

# URBAN INSECURITY, FRAGMENTATION AND FORTIFIED ENCLAVES IN THE FORTALEZA METROPOLITAN REGION

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## Abstract

The increase in the feeling of urban insecurity has justified the self-segregation of the middle- and high-income layers of society to fortified enclaves in the Fortaleza Metropolitan Region (RMF). The main objective of this paper is to analyze the fragmentation in stretches/sectors with the highest concentration of "private condominiums" and to evaluate the impacts resulting from the expansion of fragmenting enterprises in the socio-spatial fabric. Therefore, the study indicates a change from the model of dual segregation (center-periphery) towards the pattern of socio-spatial fragmentation that has been developing, primarily, in a small area of the eastern sector (neighborhood of Lourdes), in the southeast sector and parts of the sector south and specific stretches of the municipalities of Eusébio and Aquiraz.

**Keywords:** Urban Insecurity. Self-segregation. Restructuring of Urban Space. Socio-spatial Fragmentation. Typology of Fortified Enclaves.

## Resumo / Résumé

### INSEGURANÇA URBANA, FRAGMENTAÇÃO E ENCLAVES FORTIFICADOS NA REGIAO METROPOLITANA DE FORTALEZA

O aumento da sensação de insegurança urbana tem justificado a autosegregação das camadas de renda média e alta da sociedade para enclaves fortificados na Região Metropolitana de Fortaleza (RMF). O presente artigo tem como objetivo principal analisar a fragmentação em trechos/setores de maior concentração de "condomínios fechados" e avaliar os impactos decorrentes da expansão dos empreendimentos fragmentadores no tecido socioespacial. Portanto, o estudo indica a mudança do modelo de segregação dual (centro-periferia) em direção ao padrão de fragmentação socioespacial que vem se desenvolvendo, prioritariamente, numa pequena área do setor leste (bairro de Lourdes), no setor sudeste e partes do setor sul e trechos específicos dos municípios de Eusébio e Aquiraz.

**Palavras-chave:** Insegurança Urbana, Autosegregação, Reestruturação do Espaço Urbano, Fragmentação Socioespacial, Tipologia de Enclaves Fortificados.

### INSÉCURITÉ URBAINE, FRAGMENTATION ET ENCLAVES FORTIFIÉES DANS LA RÉGION MÉTROPOLITAINE DE FORTALEZA

L'augmentation du sentiment d'insécurité urbaine a justifié l'auto-ségrégation des couches moyennes et supérieures de la société vers des enclaves fortifiées dans la Région Métropolitaine de Fortaleza (RMF). L'objectif principal de cet article est d'analyser la fragmentation dans les secteurs à plus forte concentration de « copropriétés fermées » et d'évaluer les impacts résultant de l'expansion des entreprises fragmentées dans le tissu socio-spatial. L'étude indique un changement du modèle de ségrégation duale (centre-périphérie) vers le modèle de fragmentation socio-spatiale qui se développe, principalement, dans une petite zone du secteur Est (quartier de Lourdes), en le secteur sud-est et des parties du secteur sud et des zones spécifiques des communes d'Eusébio et d'Aquiraz.

**Mots-clés:** Insécurité urbaine, Auto-ségrégation, Restructuration de L'espace Urbain, Fragmentation Socio-Spatiale, Typologie des Enclaves Fortifiées.

## INTRODUCTION

The new residential and commercial models have been distinguished by the erection of physical barriers that accentuate socio-spatial differences and impose restrictions on accessibility and urban mobility. The large and diversified range of types of fortified, controlled, and guarded enclaves, consolidate the socio-spatial fragmentation process, understood herein as differentiated segregation embodied in reduced portions of the urban space, mostly developed in the southeast sector, unusually, in the De Lourdes neighborhood (east sector), parts of the south sector and the surrounding areas of the municipality of Fortaleza.

The guiding question of this paper brings the debate on the consolidation of fragmentation caused by the expansion of fortified enclaves in the Fortaleza Metropolitan Region (RMF) from the 2000s onwards. But, at first, it should be pointed out that a set of factors — the increase in the occurrence of violent crimes and the production and reproduction of a collective imaginary of violence contribute to re-dimensioning the current residential patterns and socio-spatial practices of city dwellers.

In this way, numerous urban landscapes of fear thrive (LIRA, 2017) that encompass numerous socio-spatial control and containment strategies (FERNANDES, 2009). All these attributes, briefly announced at that moment, define a phobopolis, as proposed by Souza (2008).<sup>1</sup>

As Fernandes (2009) warns, the increase in the feeling of fear and insecurity alters urban itineraries, being restricted, in most cases, to private spaces equipped with access control and surveillance mechanisms: shopping malls, water parks, housing complexes, and private allotments. The confinement of leisure equipment and intramural services and the spatial selectivity (choices of places based on security in this case) guarantee, at the same time, social exclusivity and relative independence from the rest of the city.

