

Horizontal Gated Communities and the Segregation of Urban Space: Impact Assessment and Intervention Proposals

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ABSTRACT

Horizontal gated communities (HCGs) affect the dynamics of cities, as they are obstacles to mobility, integration and democratic use of public space. In this work, we investigate the negative impacts caused by these ventures and propose mitigation measures from the perspective of urban planning. This was based on bibliographic materials and a collection of interventions found in the literature, which led to a proposal of intervention on the walls of an HCG located in the Brazilian city of Engenheiro Coelho/SP. The focus of the proposed intervention was the outsourcing of part of the public green areas, visual permeability and improvement of access. The intervention proposals aimed at urban democratization and the resilience of communities impacted by this type of real estate development, in addition to restoring the right to enjoy the city and minimizing socio-spatial segregation, ensuring access to public areas and greater compliance with urban mobility policies.

KEYWORDS: Horizontal gated community. Closed allotment. Urban planning.

1 INTRODUCTION

The emergence of urban settlements is considered a result of historical, geographical and, above all, social factors. Cities represent the place where capital accumulates and human beings exercise their restricted and restrictive choices for the benefit of their health and well being (DENTINHO; REID, 2020). From the second stage of the industrial revolution, between 1850 and 1860, the term “urbanism” emerges, coined by Ildefonso Cerdá in 1859 in the sense of defining urban planning (ALEXANDRA; NARCISO, 2013).

However, the transformations of urban space have been happening in a frantic way; urban planning is often not so anymore, offering only palliative measures as urban space issues arise and consolidate. Irrefutable proof of the pace of these changes is the population growth in urban centers and the expansion of the urban fabric.

In 2018, 55.3% of the world population lived in urban settlements and the projection for 2030 is an increase to 60% (UNITED NATIONS, 2018a). In Brazil, the urbanization process from 1950 onwards led to an average annual growth rate of the urban population reaching a peak at 2.54% (UNITED NATIONS, 2018a). In 1970 the urban population surpassed 50% (IBGE, 2010), reaching 86.6% in 2018 (UNITED NATIONS, 2018b).

This average annual growth rate slowed down and is estimated to be 0.27% between 2025 and 2030 (UNITED NATIONS, 2018a). However, such steep and rapid growth has created a series of unprecedented challenges that still need to be overcome by urban centers and their managers.

In addition to the flow of rural populations to urban centers, it is also possible to identify a flow of populations between cities (DENTINHO; REID, 2020). These flows generally depart from small and inland cities that already have geographic voids and a lack of labor, to large metropolises and urban centers that are mostly overcrowded. Increase in land prices and rules for real estate determine the distribution of the arriving individuals, forcing them to occupy peripheral regions and the so-called inner cities.

There are many indicators of growth and urban development. Different indicators are used by authors, depending on the focus of their analysis. Since the 1990s, extensive research has been conducted on the subject to understand the increase in population, mobility, unemployment, and correlate wages and purchasing potential to the level of education (DENTINHO; REID, 2020). In addition, the attractiveness of a region depends substantially on the environmental conditions in which they are inserted and on the surrounding regions (DENTINHO;

REID, 2020).

Hence, the characteristics of a neighborhood, facilities, location, presence of businesses and business environments are strictly conditioned to the growth of the employed population (CLARK; MURPHY, 1996). Since then, a trend in the changes in the urban space is found with the proliferation of horizontal gated communities (MOURA, 2003), configuring a type of city marked by peripherization, fragmentation and dispersion (LAGE, 2017).

This model is consolidated to the point that it continues to function under the most diverse historical and social conditions. A historical example could be identified in Russia. In the 19th century, the rural palaces of the nobility were walled and protected by impressive fences and gates, which offered a glimpse of their economic power in addition to protection (BLINNIKOV; SHANIN; SOBOLEV; VOLKOVA, 2006).

In post-socialist Russia, a new capitalist and suburban landscape governs the old segregation now supported by a scope of elitist economic and political principles (BLINNIKOV; SHANIN; SOBOLEV; VOLKOVA, 2006). A social example can be seen in Brazil, where the lower classes are already segregated in so-called “social” or low-income condominiums. The latter are more a synonym for status than for protection from urban chaos, consolidating even a speculative, many times informal, market that governs the acquisition of these places.

