Open infrastructure's methodology to revitalize the Chiclayo's monumental urban area (Peru)

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Abstract: Oversized territorial occupation in Chiclayo (Peru) has reduced the proximity among the residents. This process has generated multiple obsolescence spaces in the city's downtown. Perhaps the neighborhood retains its own identity, still is required to introduce a flexible system that allows citizenship participation. We pursue to construct and estimate a new urban dynamic. In this article, we discuss about the participatory urbanism process as a response to the urban obsolescence in the city. In April 2021, a new law that manages and protects the public space based on the right to city, was approved. This contributes to build a new citizenship model, assembled by a catalogue of open infrastructures of public domain. Collaborative work between neighbors could provide the city with spontaneity caused by the citizen's activity.

Keywords: open infrastructures; participatory urbanism; public space; obsolescence; revitalization.

1. Introduction

On April 15, 2021, the Congress of the Peruvian Republic approved the Law of Management and Protection of Public Spaces by a vast majority. This law's object is to "establish the regulatory framework for the management, protection, handling and sustainability of public spaces, that includes the essential elements to improve the people's quality of life and the environment of the city, as guaranteeing its public use through the coordinate and participative work [...] of the institutions and competent organisms" [1].

In this research, that was made before that this law [1] was approved, starts from the principle of the Right to the City [2,3] and looks forward to revitalize the spaces of opportunity in the historic center of Chiclayo (Peru). To accomplish this, it's applied an open infrastructure's methodology to the urban process. This allows to maintain the neighbor identity and promotes the organization between them, from the idea that another city is possible. The Right to the City by Lefebvre [4], more of 4 decades later, remains in force. The incessant work of a multitude of agents that already works in collaboration for a city that provides the citizenship exercise, has not been enough.

2. Materials and methods

This research is developed from a theoretical-practical methodology that starts from the praxis and the fieldwork to elaborate theoretical proposals that advance on the knowledge and have an effect later in the practice properly said. It has been implemented a methodology with a cyclic characterization that has 5 stages and starts from the thought that another city is possible.

In the first, the founded scenery, it's analyzed the urban dynamic in the current urban center of Chiclayo (Peru). In the second phase, it's studied the theoretical principles that offers answers to the urban obsolescence through a participatory urbanism, brought by the open infrastructure's methodology. In the third phase, the proposal, it's finally generated

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the collaborative process and how is going to be made. In the fourth phase, prototyping, it's carried out activities to sensitize the citizenship about the right to the city. At last, in the transformed scenery it's presented the different changes in the city with various prototypes built and put in use by the citizens.

3. Results

3.1. Stage 1: Analysis of the current scenery

In the first phase: current scenery, it's mapped and designed a network of urban spaces in the historic center of Chiclayo's city. The massive occupation of the public space by the car in contraposition of the space for pedestrians, the traffic congestion, air quality, etc., give as result a limited habitability.

The studio was made in mode of a Phylogenesis [5] to analyze how the urban spaces became into an obsolescence state. The forms of occupation of Chiclayo have been characterized by the high dispersion and low density, that make the basic services (such as, electricity, water and sanitation) expand in an excessive and expensive way, plus the inefficient state of others elemental services, such as public transport, health, education and citizen security. The lack of planification and the spontaneously urban development are turned out into a ballast that affects in an irreversible way the urban spaces and bring us to the urban obsolescence of the estates, vacant lots, squares and streets. The process analyzed it's similar as a blind field [6] because the urban practices don't include the users in the design process and pursue interests that looked forward for economic and productive needs in detriment of the habitability of the public space, in contraposition of a prosumer [7] culture.

Figure 1. Cartography of the current scenery in Chiclayo's center. Source: Author's own creation.

Figure 2. The conformation of the hybrid families. Source: Author's own creation.

A total of 85 species were studied and analyzed through an instrument made by the synthesis of: The urban landscape by Cullen [8], The Anatomy of the City by Guallart [9], and The Phylogenesis of the Foreign Office Architect's species [5]. This brought to us a classification of the species and its posterior organization by common characteristics. The phylogenesis process [8] is traduced as a way of parametric design to systematize the characteristics and turn them into hybrid families.

3.2. Stage 2: Open infrastructure's methodology through participatory urbanism as an answer

Due to the urban obsolescence in Chiclayo, the right to the city is promoted and adapted to the reality in Latin American [2,3] and it is considered a cross-sectional study of four aspects: politics, social, economics, and the environmental.

On politics aspect it's promoted the shift towards an exitution [10]. It seeks to modify the conditions of the management by using a policy of agreements. In the social aspect, it's strengthened the social ties through the knowledge exchange and the conglomeration of actions. In the economic aspect, it's applied a prosumer culture [7, 11, 12] that considers the economic sustainability of the actions through low budgets. On the environmental aspect, we have had consider the recycling of materials and DIY techniques.

3.3. Stage 3: Collaborative proposal

To promote these new civic practices, the instrument called Urban Co-laboratory it's based on the methodology of Bunschoten [13]: «The Urban Gallery». The urban Co-Laboratory has different stages that are related to each other. First, a database, which refers to the previous analysis. Second, the prototypes as a response of collective intelligences. Third, the microtopies, in order to perform the participatory workshops; and finally, the action plan to carry them out. The graftable prototypes are obtained from this collaborative process, and work as a graft standing on hybrid families to revitalize them.

3.4. Stage 4: Experimenting with prototypes

In the experimentation phase, a citizen empowerment activity was carried out by walking through the city. This was used as a cognitive instrument, turning walking into a political action. For that purpose, it was created a new urban collective called Jane Camina Cix, as part of the global movement Jane's Walks, consisting of free walks led by citizens and for all citizens. The citizens became aware that the transformation of a city is not solely the responsibility of public administrations or town planners. The urban eco-systems are the most complex system created by the human species [14], and the people is finally appropriating of their city, because this activity has been reproduced in the following years.

Figure 4. Photography of one of the Jane Camina Cix's Walks. Photography by: Reaño, Jhuniur.

3.5. Stage 5: Transformed scenery

In the phase of transformed scenery, the results generated by urban actions are estimated. Through the process of action-research, it was proven by first-hand that the

participatory urbanism transformed the urban dynamics. Through walking as a cognitive instrument citizen had the opportunity to re-know their city and re-think how they would like to transform urban space.

The city of knowledge, fosters renewed urban practices through an urban open-source [10]. It's sought to promote collective intelligence designing and making decisions about the management of their common spaces, shifting towards a prosumer culture.

4. Discussion

The applied methodology leads the citizens to participate in an active way in their public space. The cyclical characteristic of the methodology allows that the urban actions tested, always go through a process of review and estimation of the result and can be continuously improved.

Open-source projects, designs and processes that starts from technological transparency can be used as a tool for social evolution. Open infrastructures generate the transmission of knowledge through praxis, both in academic and informal contexts. Recovering a sense of community is part of the social benefits that participatory urban planning brings to citizens.

The centrality of public space it is to humanize the city as the ultimate goal of this research. The good living [4] it's an alternative to the western development paradigms. This comes from the Andean ancestral worldview. The good living or *sumak kawsay* learns from the local ways of doing things, technologies and materials, evolving and adapting them to contemporary procedures and needs.

The proposed open infrastructures return the contrast and the truth of urban time [4]. The live-in re-discovers their space above the habitat through the quality of good living that they possess. The urban essence turns the city into a perpetual work of its inhabitants, who work for them, and whom this research is made for. The transition of expired paradigms is achieved, transforming urban practices that finally restores the sense of the city and good living, to make it, as mentioned by Lefebvre [4] a spontaneous setting for the construction of community life.

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