Structural problems of Latin American cities 450 years after Caracas’ foundation

Problemas estructurales de las ciudades latinoamericanas 450 años después de la fundación de Caracas

Problemas estruturais das cidades latino-americanas 450 anos após a fundação de Caracas


doi: https://doi.org/10.18861/ania.2022.12.1.3241

Abstract

Latin American cities face many problems that compromise them from different angles such as infrastructure, governance and environment. At the same time, these cities seem to suffer from a series of certain conditions that make it difficult for them to deal effectively with these problems. From this perspective, the research starts from the hypothesis that the cities of Latin America share important similarities to set itself the objective of identifying the transversal conditions that are making it difficult for them to face their current problems. Understanding these difficulties could help planners and governments deal with the situation and cooperate in developing effective strategies. To achieve these objectives, the research was developed in two stages. First, Caracas was used as a case study in order to build an inductive process. This experimentation was developed within the framework of the “Concurso de Proyectos Participativos en Espacio Público” organized in the framework of the 450 years of Caracas’ foundation. This space served as a platform for debate to collect different perspectives on the subject. Second, the research reviewed, analyzed, and categorized the diagnoses made by hundreds of Best Practices collected in the UN Habitat data bases. Finally, the research defined the common conditions that hinder the sustainable development of Latin American cities: magnitude, discontinuity, opacity, fragmentation, urgency, and implementation. In addition, the enormous potential and opportunities that characterize these cities ended up being valued as a negative element, a kind of cliché that maintains an eternal hope in the future instead of motivating the actions that should be taken in the present.

Keywords: Natural disaster; Global South; Governance; Flood; Earthquake; Population growth; Infrastructure.

Resumen

Las ciudades de América Latina se enfrentan a muchos problemas que las comprometen desde diferentes ángulos como infraestructura, gobernabilidad y medio ambiente. Al mismo tiempo, estas ciudades parecen sufrir de una serie de ciertas condiciones que les dificultan enfrentar efectivamente esos problemas. Desde esta perspectiva, la investigación parte de la hipótesis de que las ciudades de América Latina comparten similitudes importantes para plantearse como objetivo identificar las condiciones transversales que les están dificultando enfrentar sus problemas. Comprender estas dificultades podría ayudar a planificadores y gobiernos a enfrentar la situación y cooperar en el desarrollo de estrategias efectivas. Para alcanzar estos objetivos, la investigación se desarrolló en dos etapas. Primero, se utilizó Caracas como caso de estudio en función de construir un proceso inductivo. Esta experimentación se desarrolló en el marco del “Concurso de Proyectos Participativos en Espacio Público” organizado en conmemoración de los 450 años de la fundación de Caracas. Dicho espacio sirvió como plataforma de debate para recoger diferentes perspectivas sobre el tema. Segundo, la investigación revisó, analizó y categorizó los diagnósticos realizados por cientos de propuestas de Buenas Prácticas recogidas en las bibliotecas de ONU Habitat. Finalmente, la investigación definó las condiciones comunes que dificultan el desarrollo sostenible de las ciudades de América Latina como: magnitud, discontinuidad, opacidad, fragmentación, urgencia e implementación. Además, el enorme potencial y las oportunidades que caracterizan a estas ciudades terminaron valorándose como un elemento negativo, una suerte de cliché que mantiene una eterna esperanza en el futuro al invadir de motivar las acciones que deberían tomarse en el presente.

Palabras clave: Desastre natural; Global South; Gobernabilidad; Inundación; Sismo; Crecimiento demográfico; Infraestructura.