Despite the evidence of the impacts caused by speculation, segregation and, often, disorderly occupation of urban centers, the literature on possible mitigating measures is still scarce. In the American continent, Australia and South Africa, publications with a focus on security and social inequality prevail that justify the search for condominiums (CRUZ, PINHO, 2009) by those who have the potential to isolate themselves from the problems of urban centers without, however, offering proposals for a solution.

Thus, this work intends to list the main impacts and mitigating proposals related to the Horizontal Closed Housing Centers (NHCF) in the urban space, in the light of cases found in the literature. With a consistent history, a case study is presented in the Brazilian municipality of Engenheiro Coelho, located in the interior of São Paulo and which, even on a smaller scale, already feels the consequences of the speculative model of this type of occupation of urban space.

2 IMPACTS OF HORIZONTAL GATED COMMUNITIES

2.1 Impacts on the Dynamics of Cities

Cruz and Pinho (2009) noted that in some countries, such as the United States, Brazil, Mexico and South Africa, the HCGs present themselves on a large scale and develop in a self-sufficient way, detached from the city in which they reside.

In Brazil, the expansion of cities took place in a widespread manner and was characterized by urban voids. This reality coexisted with the beginning of the construction of large housing estates, with a strong tendency to peripherization in Brazilian cities (MAIA, 2010; LAGE, 2017).

In the case of horizontal gated communities, the characteristics of segregation and fragmentation of spaces are accentuated. Together with the aspect of exclusivity, they are

mandatory for these spaces. Cruz and Pinho (2009) perceived, as a product of physical segregation, the absence of a sense of community as a major cause of problems.

Individuals look for communities whose enclaves are peculiar to a particular lifestyle. Public spaces have lost their character of sociability and promotion of the collective, thus weakening social connections and community values.

2.2 Social Impacts

Villaça (2011) states that the most prominent form of modern segregation involves HGCs, as there is still no concern with placing segregation as one of the factors of the urban structure together with the economic, political and ideological spheres of society. In addition, there is an eminent and economically exploratory articulation when real estate interests are aligned with the need for isolation to maintain the safety of a group of individuals who do not want to be exposed to urban violence.

The issue of segregation falls short of good social relations. "Segregation is a process according to which different classes or social strata tend to concentrate more and more in different general regions or sets of neighborhoods in the metropolis" (VILLAÇA, 2001, p. 142).

2.3 Impacts on the right to and access to the city

Melgaço (2012) presents a vision of HGCs comparing them to prison walls. The author emphasizes that "the forms are practically the same and the functions have only one difference of direction: while in the first case the architecture aims to prevent the entrance of those who are outside, in the second, it intends to prevent the exit of those who are inside". Based on this comparison, the author highlights the similarity between the structures and provokes a reflection on the transformation of urban spaces and their consequences on the architecture of cities.

To enable the implementation of this type of real estate development, this model of urbanism is becoming common in most Brazilian municipalities. Seco (2017) points out the lack of vitality in the streets around the HGCs as the main cause of insecurity in the neighborhood. The author states that "the movement of cars and people promote visual contact between houses, buildings and shops with the public space, stimulating the circulation of people during various times of the day and creating what some experts call natural surveillance".

2.4 Impacts on urban mobility

There is a change in the urban layout with the emergence of these developments. Sarmiento Filho (2012) points out that the implementation of HGCs in Brazil causes real chaos in cities, because in most cases the requirement for approval by municipal public agencies is that the street design is integrated with the main road system, which is not at all representative for a sustainable urban layout.

In addition, in view of the guidelines of the National Urban Mobility Plan, the impacts of these undertakings cause a break in the design of the city. Islands are formed which hinder the

flow of transport and intra-urban movement, forcing detours that increase the time in traffic, in addition to encouraging the use of individual motorized transport (ROSA, 2016).

Melgaço (2012) points to the emergence of road blocks. Thus, the obstacles to the circulation of vehicles cause the overload of adjacent circulation routes and increase the distances for cyclists and pedestrians.

