnostic of the environment. That way we can get a more socially sustainable urban planning. In a first moment, we have a historical context of the squatter settlements in Brazil and theoretical studies on sensitive and technical approaches that must be held for requalification projects. Then, the context of the city of Juiz de Fora was studied, focusing on the settlement Vale dos Guedes, and a field research was conducted, which have resulted on the development of projective guidelines.

Keywords *Sensitive approach. Urban requalification. Squatter settlements.*

1. INTRODUCTION

The disorderly process of urban space occupation has produced degraded environments, which are unfavorable to good quality of life of its inhabitants. These places, called at this work squatter settlements, have high environmental, spatial and/or social fragility. The squatter settlements are spaces occupied by poor housing without the need to specify the occupation situation (Marques *et al.*, 2007).

In such cases, where the citizens themselves are not able to afford the costs of access to formal housing market, full of spoliation and inequality, it is important and necessary that the city hall, State or Federation guarantee the right of these people. This right is foreseen, in the Brazilian context, through the City Statute (Brasil, 2001), which brings the claim that groups and people in vulnerable situations should have access to social rights such as housing, leisure, security, assistance to the destitute, among others, in addition to being established that the property must meet its social function.

The urban renewal projects in such communities seek to meet these rights. These are complex interventions because requalifying an area consists not only on ordering the space, but should aim to best meet the needs of its users, so that those users are subject considered in the process. Such thinking is unfortunately not yet as widespread in practice, marked by rationalist and progressive ideology that does not consider the historical, psychological, social and cultural values of space in the interdisciplinary perspective (Kashiwagi, 2004).

Urban requalification is set to be an intervention in the city that objective physical recovery and social development of poor regions in infrastructure, services and public facilities, ensuring improved quality of the environment and of life. Such interventions should be based on pre-existences, culture, and sustainable development . The importance of the requalification of these regions is the intention to reduce the socio-spatial inequalities present in the city (Camarinhas, s.d.).

Thus, this study intended to promote a debate on the need for a sensitive approach to perception of space in squatter settlements, in order to capture the perception of the residents, and how this qualitative analysis can contribute to the design process of urban requalification of these areas. The object of the study was the city of Juiz de Fora, specifically the settlement called Vale dos Guedes, located in Granjas Bethania neighborhood, in the northeast of the city.

2. SQUATTER SETTLEMENTS IN BRAZIL

Historically, urban planning in Brazil is disconnect to social reality and place, by not recognizing the informal and precarious city and look only to the formal city (Arantes; Vainer & Maricato, 2002).

The urban requalification projects aiming social and spatial inclusion to squatter settlements are a new fact in Brazil. Until the 1980s three government positions can be highlighted in relation to these spaces. The first one was simply to ignore the phenomenon, without being provided any interventions. The second followed the line of "sanitization" and defended the eradication or removal of such settlements. The third and last, which prevails to the present day, assumes that urban improvements are necessary, justified by

factors that configure risk situations such as floods, landslides and other problems arising from environmental insecurity and lack of infrastructure (Carneiro *et al.*, 2010).

From the 80s on, in a context of redemocratisation, the country began to have a higher recognition of precarious and informal occupations by the government, which led to an increase of urban requalification projects (Carneiro *et al.*, 2010).

2.1 The Juiz de Fora context

The city of Juiz de Fora went exactly through this process described above, but the idea of regularization came a little later. Only in the second half of the 1980s the practice of removals was no longer preponderant, and the alternative of regularization of land and housing started to happen. However, in the late 1990s, the housing deficit was still one of the largest municipal problems, and interventions came in a shy way and in isolated spots, without regard to total demand and without a study and specific consideration to each area and its population (Abreu, 2010).

In the city of Juiz de Fora, the last Master Plan, from 2000, recognized 87 areas of special social interest (AEIS), which are generally areas of slum or irregular allotment (Juiz de Fora, 2004). In addition to these areas, the Municipal Housing Plan (Juiz de Fora, 2007a) pointed out more 57 areas, totalizing then 144 areas. These numbers, however, should be re-analyzed by the review of the Master Plan of Juiz de Fora, in progress in the year of this research (2016), and the revision of the Municipal Housing Plan.