Sposito (2011, p.124) explains that the excessive implementation of developments with restricted access is one of the factors that redefine center-periphery segregation since the current residential systems of security, surveillance, and physical barriers control accessibility and circulation. both in private and public spaces, reconfiguring the spatial and social fabric of the contemporary city.

From this perspective, the debate on the limitation of organization based on center-periphery segregation after the consolidation of urban fragmentation is reinforced (SALGUEIRO, 1998), centered on the analysis of urban forms that represent socio-spatial segregation on a micro-scale (CALDEIRA, 2000; JANOSCHKA, 2002), whose characteristics are given by sudden socio-spatial differentiation (SALGUEIRO, 1998; SPOSITO, 2011; VASCONCELOS, 2013), with strong restriction on accessibility and mobility to city spaces (CALDEIRA, 2000; SOUZA, 2008) and with predominantly social limited to areas of a common use of residential enclaves and spaces of segmented consumption, denoting spatial selectivity (FERNANDES, 2009; DAL POZZO, 2015).

The geographical dispersion of middle- and high-income groups was achieved through the occasional implementation of "cities-fortaleza" and their respective security and surveillance systems and exerts an enormous influence on metropolitan real estate dynamics. Real estate launches began to prioritize horizontal condominiums in the east and southeast sectors of the capital; however, the expansion of the offer of private allotments, multiple-use allotments (Aphavilles), and beach condominiums is a metropolitan phenomenon, materializing a pattern of fragmented urban fabric both in consolidated areas and in stretches of dispersed urbanization. All developments that fragment the urban space are characterized by greater autonomy and dissociation from the immediate surroundings; however, they still maintain connections with the central spaces and with the great consumption facilities of the municipality of Fortaleza. <sup>2</sup>

Having said that, the main objective of this article is to analyze the fragmentation in the sections with the highest concentration of walled residential complexes controlled by surveillance and security apparatuses and to discuss the negative impacts of the expansion of walled and guarded residential complexes in the socio-spatial fabric of the city. Through this study, it is possible to contextualize and understand the reasons for the intensification of socio-spatial segmentation and the transformations in the strategies of real estate agents that have brought an expansion in the offer and diversification of the types of residential and commercial enclaves, which now offer a great variety of types of leisure equipment and services for common use within its walled and guarded limits.

The time frame of this paper covers the 2000s and 2020s and the main categories and key concepts were defined, the geographic scales (municipal and metropolitan), the elaboration of a summary map of the stretches/sectors with the highest level of fragmentation of the RMF, a survey of the offer of horizontal residential condominiums in the city of Fortaleza, in the year 2017, listing of the impacts arising from projects that fragment urban space and construction of a typology of fortified enclaves for RMF.

The fragmentation analysis was carried out in five geographic units. On the intra-urban scale of the municipality of Fortaleza, 1) a small part of the east sector (neighborhoods of Lourdes and Manuel Dias Branco), 2) the southeast sector (stretch surrounding Av. Washington Soares/CE 040); 3) parts of the South as a reference for the implementation of residential enclaves that are out of keeping with the socio-spatial fabric that surrounds them; On the metropolitan scale of Fortaleza, two stretches of intense agglomeration of walled and guarded residential complexes around the capital of Ceará were selected: 4) the extension located close to the CE 040 highway (in Eusébio) and 5) the coastal area of Aquiraz.

The bibliographic survey reveals that fragmentation is an essential category in assessing the various impacts arising from residential complexes with controlled access and private security. The intensity and form of the effects on the urban space vary according to the size of the residential enclave, the socio-spatial containment strategies (physical barriers, watchtowers, and surveillance and security systems), and also the socio-spatial practices established between the layers upper and middle social classes, disconnected from the surroundings and the rest of the city.

## FORTIFIED ENCLAVES AND FRAGMENTATION IN THE FORTALEZA METROPOLITAN REGION

The increase in supply and the diversification of types of fortified enclaves accentuate the socio-spatial differences in the areas where they are established, mostly in the main vectors of real estate expansion in the RMF, accelerating the process of socio-spatial fragmentation in intra-urban spaces and around the capital of Ceará. At that moment, three sectors with a high concentration of horizontal condominiums are identified and the physical-spatial, socio-territorial, and social impacts of the new pattern of segregation are discussed.