2.5 Privatization of public areas

Despite the emergence of Law No. 13.45/2017, which introduces the possibility of controlled access subdivisions, Law 6.766/1979 is very specific when mentioning in its article 17 that “free spaces for common use, roads and squares, [...] t will not be able to have their destination altered by the third parties”.

In practice, as identified by the study by Cruz and Pinho (2009), there is a search for social status through express exclusivity that is gained through services and facilities offered within the walls by administrators to promote sociability only among residents. These include playgrounds, swimming pools, tennis courts and even health care spaces and gyms. There is a trend of management of public facilities by HGCs administrators, further intensifying the distance between non-residents of HGCs and the so-called public areas.

In addition to the issue of areas of common use, Marra (2018) raises a debate about the road system, which is essentially a space for social coexistence and, according to Law 6.766/1979, from the approval of a subdivision it will be considered a public area.

3 METHODOLOGY

This study consists of an investigation of bibliographic materials based on the materialist-historical method. The procedure is based primarily on the exploration of scientific literature to identify the main impacts of the installation of horizontal gated communities based on cases that generalize the problem.

The context mentioned in the introductory section included publications selected by relevance in the Scopus indexed database, supported by data recovered on solid databases such as that of IBGE and the United Nations. The paradigms that have an impact on the Brazilian reality have been identified in official legal publications, as well as books, theses, and dissertations produced in the Brazilian academic context.

The impacts of HGCs were systematically divided based on the aspects identified in the literature in: (i) city dynamics; (ii) social issues, (iii) right to and access to the city and, finally, (iv) urban mobility.

Finally, a subtle discussion about the privatization of public areas closes the discussion before presenting the case study. According to the framework found in the literature and survey of the main implications of HGCs, the characterization of the municipality of Engenheiro Coelho/SP, Brazil, was carried out as a study environment.

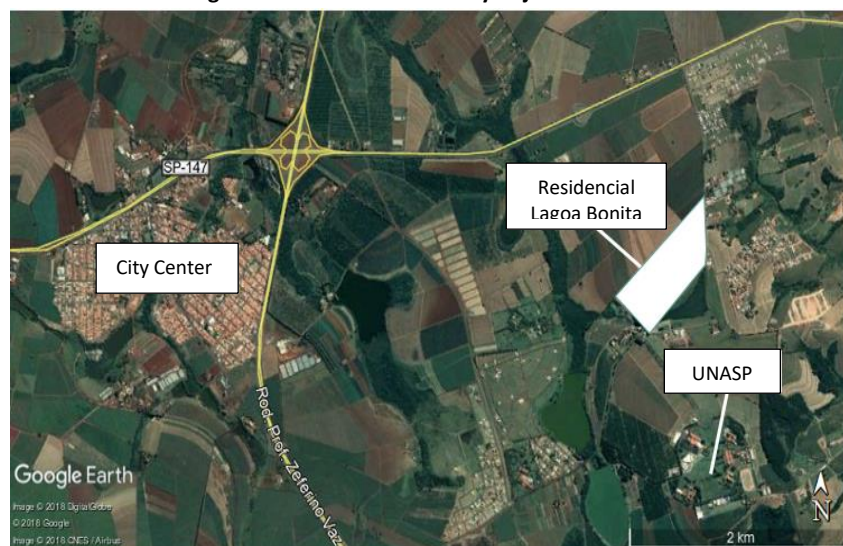
Then, each impact identified was correlated with the reality found in the municipality as a result of the implementation of this type of development. The result of this work was configured as an intervention proposal at the HGC Lagoa Bonita.

3.1 Characterization of the study area

Created in 1991, Engenheiro Coelho is a city located in the northeast of the state of São Paulo, part of the Metropolitan Region of Campinas (MRC). It has a total area of 109.94 km² (SEADE, 2018) and 19,628 inhabitants (SEADE, 2018), being one of the municipalities with the lowest population in the MRC. It is also the least urbanized municipality, with a rate of 75.58% (SEADE, 2018).

The study area is made up of open subdivisions and HGCs, which accompanied the growth of a UNASP university campus implanted in the 1980s. The study area was the HGC Residencial Lagoa Bonita (see Figure 1), facing the Municipal road Pr. Walter Boger, which gives access to the subdivision.

