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## Socio-spatial patterns: the backbone of informal settlement regeneration

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Since inception, squatter settlements in Latin America account for an on-going history of vital place-making through social actions. Unfortunately, professionals in charge of urban regeneration rarely acknowledge this potential, and its endurance is constantly being challenged by the settlements incremental and deregulated growth. In spite of these adverse conditions, the communities continuously bestow unlawfully appropriated voids, of civic content through spontaneous social actions. Our methodological approach strives to use these informal socio-spatial patterns as a framework for specific urban projects through three correlated tasks: (1) a mapping that construes the existing spontaneous socio-spatial patterns, (2) the design of a 'civic network' that integrates them and, (3) the proposal of strategic urban projects. The methodology sustains that these spontaneous civic sites, can lead the regeneration process, towards a physical and socially inclusive outcome.

**Keywords:** Informal settlements, Urban regeneration, Socio-spatial patterns

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## Introduction

Latin America is the most urbanized continent in the developing world with a double growth phenomenon; on one hand the shrinking of the population growth rates in the largest metropolitan areas and on the other, the accelerated population growth in squatter settlements (UN Habitat 2006). These facts show that the majority of the cities in this continent are finding difficulties in order to provide formal housing for their poor residents through conventional plans and mechanisms that regulate land use and urban space.

At the same time, it is important to stand out that informal growth in this continent occurs at a low rate in undeveloped land and therefore, there exists a process of densification and overpopulation which limits the expansion of the physical borders of the informal settlements.

In response to this situation, various countries of the region have been developing slum upgrading, regularization, and legalization programs for informal settlements during the past fifty years.<sup>2</sup> These strategies have been implemented thanks to the fact that in some countries local governments have a constitutionally protected autonomy.

Due to this favourable political decentralization and regularization strategies, which differ from the traditional evictions and resettlement policies; we consider it an adequate time to tackle informal settlement regeneration through the strengthening of knowledge and methodologies in accordance to their physical and social singularities. Current urban regularization strategies tend to focus on reducing physical irregularities such as inadequate sanitation and poor housing conditions but surpass the singularities of their social substrate and lived space.

Our article sustains that the persistence of collective life in spontaneous sites may play a determinant role in the formulation of specific strategies for their urban betterment. From this assumption, we intend to offer a methodological approach which reinterprets informality in a creative way, by building on the regenerative potential of the existing social ties of these settlements through three simultaneous processes: (1) a mapping which construes the lived space through community urban actions, (2) the design of a 'civic network' understood as an interrelated system of urban references, and (3) the proposal of strategic urban projects in accordance to the civic grid.

The hierarchy of the physical materials and intervention strategies will vary regarding the context, but their identification and relation to a cohesive 'civic network' will allow the understanding and regeneration of the sector or settlement.

### *A vital history in the construction of place*

The definition of informal settlements by UN-Habitats that of urbanization lacking access to water, electricity, sanitation, poor structural quality of housing, and insecure residential status. These morphological, functional and symbolic problems transcend frontiers and are common to most developing countries.

However, this definition, as many others, describe the physical and socioeconomic deficits these settlements have in order to reach urbanity, but surpass what we believe is a strong and particular characteristic of informality; its strong social infrastructure.

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<sup>2</sup> Some examples of regularization and betterment programs in Latin America are: *Favela-Barrio* in Río de Janeiro, Brazil; *The Programa de Hábitat Rosario* in Rosario, Argentina; the *Organismo de la Formalización de la Propiedad Informal COFOPRI* in Perú; *Morar Legal* in Río de Janeiro, Brazil; and the *Plan de Mejora Integral de Barrios* in Medellín, Colombia.

In our opinion, the hidden potential of informal cities lies in their values and spontaneous social dynamics which through a strong system of mutual help and alliances are able to supply thousands of human settlements in developing countries.

Considering that almost one thousand million people in Latin America, Asia and Africa will only be able to acquire housing in informal urbanizations (UN Habitat, 2006), it is critical for governments, policy-makers, planners and architects to search for integrated approaches that include community involvement in order to address urban shelter poverty at scale.