3. THE SENSITIVE APPROACH

There is a high complexity on intervening in the squatter settlements. For the success of this process it is necessary to know very well the social phenomenon before taking any action. A project carried out from non-solid foundation of knowledge can lead to inefficiency of urban requalification, generating several consequences as the emergence of new focuses of violence, the inappropriate use of spaces and places, among others. Thus, between rights and wrongs, the government began to realize the need for an interdisciplinary study before any intervention (Kashiwagi, 2004).

This more holistic approach to the process, which involves from the understanding and analysing the relationship between the individual and the space to the architectural design conception, is what we call in this research sensitive approach, conducted from the perception of the residents. Perception analyzed here under the definition of Norberg-Schulz (2006), which is conceived as the ability to give meaning to the environment through the creation of specific places.

According to Nass (2002), such public participation during the design process of requalification of the squatter settlements is the most effective policy to ensure the well-being of the residents and effectiveness of urban investment.

The basis of such a sensitive approach is in the Phenomenology, which, according to Merleau-Ponty (1994), is a philosophy that studies the essence of existence, trying to understand the man and the world from its phenomenon (or facts). Seeking the essence of the world is not to seek what it is in idea, but to seek what in fact it is for us. The essences are produced meanings, that is, perception, thought, memory, imagination, that make a universal character, subjective and absolute (Kashiwagi, 2004). Within this philosophy, the effort is to find the naive contact with the world, so reporting the world lived through a direct description of the experience as it is (Merleau-Ponty, 1994).

The search for the understanding of this contact with the world is carried out through the sensitive approach methods, which are quite subjective, highlighting the importance of the

places, the experimentation, the meanings and representations. The phenomenological perspective comes, in this aspect, to solve the problem between subjectivity and objectivity within these methods. That is, the phenomenological perspective, according to Merleau-Ponty (1994), states that there is rationality in so far as perceptions are confronted and confirmed.

The reading of the space through the experience shows the value of man as subject, from the moment that seeks the relationship of space as physical unit and human behavior within it. Thus, the reading of space through experience allows us to understand what is perceived by the inhabitants and users, perceptions that were built on cognitive, affective and symbolic foundations of the place (Kashiwagi, 2004).

3.1 Evaluation methods

The evaluation methods within the sensitive approach aims to identify the most important architectural, urban and landscape references of the study area, consolidating itself from the perception of the residents of the settlement, as well as the significance of the place and the feeling of belonging which establishes the primordial relationship between resident and space.

3.1.1. *In Loco* observations

To observe the social practices present in space helps in collecting information about their activities, about how they use and appropriate space and on the regularities that such behaviors occur (Reis & Lay, 1995). Thus, visits are made in order to understand the place and get impressions or technical note data.

3.1.2. Mind map

The vision of the places and situations that man lives in an environment are specific to each individual, and the representation of this perceived world is in symbols, in the image. In the perception of the environment almost all the senses are in operation, and the image is a combination of all of them. Each user creates their own images of a place, but since these users are groups, it is common to create substantial consensus. This group of images is of interest to urban planners, since the environment to be worked will be used by many people (Lynch, 2011).

To uncover these images, Kevin Lynch began to use the instrument of mind maps. This methodological tool is geared to understanding the urban visual form. The main concept is the "legibility", that is, visual quality, identifying the particularities of the territory (Teixeira, 2001). The mind maps can be characterized as spatial images that are in the minds of people.

To capture such images, it is asked to research participants to represent the area under study through drawing, and if it is necessary with the help of writing (or speaking), highlighting one or more elements which he/her considers important in the community. Participants are left free in the choice of which to represent, so that the researcher can understand the true picture that each participant built, and later, through an analysis of all the images, identify consensus among participants.