Figure 1: Location of the study object



Source: Adapted from a Google Earth image (2020)

4 RESULTS

4.1 Diagnosis of Problems Related to the HGC Residencial Lagoa Bonita

The current configuration of the HGC with walled closures throughout its perimeter incurs some problems for students at the university center, drivers and cyclists and the general population using the Municipal road Pr. Walter Boger, as follows:

- The walls present themselves as obstacles to urban mobility and the use of public space;
- Walled extensions incur greater distances to be overcome, mainly by pedestrians;
- The walls express segregation, loss of right to the city by those who do not live in the HGC and promote the dissolution of social cohesion;
- The internal streets do not give continuity to the external streets, eliminating the possibility of integrating the development with the dynamics of the area;

- The access of the road for the vehicles to enter is done directly, conditioned to the access control to the HGC, causing overload of vehicles on the road.

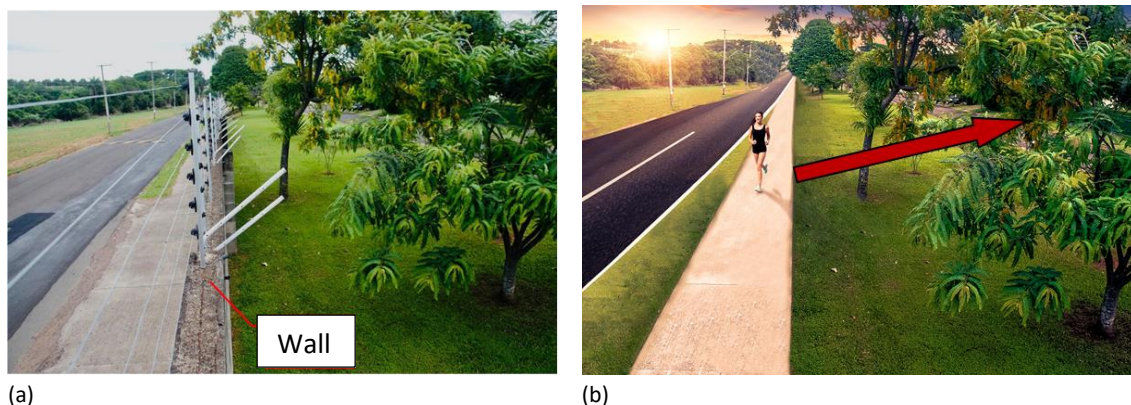
In a utopian scenario, a drastic and effective intervention would extinguish the ordinance as well as allow the reintegration of internal roads to public free use. However, this type of intervention was rendered unfeasible for two trivial reasons:

- The internal roads do not provide continuity to the external road system; in other words, even if they were reintegrated into general public use, the internal roads would not in fact serve public purposes.
- Lack of compliance with the premises of Law 13,465 of 2017, which stipulates urban land regularization.

4.2 Mitigating Proposals

In view of what was exposed in the previous section, considering the collection of interventions found in the literature and based on the premise that the real estate development is already consolidated, two central intervention proposals are presented to mitigate some of the identified impacts: transformation of the HCG closure wall into a grid and its displacement, in order to externalize part of the green areas that are parallel to the wall and internal to the HGC, as shown in Figure 2 (a) and 2 (b).

Figure 2: Current composition (a) and setback fence proposal (b)



(a)

(b)

Source: The authors (2020)

The transformation of the wall into a fence still provides a sense of security for the inmates, but also easing the physical barrier of social segregation by providing visual permeability. On the other hand, the outsourcing of part of the green areas would allow the public use of the space. Thus, the outsourced area ends up enabling the implementation of a linear park that would in fact create an area of environmental interest. Figure 3 illustrates the intended situation with these changes.