Resumo

As cidades latino-americanas enfrentam muitos problemas que as comprometem sob diversos ângulos, como infraestrutura, governança e meio ambiente. Ao mesmo tempo, essas cidades parecem sofrer de uma série de certas condições que dificultam o enfrentamento eficaz desses problemas. Nessa perspectiva, a pesquisa parte da hipótese de que as cidades da América Latina compartilham importantes semelhanças para estabelecer o objetivo de identificar as condições transversais que estão dificultando o enfrentamento de seus problemas. Compreender essas dificuldades pode ajudar os planejadores e governos a lidar com a situação e cooperar no desenvolvimento de estratégias eficazes. Para atingir esses objetivos, a pesquisa foi desenvolvida em duas etapas. Primeiramente, Caracas foi utilizada como estudo de caso para construir um processo inductivo. Esta experimentação foi desenvolvida no âmbito do “Concurso de Projetos Participativos em Espaço Público” organizado em comemoração aos 450 anos de Caracas. Este espaço serviu de plataforma de debate para recolher diferentes perspectivas sobre o tema. Em segundo lugar, a pesquisa revisou, analisou e categorizou os diagnósticos feitos por centenas de propostas de Boas Práticas coletadas nas bibliotecas da ONU Habitat. Por fim, a pesquisa definiu as condições comuns que dificultam o desenvolvimento sustentável das cidades latino-américas como: magnitude, descontinuidade, opacidade, fragmentação, urgência e implementação. Além disso, o enorme potencial e as oportunidades que caracterizam essas cidades acabaram sendo valorizados como um elemento negativo, uma espécie de cliché que mantém uma eterna esperança no futuro ao invadir de motivar as ações que devem ser realizadas no presente.

Palavras-chave: Desastres naturais; Global Sul; governança; Enchente; terremoto; Crescimento populacional; A infraestrutura.
Introduction

Latin America is a complex concept that brings together a very diverse group of countries. Even so, within this diversity, it is common to find research, reflections, reports, and all kinds of analysis that try to approach and understand this concept. This research is aligned within that position and starts from the hypothesis that there are significant similarities between the cities of Latin America. Understanding these similarities would improve the possibilities of cooperation between these cities, allowing them to share information on the diagnosis of the situations they face, as well as the possible solutions they try to put into practice. In other words, the objective of this research is to contribute to the understanding of the similarities that exist between the transversal conditions that hinder the sustainable development of Latin American cities.

Some of the facts that support the hypothesis of similarities between cities in Latin America are associated with their history. In addition to a common origin, many of these cities underwent similar transformations, particularly in the last century. During the 20th century, the transition to a metropolitan model driven by unstoppable mobility, the outsourcing of the economy, and a growing formal and informal real estate market are some of the most significant phenomena (De Mattos, 2002). But all this process was framed in a vertiginous growth process. By 1930, what was once an overwhelmingly rural part of the world could boast metropolises like Buenos Aires, Rio de Janeiro, and Mexico City (Scobie, 1991, p. 229).

Nowadays it is widely understood that the disorganized and rapid population growth and migration from the countryside to the city resulted in a high social, economic, and rapid population growth and migration from the countryside to the city. This process was framed in a vertiginous growth process. By 1930, what was once an overwhelmingly rural part of the world could boast metropolises like Buenos Aires, Rio de Janeiro, and Mexico City (Scobie, 1991, p. 229).

As possible places of intervention, ten key spaces were defined with the most sensitive places offered in the contest as opportunities: • Sector 06 | RIVER CITY. Las Mercedes, Chua, Centro Comercial Las Mercedes, Hotel Tamanaco, Centro Banaven (Cubo Negro).
• Sector 07 | GARDEN CITY. Altamira, La Floresta, Hotel Monserrat, Ministerio del Poder Popular para el Turismo, Colegio Universitario de Caracas.
• Sector 09 | SPORTS CITY. La Rinconada, Las Mayas, Hipódromo La Rinconada.

Within the framework of this opportunity, a team composed by Erika Franco, Isabel Yacot, Alexandra Montes, Franco Tabacco, and Fabio Capra-Ribeiro, and organized under the name Altero (from the Latin of the other side), prepared a proposal that would make visible a series of serious problems of this city starting from the knowledge and experience of the participants. Considering the guidelines of the contest, this proposal was done in a disruptive vision that was trying to motivate the discussion on complex, intense, and extensive problems. For the elaboration of this proposal, the team chose three of the most sensitive places offered in the contest as opportunities.
danger and an image that synthesizes the probable future towards which the chosen sectors is headed. Together, these became a new perspective of the city on its way to 500 years. The results of this first stage contributed to the understanding of many of the problems suffered by Latin American cities. But, although the framework of the contest served to contrast these visions and nurture the debate after the contest, it was difficult to recognize patterns that would allow formulating structured generalizations. For this reason, and after studying the results of the contest, a second complementary stage was designed based on one important conclusion: one of the main spaces for exploration and discussion regarding the problems of cities are the probed experiences. Thus, the second stage of the research was developed more as a review of the Best Practices that had been collected in the databases of UN Habitat (Best Practices | UN-Habitat, n.d.). This phase was developed as a literature review focused on identifying the similarities on the problems described by the different practices, and it did not consider a specific timeframe but starting by checking the most recent examples. The search progressed until the observations seemed exhausted and no new conditions were found to include in the research. In this way, the literature review ceased after reviewing more than 200 initiatives, which was considered a representative sample. The collected information was then analyzed using coding and categorization. Coding served to break down, conceptualize and put back together the information with a new structure from a specific point of view (Mayan, 2001, p. 24). From there, several categories where established organizing the data in groups that shared similar characteristics and a synthesis was needed to reduce the categories to a manageable group on which to work. This last process helped to merge several categories together to have a broader understanding of the situation and present a coherent and manageable number of results. Finally, the results of these two phases were contrasted to ascertain that the results obtained through the documentary review were consistent with the case studied. 