It is understood that excessive production and the development of new types of residential enclaves undoubtedly lead to a rupture in the unity of the socio-spatial fabric and the internal reorganization of urban space based on urban fragments. The separation between those who are “inside and those outside the walls” of the “private condominiums” is a symbolic and material mark of the change in the pattern of contemporary segregation, which produces discontinuities in the immediate urban fabric and generates a redirection of the sociability of the layers of society. medium- and high-income for common spaces in residential enclaves and large equipment for segmented consumption arranged in new centralities (SALGUEIRO, 1998; CALDEIRA, 2000; BAUMAN, 2007; SPOSITO, 2011; DAL POZZO, 2015).

According to Prévôt-Schapira (2001), the notion of fragmentation emerged in the literature with studies about the city in the late 1980s. This conception adds aspects of the spatial dimension (concrete and visible) of the fracturing of the socio-spatial fabric, of the morphological discontinuities, of the formation of independent units concerning the rest of the city, of the social dimension with new forms of exclusion and the political dimension through new devices of urban management and regulation as a result of metropolization under the design of economic restructuring and urban insecurity.

Evaluating the physical-material fragmentation, Janoschka and Glasze (2003) report that analyzes the consequences of walled residential developments equipped with private security services almost always boils down to discussing the impacts caused by physical barriers, and it is also necessary to take into account the private management of security in public spaces, social disintegration, the morphology of fortified enclaves and the forms of socio-spatial control and containment that entail restrictions on accessibility and urban mobility, the existence and number of leisure areas/services for the exclusive use of residents and the presence of functions typical of a city. Synthetically, these authors propose a broader investigation of the rupture of the socio-spatial fabric through three analytical levels: physical-material fragmentation; political-territorial fragmentation, and social fragmentation.

In this sense, it seems much more accurate to restrict the use of the term fragmentation to the self-segregation of the high and middle strata into residential enclaves protected by physical barriers, surveillance, and security systems. In this new type of segregation, separations and socio-spatial containment manifest themselves on small scales and

[...] the relative geographic proximity is only possible because of the walls and access control systems to private residential spaces (private allotments and horizontal and vertical condominiums), industrial spaces (company condominiums), commercial and service spaces (such as shopping malls, business, and business centers, leisure and entertainment spaces), as well as free circulation in public spaces (SPOSITO & GOES, 2013, p. 141).

For Caldeira (2000), the increase in urban insecurity crystallizes in material and symbolic borders, whose separations between the different layers are accentuated through the fortified enclaves. Consequently, the consolidation of new real estate and commercial products, such as private allotments, horizontal condominiums, vertical condominiums, shopping malls, office towers, theme parks, etc., devalues what is public and open.

In general, these real estate ventures are relatively independent of their immediate surroundings and, due to the control, security, and leisure devices, they can be located practically anywhere in the city, but the location of these artifacts is spatially concentrated.

As a result, the self-segregation of the elites into these fortified enclaves is a key factor in the fragmentation of the contemporary city (SALGUEIRO, 1998; CALDEIRA; SOUZA, 2008; SPOSITO, 2011; DAL POZZO, 2015). Therefore, the current form of urban growth, in the most valued sprawl vector of the RMF, has been given by its dynamics and differentiated from the center-periphery pattern, as suggested by Diógenes (2012). However, the increase in differentiation and segmentation occurs, fundamentally, in specific stretches/sectors of the main metropolis of Ceará.

The center-periphery model developed, predominantly, in an area well served by infrastructure (the center-east sector of the capital of Ceará) as opposed to another peripheral area, with spatially and socially segregated neighborhoods.

Thus, the territorial distribution of social strata shows a historical trend of the concentration of elites in neighborhoods traditionally recognized as places of social and economic status (Aldeota, Praia de Iracema, Meireles, Varjota, and Dionísio Torres).

In addition to these spaces traditionally occupied by the traditional elites, the high-income segments were grouped preferably in a large region that encompasses the Cocó, Papicu, De Lourdes, and Manuel Dias Branco neighborhoods (east sector); and in the southeast region (BERNAL, 2004; MONTEIRO, 2007; DIÓGENES, 2012; FÚCK JUNIOR, 2012), which includes Edson Queiroz, Guararapes, Salinas, Luciano Cavalcante, Cidade dos Trabalhadores, Parque Manibura, and José de Alencar.

As already mentioned, fragmentation develops more intensely in the southeast sector of Fortaleza, in a specific section of the CE 040 highway, which forms part of the municipality of Eusébio and in the Porto das Dunas area (driven by the urban growth adjacent to the highway CE 025 – Via Litorânea), extending to other portions of the east coast of the municipality of Aquiraz (Figure 1).