3.1.3. Commented routes

This method, developed by the French sociologist Jean-Paul Thibaud, aims to qualify the environments of a place through the perception that users have of it, enhancing the action

of the person in a certain ambience. This is relevant since the place is considered inseparable from its power of orientation and expression, which has a unique meaning to its users (Cohen, 2006). To achieve this goal, the author presents the perception route, so that sensitive characteristics of the place can be apprehended. The act of walking through certain location awakens the senses and sensations that make people respond to the world perceived and to the lived world, incorporating in space experiments and influences of previous experiences. Along the way contexts, situations, perspectives, cultures, strategies and ways of acting and interacting are considered (Ongaro, 2015).

During the way, users presents the place to the researcher, describing situations faced at the walk and lived situations, experiences that create memories and consequently the sense of ownership. The start point of the way is defined by the researcher or by circumstances, and the resident himself defines the end point. By requirement of the method, the route should be part of the routine of the interviewed. During the walk the user is free to do interventions and stops while the researcher must intervene the least. At the end of the route some informal questions can be held for better understanding of the perceptions and situations found (Ongaro, 2015).

3.1.4. Interview

To better understand the significance of space for the resident, their strengths and weaknesses, it is important to complement the analysis with an interview, where the resident expresses her/his thoughts freely.

4. THE TECHNICAL APPROACH

The slum upgrading projects have the social bias but, just as important, is the technical quality of the intervention, as well as the adjustments of the legal limitations, urban and financial issues.

Solve the illegality involves identifying its irregularities. While urbanization and requalification programs have their focus on the physical adequacy of the necessary systems, legalization programs will promote legal adequacy of the earth, making it able to receive the benefits of the proposed intervention in urban project (Ferreira, 2006).

Some regulators of the urban space are the laws of use and occupation of land, municipal plans, and various rules and guidelines for the production of projects. On the City Statute (Brasil, 2001), various instruments were made possible to enable the actions in the urban territory.

5. OBJECT OF STUDY: VALE DOS GUEDES

Located in the northeast of Juiz de Fora, more precisely in the neighborhood Granjas Betânia, Vale dos Guedes (Figure 1) has a total area of 52,493.13 m². Of this total, 16,208.13 m² are located in the public area, and 36,258 m² are in particular area, registered on 24. February of 1970 (Juiz de Fora, 2011; Juiz de Fora, 2007b).

According to one participant of the research, which claims to have been the second resident to invade the area in 1971, Vale dos Guedes had only one "rail", that is, a narrow passageway of access for residents. Subsequent to the first occupations, many other

families came to occupy the settlement, so that in June of 2006 there were registered 61 occupations.

The high concentration of poverty and total absence of urbanization and land irregularity, make the Vale dos Guedes to be considered, according to the Social Atlas of Juiz de Fora (Tavares, 2006 *apud* Juiz de Fora, 2007b), one of 11 micro areas of social exclusion in group I. This group covers the areas of complete social exclusion and priority seating in the full urbanization and integrated social policy programs.



Figure 1: Vale dos Guedes. Source: Personal Archive

5.1 Field research

The research was structured in two stages. First was performed a technical survey of both the surrounding area and the area under study and then sensitive methods of approach in the residents of the settlement were applied.

The gathering of technical data was made through surveys along the sectors of municipal administration and through on-site observations conducted by the researcher. The information was then compiled into maps, and analyzed, which contributed to a first look at the settlement, allowing the elaboration of a list of problems and potentials. This list was systematized in a framework of analysis, from which the main problems were highlighted in order to guide action strategies.

The most serious problems encountered on Vale dos Guedes, found in this step, are caused by the total lack of infrastructure in the area, such as lack of sanitation, piped water supply, electricity network, paving, street lighting and proper drainage. Moreover, the situation is aggravated, as the area is considered high risk, with land subjected to landslides.

The situation of the population, in respect to the legitimacy of the ground, is also problematic, since none of the families has ownership of the possession or ownership of the occupied lands. This factor hinders their access to basic services.