Results

Three re-visions of Caracas

This experiment used Caracas as a case study through the recognition of latent and growing problems in three of the places that the contest proposed as possible spaces for intervention. These sought to materialize some of the problems that our experience as architects and inhabitants of this city showed us important. At the same time, it became a scenario of discussion and collaboration.

River –Flooded– City

According to the IDB, the economic effects of natural disasters in Latin America are the highest in the world (close to 0.18% of GDP per event) (Mejía, 2016). In the middle of this situation, projections indicate that in much of the region the intensity and frequency of rainfall will increase, mainly affecting infrastructure in urban areas due to flooding (Dirección de Ambiente y Cambio Climático de CAF, 2015). Likewise, when looking at Caracas, a tropical valley with a river that crosses and divides it in two, the possibilities of floods or damages due to alterations in the precipitation cycles multiply. In a few words, Marisa Vannini explains this situation when she affirms that in a couple of minutes Caracas streets can become torrents, the streams, rivers, and the squares, lakes (Vannini, 2005).

The significant rise in water courses has not only been protagonists in the history of the metropolitan city of Caracas, but also, thanks to Climate Change, increasingly extreme climates await us (Capra Ribeiro, 2017). Surely the bitterest reference is the catastrophic event in Vargas State in 1999. A tragedy caused by the undue occupation of alluvial fans. The previous antecedents that warned that the Central Coast was a high-risk area subject to frequent floods, such as those of 1798, 1912, 1938, 1944, 1948, 1951, and 1954 were not enough to seriously consider the risk (López S., 2005).
Image 1: Map indicating the area most susceptible to flooding around one of the locations selected for the “Concurso de Proyectos Participativos en el Espacio Público” (Las Mercedes, Chuao, Centro Comercial Las Mercedes, Hotel Tamanaco, Centro Banaven). Darker colors show more susceptible areas and dashed lines underline the specific sites. Based on the sector’s topography and previous events. Image by the authors of the contest’s proposal, edited starting from Google Earth, earth.google.com/web.
The city’s rivers and streams have become a source of concern, not only as conveyor belts for garbage and sewage, but also as a constant threat of landslides and flooding. Looking at recent events, soil composition and topography, Las Mercedes and Chuao (partially shown in the map) areas can easily be identified as particularly vulnerable to flooding. A latent danger, but also growing thanks to the growth of the population that translates into new waterproofed areas in the basins of the region, the increase in the production of garbage that ends up being dumped on the waterways and hinders natural drainage, as well as the changes we have caused in the climate. Regarding this last point, it is important to bear in mind that Venezuela, although it does not have a winter season, is one of the countries that emits the highest amounts of carbon dioxide into the atmosphere in Latin America after Mexico, Brazil and Argentina (CEPAL, 2016).

Garden–seismic–City

The 1967 earthquake took the population of Caracas by surprise, who were very unprepared to face a disaster of this nature, but the collective memory is short, since Caracas has a well-documented seismic history (Genatios et al., 2017). Sixty years after the last great earthquake in Caracas, the city remains unprepared. Unlike other natural phenomena such as intense wind caused by hurricanes, volcanic eruptions or severe storms, earthquakes arrive unnoticed (Tapia Hernández et al., 2017). Working to face earthquakes remains a long-term effort, preparing for a moment of crisis that can happen at any moment. Adding a huge latent and unpredictable risk, with a disorganized society focused on other problems, the consequences can be very serious.