The analysis of the "Offer of horizontal residential condominiums", in the city of Fortaleza (Figure 2), allowed us to identify a significant spatial concentration of high-standard horizontal condominiums in the east sector, in the De Lourdes and Manuel Dias Branco neighborhoods, and of horizontal condominiums of small and medium-sized businesses aimed at the middle income, in the neighborhoods of Sapiranga/Coité, José de Alencar (formerly Alagadiço Novo), Edson Queiroz, Lagoa Redonda Engenheiro Luciano Cavalcante, Cidade dos Trabalhadores, Parque Manibura and Cambéba and Messejana.

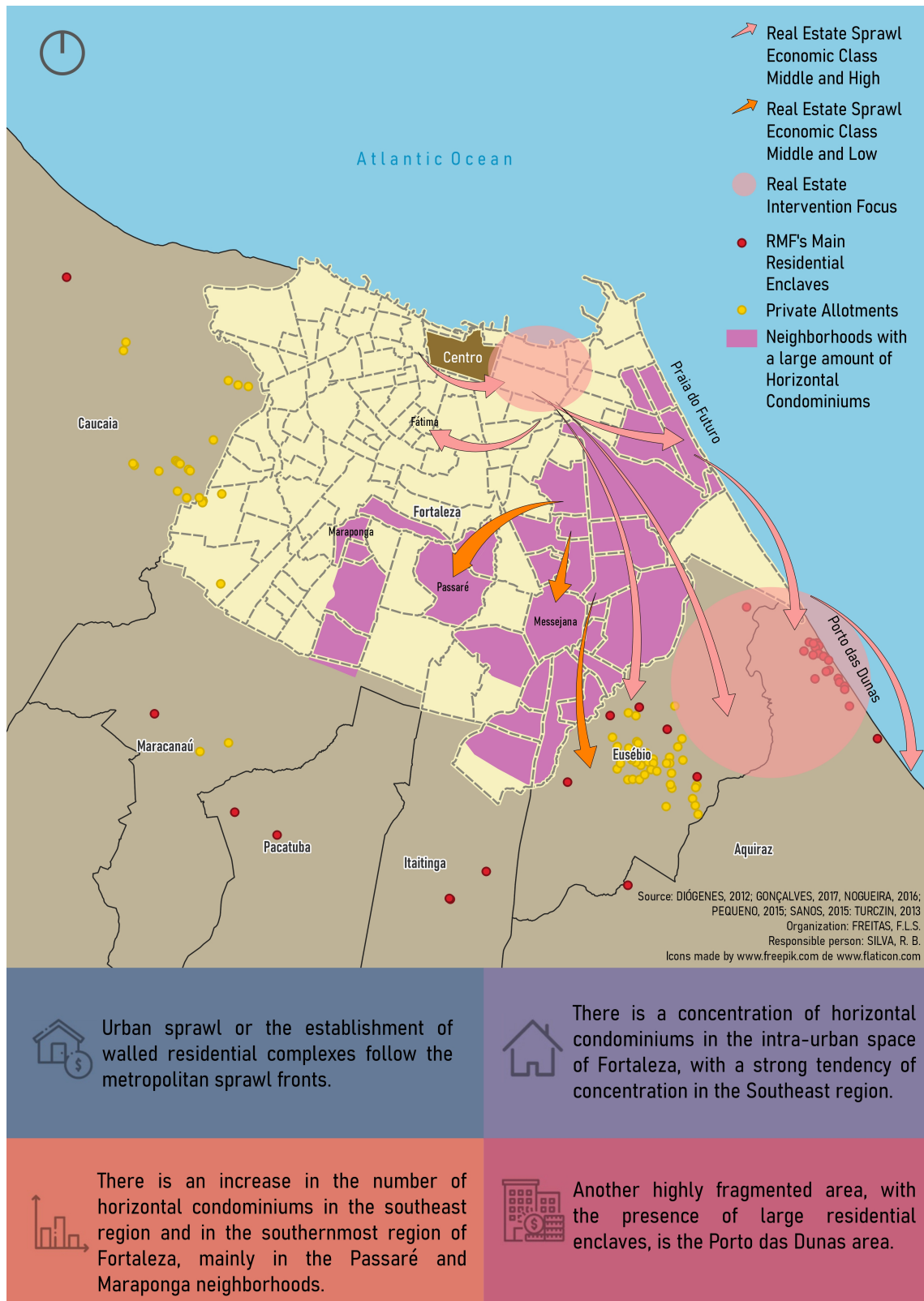


Figure 1 – Dynamics of real estate sprawl in residential enclaves in the eastern and southeastern regions of the RMF. Source: Silva, R. (2019). Organized by FREITAS (2019).