The incorporation of the urban poor in the decision-making, of city development and regeneration needs to be accomplished by the strengthening of their financial, informational and organizational capacities in order to be heard, and for the community to believe they have the ability to solve their own problems. In this direction, there is an urgent need for methodologies, which recognize and address the existing social values and active organizations as partners in the urban regeneration process.

The report 'The challenge of Slums' (UN-Habitat 2003), points out that the non-intended benefits of informal settlements over their eviction is providing immigrants with affordable housing, which in time enables them to have savings and eventually upgrade into the urban society.

Although excessively optimistic, it is true that informal settlements are the only option to provide cheap, although inadequate, housing for the poor, and that evictions only lead to housing in inferior conditions than the so called informality.

Therefore, the initiative of '*Cities without Slums*' (Cities Alliance, 2000) should be '*Cities Recognizing Slums*' (Huchzermeyer, 2006), focusing on strategies that rise the standards instead of slum eradication. Our article aligns with this perspective, for we believe in the regeneration of urban informality over evictions and forced resettlements which cause the destruction of the existing social networks.

Collective social action is a key characteristic of poor communities, concerning a wide range of activities such as leisure, development of public spaces or for purpose of protest or advocacy. Reliance on social networks explains why these communities reveal homogeneity of place of migratory origin, and of ethnic or religious group. This uniformity allows for a sense of belonging and facilitates relations of support and reciprocity.

These grassroots organizations are usually based on self-help and cover a wide range of social actions. Community-based organizations have a strong role in providing services, especially in Latin America, where, since the 1980's, they have been addressing basic services such as communal kitchens, income-earning schemes and cooperatives.

With this understanding, our paper sustains that the social values and organizations of the urban poor are much stronger than their social deviations; therefore, we emphasize the need of intervention tools and proposals that build on this identity and value to guarantee a cohesive and sustainable regeneration.

## **Socio-spatial patterns as the backbone of urban regeneration: a methodological approach**

Our methodology's starting point is the mapping and analysis of the existing socio-spatial patterns as part of a structural network that will guide regeneration strategies and urban projects for the derelict areas.<sup>3</sup>

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<sup>3</sup> The proposed methodology is based on two research projects of the Urban design and planning department (*Laboratori de l'Àrea d'Urbanisme* (LAU) of the School of Architecture of the *Universitat Internacional de Catalunya* (ESARQ-UIC):(1)'Technical basis for the regeneration of low density suburban residential areas' (2009) Vall , P., and Mendoza, C. (2) 'The value of informality in the construction of cities: Cali, Colombia. (2010), Mendoza, C., Acosta, B., Colacios, R., and Serna, J.

We consider that in informal settlements, fragmentary opportunities outweigh structural functionalism (Mendoza, 2011). Likewise, we strongly believe that urban space is still the medium, which allows the integration of the social, cultural and ecological dimension of development. Therefore, our methodology strives to synthesize the physical and active community manifestations through the urban space.

'Sense of place' is the concept that describes the feeling of being part of a place, and is created by the life experiences and intangible emotions experienced in that particular place. This description of place is not only a geographical or spatial concept; it is an existential space full of significance, emotions and meaning for the people inhabiting it.

Furthermore, places are full of intangible material linked to the life experiences of their inhabitants (Nogué, 2010). Escobar states that, 'local knowledge is a mode of place-based consciousness' (Escobar, 2001), and we believe that this local knowledge grants significance to certain urban spaces due to cultural and social actions that have taken place in them. These place based social spots constitute a rallying point for the construction of a network of significant civic sites. In order to discover this network, it is essential to understand that the personal lived experiences of a place are indispensable in order to acquire a sense of belonging.

In the North American context Cooper (2007) and Oldenberg (1999) define 'third places' referring to places in which communities interact, which are not dwellings -first places-, nor work -second places- but, places for informal encounters which are essential in order to trigger and build social infrastructures. In this sense, informal settlements are full of 'third places' yet to be identified and strengthened.

The communities understand the importance of social ties, and advocate that the betterment of a settlement or urban cluster not only lies in developing public services, accessibility and transport systems, but in the consolidation of their social networks.

The dwellers believe the settlement is a portion of the urban space that has been obtained by the communities struggle for its betterment and formalization. This fact grants its dwellers a feeling of belonging that must be the starting point of its urban regeneration (Hayden, 1995).