Among the vulnerabilities that are generally discussed in relation to earthquakes, it is necessary to highlight that almost half of the population of the capital lives in slums
(El Nacional, 2017), areas characterized by self-built houses that hardly meet the regulatory structural conditions. But, on the other hand, it is widely known that there is a huge patrimonial capital that was built before the anti-seismic regulations in force.

The vulnerability to seismic movements is particularly severe in various sectors of the Chacao Municipality (partially shown in the map) since it’s the area with the greatest depth of sediments in the valley basin, which usually amplify the seismic movement (Schimtz et al., 2017). Likewise, according to research on the matter, the Municipality of Chacao has high-density constructions that have not been authorized by Municipal Government, which transforms in both physical and human vulnerability (Jimenez Vallenilla, 2011).

Sports–suburban–City

In his doctoral thesis on the housing problem in Venezuela, Luis Eduardo González studies the problem between 1984 and 2012 to conclude that there is a tremendous unsatisfied housing need of about two million new homes and no less than one million to be rebuilt (González del Castillo Yanes, 2016). The presence of the violence in the conflicts today, from three perspectives: the perception of justice, the interpersonal relationships and the socialization of violence (chapter second). Additionally, only 8,659 marriages are registered per year, which implies the formation of new households that demand a home (El Nacional, 2017). When governments cannot meet this demand, residents try to solve their problem through self-construction (Lafuente & Genatios, 2017), which usually results in an uncontrolled expansion of self-built areas, especially on the outskirts of the city.

Historically, the urbanization process generated needs and demands with a speed that clearly tended to exceed the country’s capacity to satisfy them with the same speed with which they appeared (Fossi Belloso, 2012). The most recent large-scale residential initiative, the Gran Misión Vivienda Venezuela, is not only far from meeting the housing needs of the population of the capital, but it also generated legal mechanisms to make the expropriation of land (Rety, 2017) that negatively affected any housing supply from the private sector. This project chose, above all, flat and unbuild land as parking lots, the Generalissimo Francisco de Miranda Air Base, the Fort Tiuna Military Complex and the area previously dedicated to solid waste management between Las Mayas and Tazón (Ciudad Tiuna II) that ended up becoming one more cause of the uncontrolled growth of the city (partially shown in the map). Likewise, the new buildings provided housing opportunities for a small number of inhabitants (in relation to the existing demand), but without providing them with the necessary infrastructure.

The Fundación Espacio contest sought intervention on public space that could be financed and built. But, after reviewing the bases and understanding the circumstances of these places and the historical moment, our team decided to take advantage of this opportunity to explore some of the biggest problems that the capital of Venezuela faces and will face. Even so, the proposal was awarded an honorable mention that served to promote awareness on these issues. In short, the effort served to promote a discussion that we considered important, but the concerns we set out to highlight were quickly forgotten.
By reviewing hundreds of Best Practices and contrasting them with the exploration developed in Caracas, this research has found a series of recurring conditions that are common to many cities in Latin America. More importantly, these seems to be transversal to more common topics of discussion such as transportation, education, governance, etc. These conditions were defined as:

**Magnitude:** The magnitude of the difficulties faced in relation to the capacities of the different levels of government and other entities involved makes these difficulties a huge impediment to move forward. The number of houses that must be built, the jobs that must be generated, the hospitals that are needed, the distance and the extension of the sectors that must be served, are just some general examples.

**Discontinuity:** Four, five, six years, how long are the terms of presidents, mayors, deputies, and how many years of continuous and articulated work are necessary to build meaningful solutions that achieve lasting and profound changes? On the one hand, it is common for political leaders to plan and execute actions to which they can see the fruits before the end of their term to obtain political profit. On the other hand, efforts that require more than one political cycle to be carried out are usually quickly canceled or at least modified when there is a change in power. When the first item on the list (magnitude) is reconsidered, fragmentation is understood to be an added complication. The problems are getting bigger and bigger, international logistics are required for transportation, care and conservation of ecosystems that cover several regions and countries, fight criminal organizations that cross any border, etc.

**Opacity:** The data and information in general is difficult to obtain. Governments and public and private organizations tend to appear as a closed box that prevents the population from knowing the origin and use of public funds, which has made it almost impossible to obtain the figures of the person who is exercising power in a given moment, the most recent, usually gets the most attention, especially if they are problems that have the intransigent reality; again, weakening confidence in the system. Surely Latin America can be understood as an extremely heterogeneous space, but it is also true that small positive initiatives.