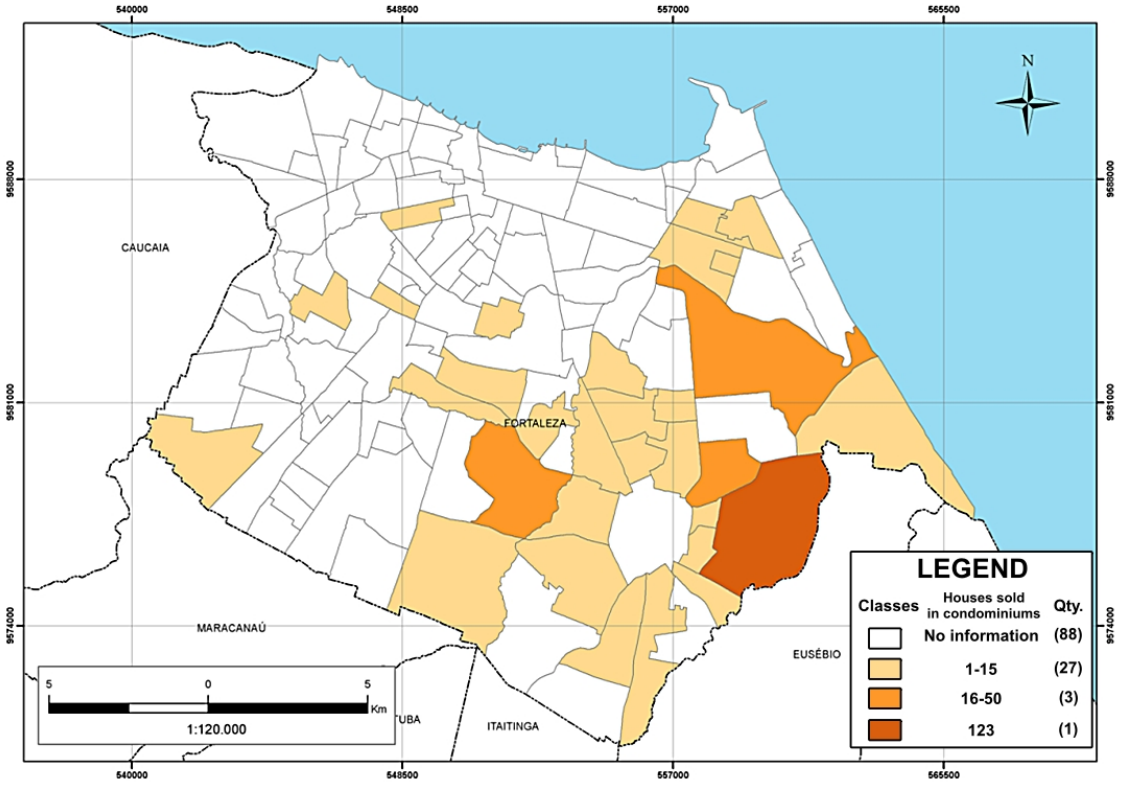


Figure 2 – Offer of horizontal residential condominiums per neighborhood in the city of Fortaleza (January 2017). Source: Elaborated by Freitas e Lima based on data from FIPE (2017).

It appears that the areas of the high occurrence of horizontal condominiums, in the municipality of Fortaleza, coincide with the sectors of high concentration of middle- and high-income strata and real estate appreciation, especially along important municipal road axes or state highways; which are in the surroundings of Av. Washington Soares/CE-040 (initial section of the southeast vector of metropolitan sprawl) and at Av. Maestro de Lisboa/CE-025.

The linear centrality of Av. Washington Soares/CE-040 provides good accessibility to public and private facilities such as shopping malls, malls, offices, large stores and hypermarkets, Convention Center, Clóvis Beviláqua Forum, private schools, and universities.

In the southern section of the municipality of Fortaleza, the increase in the number of single-family condominiums, aimed at the middle and lower-middle-income strata in the neighborhoods of Passaré, Maraponga, and Mondubim, allows for the mixture of fragments of horizontalities alongside apartment buildings, which overlap with the traditional urban fabric. These neighborhoods have been going through intense transformations in their landscapes and real estate appreciation due to the strong commercial development in the main roads that give access to them, Av. Godofredo Maciel, Av. Presidente Costa e Silva (Perimeter) and Av. Silas Munguba.