Figure 3: Location of the desired green areas

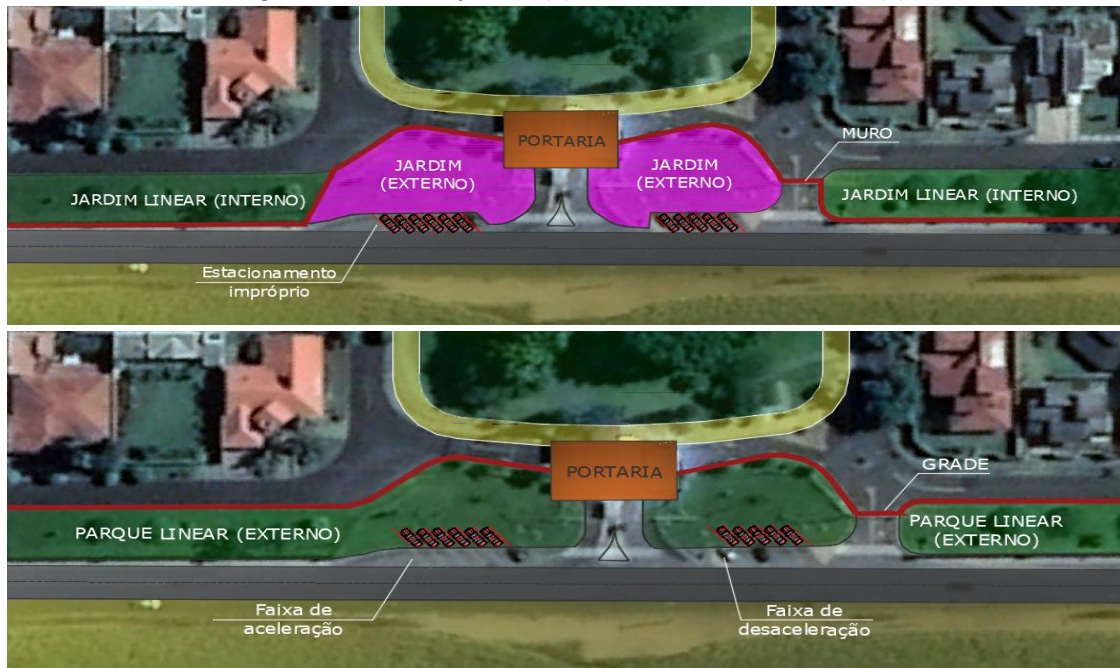


Source: Adapted from a Google Earth image (2020)

Currently, the green areas located internally at the closure have only a landscape function (garden). From the displacement and implementation of the linear park, public areas of environmental interest are used by the population beyond the walls of the development and allow the appearance of an active facade.

This intervention proposal also makes it possible to mitigate one of the negative impacts related to urban mobility: interruptions in the circulation of vehicles on the road due to the condition of releasing vehicle access in the entrance of the development. Figure 4 illustrates the proposal for restructuring vehicle access to the project, summarizing the introduction of an acceleration/deceleration strip parallel to the Municipal road Pr. Walter Boger.

Figure 4: Current composition (a) and intended access structure (b)



Source: Adapted from a Google Earth image (2020)

With interventions to the geometry of the wall one expects there will be externalization of green areas, creation of the linear park and adaptations aiming at an active facade and secure access. All of this would mitigate the negative impacts resulting from the consolidation of the HGC under analysis.

5 CONCLUSIONS

HGCs, in the dynamics of cities, including the analyzed case for intervention, present themselves as obstacles to mobility, integration and the use of public space. Therefore, interventions in the area studied were limited to the implementation of active facades and replacement of walls by railing fences that provide visual permeability.

This intervention proposal aims to boost public spaces and sidewalks and promote natural surveillance. This change, associated with the creation of the linear park based on the outsourcing of part of the public spaces and adaptations of the access road to the project, provides a more pleasant and safer condition for residents and non-residents of the HGC. Furthermore, it ensures accessibility in accordance with the National Urban Mobility Policy (NMUP), Law 12,587/2012.

On the other hand, due to the already consolidated nature of the housing project, the intervention proposals do not address issues related to obstacles to urban mobility in their entirety, as the existence of the road system is not guaranteed in the future and access to it now remains controlled. In this sense, it was decided to mitigate the negative impacts caused by the ineffective access structure, by inserting an acceleration/deceleration lane.

Finally, the mitigating measures proposed do not aim to solve the complex problem in its entirety, but rather to decrease the negative impacts with urban democratization by improving mobility and integrating public spaces into the residents' internal dynamics of the congregation and social cohesion with consequent exploration of the potential right to the city.

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