**Urgency:** Generally, problems with more visible consequences in the short term tend to take up more attention and resources, leaving little room for planning and investment in the medium and long term. But in a region where there are so many problems that have been growing, accumulating, and intertwining for decades (or centuries) it is difficult to understand the importance of each of these. In this situation, the population suffering difficulties tends to normalize them. Thus, the problem of the moment, the most recent, usually gets the most attention, especially if they are problems that have the attention of the press or can be solved quickly. As a result, structural problems are left unattended in the background where they continue to advance, becoming larger and more complex.

**Implementation:** Adding up to all the previous points, the implementation of any project becomes a huge and complicated effort that not only has to face the problems that are being addressed but is also surrounded by all the complications that have been pointed out. Ideas multiply, but a long race with obstacles separates them from reality.

At the same time, two conditions generally seen as favorable could end up playing against the achievement of the proposed objectives in the long run and in many cases, these are:

**Potential:** Latin America continues to be seen as a region with enormous potential to develop favorably. The rapid population growth that has resulted in a young population, and the amount and variety of natural resources are two examples of these so-called potentials. But, in general terms, these advantages have not been harvested to yield positive results and inertia continues to rule.

**Opportunities:** Small advances are commonly recognized, isolated initiatives that show that a different reality is possible. Many of the Best Practices are examples of this. But these initiatives are the exception to the rule. Meanwhile, problems and wrong actions overwhelm these small positive initiatives.

By associating potentials and opportunities, interesting solutions and proposals can be formulated, but the hope for improvement can also end up impacting against an intransigent reality; again, weakening confidence in the system. Surely Latin America can be understood as an extremely heterogeneous space, but it is also true that small positive initiatives.

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**Opportunities:** Small advances are commonly recognized, isolated initiatives that show that a different reality is possible. Many of the Best Practices are examples of this. But these initiatives are the exception to the rule. Meanwhile, problems and wrong actions overwhelm these small positive initiatives.
The current situation is complicated, but it can get worse (Carvajal, 2017), that is what Marco Negrón, perhaps the most important urban planner who has worked on Caracas, said when he was questioned about the current situation of the city. Precisely, the room for worse is extremely wide. In general, the region and in particular Venezuela and the city of Caracas are involved in a network of complications that make it very difficult to build sustainable progress. This situation surely mirrors many other cities in the region. Likewise, it is true that there are many examples of interesting initiatives, but these are overshadowed by many bad decisions and inefficient or poorly prepared governments that led and lead the countries and cities of Latin America.

This list of cross-cutting conditions for Latin American cities may be somewhat abstract, but it has direct and concrete effects on them. Three examples of these effects can be said when he was questioned about the current situation of the city. Precisely, the room for worse is extremely wide. In general, the region and in particular Venezuela and the city of Caracas are involved in a network of complications that make it very difficult to build sustainable progress. This situation surely mirrors many other cities in the region. Likewise, it is true that there are many examples of interesting initiatives, but these are overshadowed by many bad decisions and inefficient or poorly prepared governments that led and lead the countries and cities of Latin America.

But the way in which these transversal conditions are confirmed or adapted to each case is precisely one of the missing pieces of this work. A first effort in this direction has been done in the book “Uncertain Regional Urbanism in Venezuela. Government, Infrastructure and Environment” (Carpa Ribeiro, 2020), but much remains to be done. Therefore, it is recommended to propose research that tests these conditions. But instead of individual comparisons, it would be convenient to develop a systematized method that would allow serial comparisons to be made with a group of cases at a time. Which in turn would allow effective progress in refining these conditions. Having a solid and proven series of common conditions of the cities of Latin America would help the governments and planners of the region to understand the situation, learn from their neighbors and advance jointly towards solutions that they could also share more easily.

Finally, in that same line, it is important to consider that the second stage, more extensive and intense, was carried out individually. Therefore, it might suffer from some of the normal bias of extensive literature reviews done by one person. For this reason, the results must be taken with caution and compared with similar studies.

References


* Contribución: el trabajo fue íntegramente realizado por los autores.

* El Editor en Jefe de la revista Arq. Carla Nóbile aprobó la publicación final del artículo.