Nogueira (2016) found that numerous large private allotments and horizontal condominiums occupy the spaces around Fortaleza, making up a peripheral ring. Among the implemented megaprojects that surround the municipality of Fortaleza, the subdivisions Alphaville Fortaleza, Alphaville Eusébio, Quinta das Fontes, Park Eusébio, Quintas do Lago, Jardins Ibiza, and the beach condominiums Aquaville Resort, Beach Park Living, Resort Oceani, Condomínio Portugal Village, Porto Beach Residence and Resort Atlantic Palace. In the RMF, one branch progresses, which starts at Av. Maestro de Lisboa and continues along CE-025, the main east-southeast sprawl axis. Such an urbanization process is carried out, more and more, by huge real estate developments that combine residential and commercial uses. Strongly linked to tourism or second home, this part has a different dynamic, in which you can see a confluence of theme parks, Alphaville Fortaleza subdivision, and several beach condominiums implanted parallel to the coastline of the municipality of Aquiraz.

Then, during the 2000s, there was an intense real estate appreciation in Porto das Dunas, exposed in the gradual increase in the installations of beach condominiums in the conventional subdivision opened by the Gentil family, in 1979 (DIÓGENES, 2012). From the end of 1990 onwards, ventures were established that combined residential, tourist-hotel, and wide leisure options, denoting relative autonomy from the surroundings. The Beach Park aquatic complex, the main leisure development in the state of Ceará, is undoubtedly the main factor in real estate appreciation and attraction of real estate developments in the region.

The spatial discontinuities continue towards the east, reaching as far as the beaches of Iguape and Barro Preto, where residential enclaves of leisure are not contiguous to the consolidated urban fabric, such as the Golf Ville Resort Residence, Mandala Kauai and Aquiraz Riviera. In this situation, a dispersed and fragmented urban fabric is produced, with autonomous units that maintain a little spatial relationship with neighboring spaces.

As a result, a significant number of scholars are dedicated to assessing the impacts of horizontal residential complexes on the structure of the urban fabric (BECKER, 2005; SOUZA, 2008; SPOSITO & GOES, 2013; TURCZYN, 2013; ALAS, 2013; SCIOTA, 2015). The intensity and type of physical-material, social, or territorial impact on the urban space will depend on the size of the physical barrier surrounding the developments, the diversity of leisure equipment and services within the walls, and the form of integration into the spaces the around the residential enclave.

Caldeira (2000) recognizes that the walling of large residential areas is the most visible artifice of a series of protection, separation, and social distinction strategies. Given this, social distancing with physical proximity, revealed by Caldeira (2000) and Sposito (2013) or as evidenced in studies by Santos E. (2015), for the Sapiranga neighborhood, and Freitas e Costa (2021, p. 42), in the case of the De Lourdes neighborhood, which has also been given by the institution of a physical-spatial, socio-territorial and social fragmentation “resulting from the propagation of walled residential complexes and with controlled accesses affecting the socio-spatial fabric and causes changes in the relationship of people with the rest of the city”.

The neighborhoods Sapiranga/Coité, Lagoa Redonda, José de Alencar, and Messejana stand out in the offer of private housing complexes represented in the pair social distancing/spatial proximity to the precarious settlements surrounding the residential enclaves, consolidating the pattern of fragmentation in the southeast axis of real estate appreciation, fundamentally. In many places in the city of Fortaleza, some poor communities are very close to residential enclaves, even occupying the beds of public roads and/or building houses on the sidewalks attached to the walls of horizontal residential complexes.

In this sense, the urban fabric of the Fortaleza Metropolitan Region has been undergoing significant morphological changes, resulting from new logic of separation (appearance of physical barriers and access control) and social distancing. There is a redefinition of socio-spatial segregation in specific parts of the surroundings of Fortaleza, indicating a consolidation of physical-spatial fragmentation, socio-territorial fragmentation, and social fragmentation.

Given the increase in violent crime and the innovations proposed by real estate agents, the walling of living spaces has become a socio-spatial practice among the middle and high-income segments of the city of Fortaleza, where the proliferation and diversification of fortified enclaves, which are subdivided into three categories: horizontal residential enclaves, vertical residential enclaves, and commercial and leisure enclaves. In this context, 12 types of fortified enclaves were identified in the RMF, which are distinguished by their architectural standards, the predominant form of use, the location, and the socioeconomic profile of the residents: illegal condominium or pseudo-condominium, private allotment, use allotment, condominium; vertical building complex I, vertical building complex I, club condominium or super condominium, resort or beach condominium, shopping mall, mall, large stores and hypermarkets and theme parks (Figure 3).