Due to the fact that informal settlements lack formal places for social interaction, the spatial analysis of places of spontaneous communitarian interaction need a special methodology to reveal their significant potential to guide their regeneration.

#### *Step one: construing and constructing social and ecological grids*

The first step of the methodology consists on a process of mapping that not only interprets, but also construes the lived space of the settlement. We sustain that this 'social cartography' is a fantastic cultural project for it describes and constructs the hidden social world (Coroner, 1999).

This tool is used in this first step in order to discover and then map the significant connections and interrelations that remain hidden in the place.

To obtain this social density we must interpret the social infrastructure made up of social relations established in the place through the physical space (Putnam, 2000). Besides its strong place-based value, it is significant to stand out that when the social network is nurtured in a place, it can become one of the most valuable tools against social exclusion (Colacios, 2011).

The process of obtaining the social cartography of a settlement consists in a survey of the voids, which by spontaneous and illegal manner have been appropriated by the community for social and cultural events (*Figure 1*).





*Figure 1.* Social spaces, spontaneous void as a socio-spatial site. Cali Colombia (Foto by B. Acosta,2009).



*Figure 2.* Social Cartography, interactive map of spaces the community “likes/doesn’t like” in the SantCosmeNeighborhood in Barcelona. Study conducted by Arch. Raquel Colacios.ESARQ-UIC.(Foto byIvan Llach)

It is essential to establish a committal to the place in order to interpret these social relations, for it is not only necessary to experiment them personally, but to recollect the lived experience of the dwellers. Thus, community involvement is mandatory in order to capture with a comprehensive scope their use of space. The translation of the socio-spatial dynamics of the settlement to a physical mapping may be accomplished by various participative methods. In order to generate the most interaction with the dwellers, and facilitate the recollection of information, an urban action must be designed preferably in an open space to guarantee open participation. The activity serves to establish a relationship with the grass root organizations and allows us to conduct surveys, interviews, and finally develop interactive maps, which will help us construe the social use of significant spaces. The surveys provide us with quantitative data of how the dwellers view their settlement and raise questions on the need of public space, services etc. The interactive maps (*Figure 2.*) enable hands on activity with the dwellers with information on issues related to the physical space, its use, and perception. It also leads to the participants' awareness of producing a special kind of mapping leading to discussions on urban issues (Colacios, 2011). The mapping of these socio-spatial needs, problems, and lived sites, helps us experience the place from the user's point of view and enables us to physically and mentally feel the particular context to understand and represent it (Tiwari, 2008). We strongly believe that the understanding of informal settlements from the social infrastructure layer helps guide the regeneration process from a positive user response. It is important to stand out that in this first step of the methodology, a simultaneous mapping of the physical and ecological grid of the settlements must be done. Rivers, swamps, streams, etc. are usually in a contaminated and degraded state in informal contexts (Fig. 3.). However, due to their topographic and structural role in the settlement configuration, when revitalized in their ecological function they consequently play an important role as elements of social identity and cohesion by contributing to the open space structure (Vall, 2011).



*Figure 3.* Contaminated River, the river through the neighbourhood of Siloe, Cali, Colombia  
(Foto by Fundación SIDOC)

The channel of the river must be naturalized and appropriate measures taken to ensure safety at the water's edge. The fringes must undergo a substitution of dwellings in risk areas and connect this linear element to the urban sectors.

The underlying objective is that the territorial division these natural elements generate can be transformed to a support structure by engaging them to a broader open space system and commonplace, including the surrounding built environment. The environmental betterment and flood mitigation of the river or stream may bestow on it a collective use, as a safe public space with a place-based attachment to territory and culture.



Figure 4. Ecological Grid, Example of an ecological and open space grid. Cochabamba, Bolivia. (Image by: Ben Dirickx. ESARQ-UIC).

At the end of this first step of the methodology, the mapping of the spontaneous civic sites and open space ecological grid, acquire a new meaning in the informal fabric generating an open space network (Figure 4).

The balance of morphological and social mapping at different scales ensures community participation and local engagement. Therefore, for this step, physical mapping as well as the knowledge of the dwellers practices and perceptions of space structurally guide the future spatial betterment.