Despite all of the problems identified, the area also has some potential, such as the existing route, which was done by the residents according to their own needs. The route follows the topography and can be a reference for future urbanization project. Beyond that, the area has a view to the forest of the army, which, as a conservation area, ensures the occupants a visual landscape and close contact to nature.

In parallel, the sensitive survey was conducted, which was initiated by the application of the interview, as a way to the resident to get to know the researcher and feel more comfortable with the conversation. This was followed with the application of mind maps, a method that found more resistance to being performed, since it involved drawing and consequently the fear of making mistakes and to express themselves through this unconventional way. The survey was then completed with commented routes, which led the researcher to better understand the reality of which the locals referred. All methods applied were recorded, transcribed, and systematized in tables and graphs, in order to enable the researcher to characterize the needs of residents, as well as the potentials and problems that the users see in their environment.

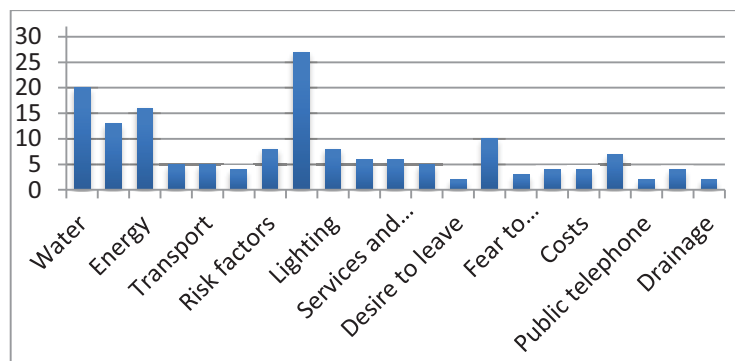


Figure 2: Visual expression of the sensitive diagnostic. Source: Prepared by the author.

The graph displayed above (Figure 2) systematizes the main topics discussed in sensitive methods, although they are not quantitative methods, they show, by the frequency of the listed facts, the gravity and importance of the problems mentioned among the inhabitants.

It is possible to diagnose that the main problems, as seen in technical analysis, are connected to the lack of infrastructure.

Rainy season here is very difficult... very. We are afraid to get sick know... you don't know when you are going to get sick... No one has a car. If I call 911 it doesn't come. Just like happened... the woman was on fire, so we called 911. The rescue came, but it couldn't arrive the house... She was inside it... I had to search her there and bring her back here. I turned the fan on her... The rescue left the car there and came... she was already practically dead. (RESIDENT 3, in reporting to the researcher).

In addition to these basic problems, there are others that deserve attention, such as the lack of services and leisure areas, the absence of a square and a community center, and the legal issues regarding the ownership of the land tenure, as shown in the report below.

I think an address is important in the life of a person. Where do you live? I cannot give an address to get my mail. I have to give an address from the street above. (...) Even living here for so many years, you cannot have an address. That is one thing that bothers me, you know? Because this place is almost non-existent in the society as a whole, you understand? (RESIDENT 6, in reporting to the researcher).

Therefore, in possession of a technical and a sensitive diagnosis, the results obtained in each of them were crossed, in order to have a general look at all the issues.

Thus, a table was developed to enable the quick view of each aspect containing the technical and residents observations, as well as proposals for possible specific actions that

would serve as the basis for the definition of projective guidelines for the area. In order to place the main observations in the physical space of the settlement, an array of discoveries was prepared (Figure 3).