TYPE OF PROPERTY DEVELOPMENT THAT FRAGMENTS THE URBAN FABRIC						
	TYPE	TYPE OF USE	HOUSING STANDARD	LOCATION	SOCIOECONOMIC PROFILE	SYMBOLGY
RESIDENTIAL HORIZONTAL ENCLAVES	Illegal condominium or pseudo-condominium	Residential	Single-family home	Consolidated urban fabric	Popular and Middle	
	Horizontal Condominium	Residential	Single-family home	Consolidated urban fabric	Middle and High	
	Private Allotment	Residential/Residential and Commercial	Single-family home	Consolidated urban fabric predominantly in peripheral areas	Middle and High	
	Multiple-use allotment	Residential or Commercial	Single-family Home and/or Apartment	Implementation in areas classified as "not urbanized" or disperse urbanization areas	High	
VERTICAL AND MIXED-USE RESIDENTIAL ENCLAVES	Vertical Building Complex I	Residential	Apartment	Consolidated urban fabric predominantly in peripheral areas	Popular and Middle	
	Vertical Building Complex II	Residential	Apartment	Consolidated urban fabric	Middle and High	
	Condominium Club or Super Condominium	Residential	Apartment	Consolidated urban fabric	Middle and High	
	Resort or beach condominium	Residential, Commercial and Recreational	Single Family Home and/or Apartment	Implementation in areas classified as "not urbanized" or disperse urbanization areas	High	
COMMERCIAL AND LEISURE ENCLAVES	Mall	Commercial	Commercial and service stores	Consolidated urban fabric	Middle and High	
	Large stores and Hypermarkets	Commercial	Commercial warehouses	Consolidated urban fabric	Middle and High	
	Shopping Malls	Commercial and leisure	Commercial and service stores	Consolidated urban fabric	Middle and High	
	Theme Parks	Commercial and leisure	Commercial and service stores	Predominantly in peripheral areas	Middle and High	

Figure 3 - Typologies of fortified enclaves in the eastern and southeastern regions of the RMF. Source: Silva, R. (2019). Organized by Freitas (2019) based on Becker (2005), Diógenes (2012), Gonçalves (2017), Turczyn (2013), Alas, (2013), Santos, A. (2015) and Santos, E. (2015)

Large private subdivisions and super condominiums (large vertical building complexes with a wide range of leisure options and services) produce strong discontinuities in urban organizations due to their enormous dimensions and advanced degree of autonomy. In the case of small and medium-sized horizontal condominiums, in particular, the deleterious socio-spatial effects are much smaller than the large private subdivisions, since there is a greater dependence on the functions and services of the city, however, the increase in insecurity has contributed to the expansion of leisure areas and services in all types of walled residential complexes.

Furthermore, incongruence is evident in the use of the term "private condominium" to refer to any walled housing complex. The designation private condominium, more usual in Brazil, or even exclusive condominium, as Souza (2008) prefers, are extensive denominations that do not cover the multiplicity and complexity of the current models of walled residential complexes made available by the formal real estate market and this justifies the elaboration of a typology, more detailed and with new types of fragmenting elements of the urban space, for RMF. Therefore, it is not appropriate to qualify, in the same standard, the vertical condominiums open to the streets — built in the 1980s/1990s —, for the most part, located in the center-east and pericentral neighborhoods of the city of Fortaleza, or even those that have from circulation areas, playgrounds or ballrooms to walled residential complexes that have a huge variety of leisure spaces and services in common areas and complex integrated surveillance and private security system.

Therefore, what should be emphasized in this part of the work is that there has been a diversification of the patterns of fortified enclaves in recent decades and their physical, spatial, and social effects vary according to the type, size, morphology, and combination of uses. in the same urban facility. The size, high density, and juxtaposition of several walled horizontal ventures, in the same area, restrict accessibility and urban permeability, by expanding pedestrian and vehicle paths in the urban fabric and imposing insecurity in long stretches characterized by low traffic flow. people and few route alternatives. On the other hand, the paths of self-segregated subjects are limited to places of residence and areas of collective use of residential enclaves and new spaces of segmented consumption (shopping malls, hypermarkets/supermarkets, large stores, private colleges, and malls).



Consequently, the appreciation of the private sphere and the new demands of the contemporary way of life induces a diversification of leisure options in the areas of collective use of residential enclaves. The most common leisure facilities offered to middle-income groups include a swimming pool, gym, playground, sauna, Society soccer field, and ballroom with barbecue pit. While in a high-end condominium, more specific spaces can be made available, such as a swimming pool with a lane, a tree-lined playground, tennis courts, a multi-sports court, and a large green area for the exclusive use of residents, which become elements of social status and economic appreciation of the property residential development.