*Step two: constructing a 'civic network'*

The second step of the methodology recuperates the concept of 'civic network' as a system of connected urban references (parks, civic roads and activity nodes), which allow the comprehension, articulation, and revitalization of the settlement or sector (Vall, 2007). Our assumption is that this strategy generally applied in the regeneration of formal cities, can be appropriate for informal settlements, due to the fact that it is based on a structure of public spaces responding to culture and context. The 'civic network' of the informal city will not be the same as that of the formal city due to the lack of public spaces, roads, activities and amenities. In derelict contexts, it will be made up of the spontaneous and singular spaces mapped in the first step, and by the identification of interstitial voids that due to their strategic position in the existing fabric have the possibility of becoming significant collective spaces. In the same line, the civic grid will incorporate roads, or pedestrian paths in and in-between settlements to strengthen their connective capacity. (Figure 5)



Figure 5. Civic Network, example of a 'civic network' incorporating open spaces, civic axes and roadways as structural elements. (Drawings by: Laura Gómez and Ester Laso. ESARQ-UIC)

To sum up, the second step must also include the betterment of the informal roadways as part of the 'civic network' and therefore help solve better access to the settlements and dwellings. Furthermore, it must incorporate the analysis and identification of linear growth and activities along the roads.



This step allows us to activate local places, as the product of social relations with a view of space, and by that emphasize both its social construction and spatial articulations as ‘the juxtaposition of different narratives’ (Massey, 1999:18).

Reinforcing existing mixed use and activities allows us to multiply the places of contact and help establish the necessary distinction between public and private spaces informal settlements lack. Nevertheless, although the civic network and roadways are strong interconnected systems, we still find that this new civic space is not enough to create activity and collective participation. Therefore, in order to accomplish this we need to add strategic projects in accordance to the new civic grid.

### *Step three: Strategic projects*

The third step of the methodology strives to incorporate activity to the new structural elements of the civic grid through specific strategic ‘urban projects’ (De-Solà-Morlaes, 1999). These projects, when related to the ‘civic network’ act as urban references that grant a cohesive potential to the existing fabric. We believe that the strategy of incorporating urban projects can be an optimal tool for the regeneration of informal settlements due to their mixed use with a diffusing effect, urban architecture, public housing, and a delimited time for their development.

Unlike conventional Plans, the urban projects, due to their size and diverse programs can attract both private and public funding. They enable inter-agency collaboration through various actors and stakeholders during the project’s development, which is critical for successful regeneration. While the financial costs of regularization programs vary widely, residents of regularized areas rarely contribute any payments to compensate for those costs, consequently the lack of revenue associated with regularization many times inhibits the scaling up of these programs (Fernandes, 2011).

With this in mind, we strongly believe in a participatory budgeting process as an innovative approach to urban governance and decision-making, which can also allow the community to determine through their needs the program and type of social facilities needed. In order for these urban projects to have a cohesive effect, it is mandatory to enhance an alliance between them and the ‘civic network’ in order to enable physical and social ties.

Through this step, we intend to balance physical and social interventions by incorporating the architectural scale in combination to the urban space. To make sure this methodological step ensures community participation and local engagement, it is essential that physical interventions incorporate the knowledge of the inhabitant’s building practices and perceptions.

In order to obtain a territorial identity we must create a framework of history, common geographical references, and the persistence of types of collective life (Nogue, 2009). The three steps of the methodological approach we present in this article: social cartography, ‘civic network’, and urban projects, strive to obtain this territorial coherence through vindicating the persistence and the pre-existence of collective life as the real value of informal settlements. In this frame of mind, it seems reasonable to affirm that the effectiveness of the interventions and urban projects depends on our ability to involve the community in the process of identifying and preserving the existing social values.

We must remember that the important challenges we are faced with in the urban regeneration of informal settlements are not only the physical deficiencies but the limitations of existing institutional and regulatory frameworks which do not recognize the underlying value of the place-based social infrastructures. Therefore, our methodology wants to contribute to build practical knowledge within these limitations, by emphasizing that informal urban regeneration must use the strength of the community and their continued vitality of place and place making to accomplish a sustainable betterment.