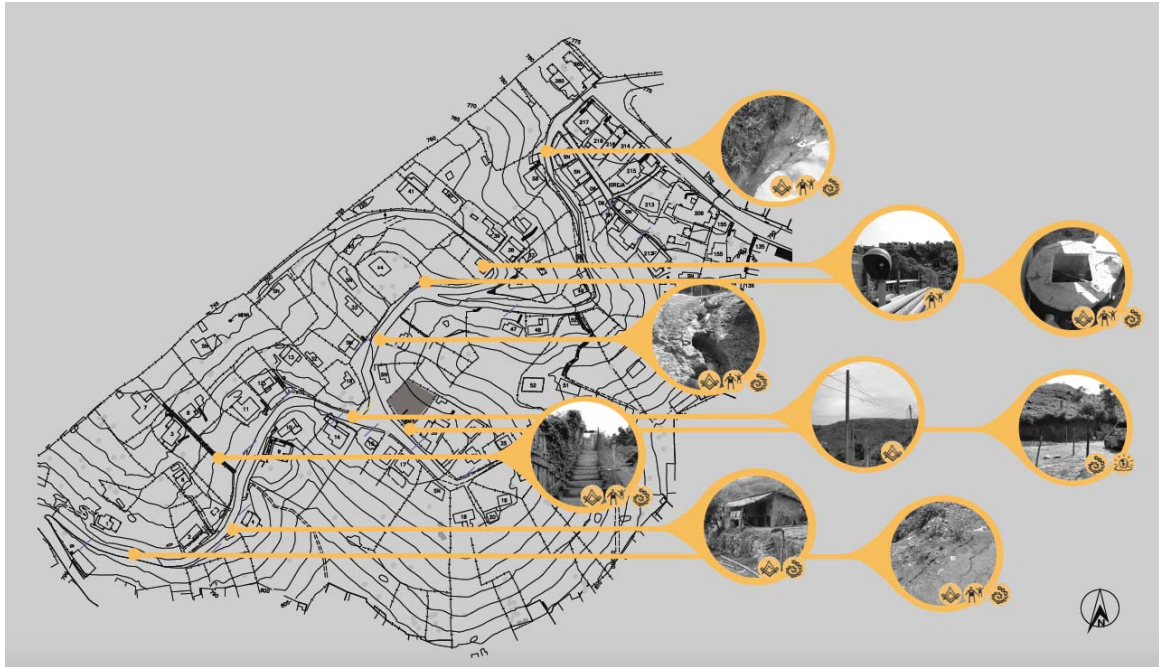


Figure 3: Cross analysis. Source: Prepared by the author.

This figure shows and illustrates problems like lack of paving, erosions, water wells, informal electrical wiring, stairs, irregular contentions of slopes, and the land designated for the construction of a community center. It shows also the methods in which each of the findings was made, the setsquare represents the technical approach, the people represent the interviews, the snail represents the commented rout and the sun represents the mind map.

5.2 Projective guidelines

Targeted the area and the inhabitants needs, eighteen projective guidelines for Vale dos Guedes, in response to the problems found, were prepared, as follows:

- Land divisions project;
- Project for slope retention works;
- Project for public roads;
- Storm drainage system design;
- Project for urban furniture;
- Grid project sanitary sewage;
- Grid project of water supply;
- Grid project of electric power;
- Public lighting network design;
- Project for installation of phone lines;
- Suggestions of alternative means of waste disposal;
- Intervention plan for the removal and relocation of families;

- Specification of the necessary urbanistic tools to enable the regularization of land tenure to the residents;
- Leisure area;
- Community Center;
- Suggestions for rainwater harvesting systems;
- Location for construction of pharmacy in the surrounding areas;
- Improvement project of bus stops in the neighborhood.

6. CONCLUSION

This paper presented as objective to present the development for a requalification proposal to the Vale dos Guedes, based on a holist approach. All the steps developed and presented here were important to achieve the searched look, a sensitive look, driven by the perceptions of those who live in such settlements, crossed with the technical issues, also needed to a good urban design. The guidelines achieved at this diagnostic phase were essential for the development of an urban project, conducted after this research, which has not lost the participatory focus along the projective decisions.

In face with all the above, we can ask ourselves how far the requalification projects of squatter settlements, within the field of Architecture and Urbanism, can be a vehicle for social transformation. Insofar as further research and analysis focused on the perception of the residents and on the sensitive field are developed, the objective of social inclusion on these projects will be increased. However, when it comes to practice, effective actions depend on strong political will.

Even with all the obstacles still to be overcome, small actions and projects like this can show hope in a more equitable and sustainable society.

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