As for the social and socio-territorial consequences, the privatization of public areas and the imposition of services provided by private companies (mainly in the area of security) stand out, which, in many cases, replace the responsibilities of public administration. In general, resort condominiums, medium-sized horizontal residential condominiums, private subdivisions, and Alphaville-type developments tend to be located, preferably, along the seafront or close to natural resources of relevant landscape and environmental interest, such as areas of environmental protection (APP) and beach strip, often making it unfeasible or discouraging the use of these areas by the local population.

Attention should be paid to the fact that the type of socio-spatial exclusivism of higher-income social groups is similar to the fragmentation of the socio-political-spatial fabric (SOUZA, 2008) or political-territorial fragmentation (JANOSCHKA & GLASZE, 2003), characterized by the substitution of essential services, the responsibility of the municipality, for activities carried out by private companies and the socio-territorial control strategies of its space.

Security managed by private companies is maintained by a sophisticated walled perimeter protection system and socio-spatial containment that may include a 24-hour doorman, surveillance cameras, alarm system, raised guardhouse with lock/armored guardhouse, electronic gates, residents screening and visitors and vehicle patrols on public roads.

Such socio-spatial control and containment strategies function as separation devices, demarcate the coexistence space, and condition the very structuring of fragmentation. Undoubtedly, the walls of residential enclaves are simultaneously physical and symbolic demarcations that cause restrictions on movement in the city. They reaffirm the isolation, distinction, and distancing of social groups and cool the socio-spatial relations with the immediate surroundings and even with other parts of Fortaleza, denying the possibility of living with differences and limiting the access of other social groups.

## CONCLUSION

The increase in violent crime has a close relationship with the spread of insecurity in the city of Fortaleza. This situation has legitimized the erection of physical barriers that accentuate socio-spatial differences in areas where residential enclaves are established. The oversupply and the diversification of types of controlled and guarded residential complexes consolidate the process of socio-spatial fragmentation in specific stretches/sectors of Fortaleza. Based on this investigation, it was possible to verify the passage from center-periphery segregation, in specific stretches of the municipality of Fortaleza and the RMF, to the pattern of socio-spatial fragmentation. In this context, there is a strong fragmentation in the east-southeast sector, in the southern portion, and the surroundings of the municipality of Fortaleza.

On another scale, the metropolitan scale, an intense concentration of private subdivisions, horizontal condominiums, and summer condominiums are established in representative stretches of the municipalities of Eusébio and Aquiraz. It has resulted in the production of a dispersed and fragmented urban fabric in a sector of high real estate valuation, accompanying the metropolitan expansion axis of Av. Washington Soares/Rodovia (CE-040) and Maestro Lisboa/Via Litorânea (CE-025).

As for the analysis of the problem of the impacts arising from the projects that are enclosed in walls, it necessarily involves the debate of the challenges and limits that they impose on the city as a spatial and social unit with a strong restriction on accessibility and urban mobility, the transformation of sociability in the public sphere, private appropriation of public areas, the transfer of public responsibilities to private companies and socio-spatial constraints and containment strategies. So, there is a growing demand for residential security systems and a diversification of new types of residential and

commercial enclaves in the RMF, whose various types include vertical condominiums (club condominiums are the most complex and sophisticated), horizontal condominiums, beach condominiums, multiple-use subdivisions, shopping malls, business towers, and recreational parks.

Thus, as the contemporary city fragments, social relations are guided by feelings of fear and distrust, materialized in physical separations and territorial stigmas that transform contemporary sociability. In this context, there is a tendency for high-income social strata to leave spaces for common use and public coexistence to “confine themselves” to walled residential complexes equipped with leisure areas and private services. We have a city with less dialogue between different social groups and reduced sociability in public spaces because part of the social relations of the middle and high-income strata are oriented to the leisure and service facilities within the city walls and too segmented consumption spaces.

## NOTES

1- The conception of fear landscape (original term), as a palpable and subjectively perceived fact, suggests a connection with the fear of violence and a type of aesthetic aversion to certain places (TUAN, 2005). Consequently, some urban landscapes can cause warning signs and anxiety in the individual for the simple fact that they appear gloomy, for bringing up a traumatic experience of a robbery or news of murders; thus, the urban landscapes of fear are manifested in high walls, railings, fences and other protection and security artifacts typical of the contemporary city.

2- This terminology is adopted by Davis (1993) to describe the defensive strategy of the luxurious lifestyles of the affluent society of Los Angeles-USA.

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