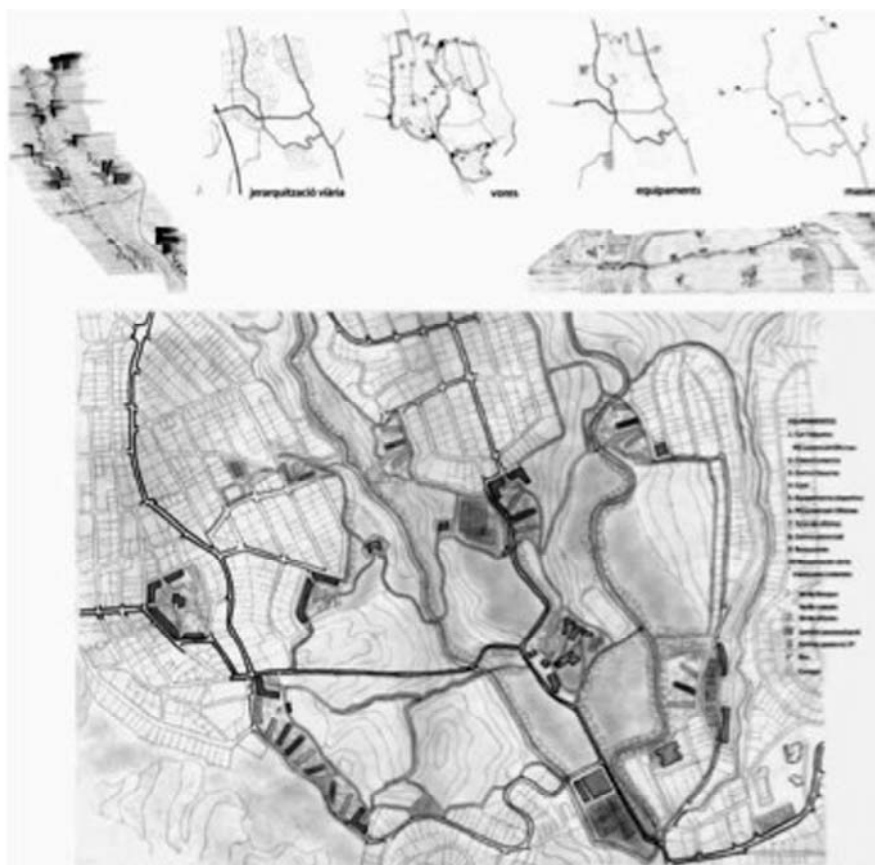


Figure 6. Example of urban projects as part of a 'civic network'.(Drawing by: M.Poble and R. Munar. ESARQ-UIC)

## Conclusions and considerations

Fortunately today the regularization of consolidated informal settlements is included in the political agenda of seventeen countries in Latin America and the Caribbean (Shlomo, 2006). Diverse strategies in regularization, land tenure and housing policies, are broadening the legal access to neighbourhoods with services and extending grass root participation in the decision making process. Due to this situation, it seems like a favourable moment for the implementation of strategies that promote the democratization of living conditions in informal cities. However, we strongly believe the current tools and regeneration strategies need to be revisited in order to adapt them to the singularities of informal contexts and work towards prevailing and strengthening their physical and social networks. In this direction, and with the objective of contributing to the discussion of the betterment of the informal city, this article introduces a regenerative methodology, which aspires to take advantage of the enormous potential of the existing socio-spatial patterns and convert them into the backbone of their urban regeneration.

We are aware that our proposed methodology does not tackle underlying causes of the prevalence of informal settlements in Latin America such as: the dysfunctional legal systems and insecurity of tenure. Land tenure politics have shown that overall illegality of urban residency can jeopardize the settlement's regularization but, there is also no guarantee that the normalization of settlements on its own can reduce urban poverty (Smolka, 2003).

Therefore we understand the importance of the study and implementation of appropriate titling systems (freehold, leasehold, cooperatives, land trusts, or communal ownership), to ensure the socioeconomic sustainability of the community. However, our methodology does not delve into paradigmatic regularization programs in Latin America as, tenure through titling (de Soto, 1989) or legal titling with upgrading of public services, job creation and community support structures, as in Brazil (Fernandes, 2011). It strives for a socio-spatial approach that advocates for regularization by upgrading the existing social-spatial infrastructure with projects and civic spaces that acknowledge the community's place-based values.

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