STUDY OF GATED COMMUNITIES IN BRAZIL: NEW DEVELOPMENTS AND TYPOLOGIES IN THE PARAÍBA VALLEY, SP

Estudo de condomínios no Brasil: novas abordagens e tipologias no Vale do Paraíba, SP

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ABSTRACT

Since the late 1970s, new forms of urbanization have been created in Brazil and are characterized as high-standing and accessible architectural structures that are normally located in areas far from the city center. These new forms increase urban social and spatial segregation, creating "fortified enclaves", also known as condominiums. They disperse urban settlement and isolate residents from the actual city. Considering these aspects, this article aims to study the growth of urban sprawl in the Region Valley of Paraíba River, which connects the cities of São Paulo and Rio de Janeiro, predominantly condominiums. We assume these condominiums are not homogenous in terms of characteristics and process of emergence. These new forms of urbanization are consequences of the process of decentralization of the São Paulo Metropolitan Area's economic activities.

Keywords: Gates communities. Urban sprawl. Typologies. Valley of Paraíba.

RESUMO

Desde o final de 1970, novas formas de urbanização foram estabelecidas no Brasil, as quais são caracterizadas como de alto padrão social e que, usualmente, estão localizadas em áreas distantes do centro da cidade. Estas novas formas aumentam a segregação socioespacial urbana por meio do surgimento dos "enclaves fortificados", também conhecidos como condomínios. Essas formas de ocupação do espaço urbano causam uma dispersão desse espaço e isolam os moradores da cidade real. Considerando esses aspectos, este artigo tem como objetivo apresentar um estudo do crescimento da urbanização dispersa na Região do Vale do Rio Paraíba, localizada no eixo São Paulo - Rio de Janeiro, predominando nesse contexto as forma condominiais. Assumimos que esses condomínios não são homogêneos em termos de características e processos de implantação. Estas novas formas de urbanização das atividades econômicas da Região Metropolitana de São Paulo.

Palavras chave: Enclaves fortificados. Urbanização dispersa. Tipologias. Vale do Paraíba.

1 INTRODUCTION

In Brazilian cities, the traditional urban growth model – wealth in central areas and poverty

farther from the periphery – was accentuated during the 20th century. Only after the 1970s did a process similar to the American model (under-urbanization) appear in some cities, with the constitution of rich condominiums in faraway places (Bogus & Taschener, 2000). For some authors, this tendency has been characterized as disperse urbanization (Reis, 2006).

According to Reis (2006), formation of urban areas in the periphery of some cities exists, discontinuous from the already existing urban fabric and the formation of new nuclei, with multiple utilization forms in isolated points that correspond more precisely to what the author defines as "disperse" or "diffuse urbanization". Squires (2002, p. 2) defines disperse urbanization as a pattern of urban and metropolitan growth reflected by low population density, dependency on cars, development of spatial self-segregation, and location at the urban fringe. Some problems in North American cities are appearing, such as daily traffic jams on main roads, political fragmentation of land use planning, and degradation of residents' feelings of community.

Disperse urbanization has been characterized in the planning and public policies literature as a distinct form of urban growth, scattered and inefficient, disorganized in its configuration, and highly dependent on the car, as emphasized by Hasse & Lathrop (2003). For these authors, the costs and negative externalities of disperse urbanization have been widely documented. There are positions pro and contra this process, but there is a consensus that it is the result of real estate markets, consumer rights, and public policies. Emphatically, the logic of the land market defines the occupation of space, i.e., different rights provide persons with land ownership and environmental quality as a function of social capacity.

In this context, discussing this phenomenon that has affected Brazilian cities is important as a contribution to the elaboration of public policies that would inhibit these new forms of urbanization that are establishing anti-cities (Maricato, 1997), not allowing spontaneous agglomeration of people, which is so common to the essence of a city.

In Brazil, these new forms of urbanization (gated communities) settle in areas that have strong environmental appeal because in addition to security, developers sell a pleasurable landscape, surrounded by green areas and far from the urban chaos. In this sense, these residents' daily commutes cause many different problems, and environmentally fragile areas are not always considered when gated communities are built.

According to Caldeira (2000), gated communities have been attracting an increasing share of the population by selling well being, status, exclusivity, and security. Fear of violence has been another factor responsible for the proliferation of gated communities. This model of living originated in North America and has intensified in South America and since the 1990s, has become increasingly complex in Brazil. This new expansion also brought with it new socio-economic disparities in the state of São Paulo, turning mid-sized cities into centers of real estate development.

The location of gated communities is another factor that stands out because they are increasingly expanding to areas that were considered rural or farther away from the chaos of the city center. According to Caldeira (2000), isolation and distance from the city center and intense urban life are believed to provide a better lifestyle. This lifestyle is characterized not only by the new standard of housing but also by a new status in society. The proliferation of gated communities in urban areas is a result of circumstances such as urban violence, and these fortified enclaves confer status to their inhabitants.

Considering these factors, our paper aims to characterize and analyze urban sprawl and gated communities as a result of this process, focusing on the Region of the Valley of Paraíba River, located in São Paulo State, Brazil. This region is considered a high technological center, and this urban phenomenon has grown rapidly. These forms are altering the urban structure in the region and are fragmenting urban space and segregating social classes. Walls and technological security devices separate people with greater purchasing power from groups deemed undesirable.

This paper quantifies urban sprawl in the sub-region of São José dos Campos, composed by eight municipalities, classifying the social segregation that exists in these areas. We also detail three cases in the region: a city with a small urban population (less than 10,000 inhabitants), a medium city (more than 200,000 inhabitants), and a large city (nearly 700,000 inhabitants). The gated communities of these municipalities differ considerably in terms of spatial and social composition; while this factor does not allow us to establish a spatial pattern, it provides a better understanding of this quite recent process in the region.

2 URBAN SPRAWL, NEW FORMS OF URBANIZATION, AND GATED COMMUNITIES: A CONCEPTUAL FRAMEWORK

Many authors use the term urban space to address issues related to cities. Studying cities has been a topic for researchers of different academic spheres and for planners, politicians, and those who own capital to invest.

In Brazilian cities, the traditional model of urban growth - rich in well-equipped central areas and poverty increasingly pushed to the periphery - has arisen in the twentieth century. Only after the 1970s did spatial dynamics following the American urban model (sub-urbanization) emerge in some cities, such as luxury condominiums located in areas far from urban centers (BOGUS; TASCHENER, 2000).

Some authors have characterized this trend as urban sprawl. According to Reis (2006), urban areas are expanding toward the periphery (urban fringe) of some cities. These new areas are not contiguous to the pre-existent urban fabric, resulting in new urban nuclei, with multiple forms of land use and isolation, corresponding to what the author defines as urban sprawl or diffuse urbanization. The author emphasizes that spatial changes are not observed for only physical structures and urban forms. This concept of occupation is entirely new and different.

As stated by Hasse and Lathrop (2003), urban sprawl has been characterized in the literature as a distinct form of urban growth that is sprawling, inefficient, disorganized, and highly dependent on automobile transportation. For these authors, the costs and negative externalities of urban sprawl have been widely documented. The process contains divergent and positive positions in the United States, but there is a consensus that this process reflects public policy and is a result of real estate market performance and consumer law. This process of segregation is followed by environmental problems (from an ecological and social point of view), which do not affect urban space completely. It occurs more frequently in areas occupied by lower social classes than by upper classes. Thus, the logic of land market sets the space occupation, meaning that people are provided access by different rights to environmental amenities and quality of life as a function of their social capacity.

Urban sprawl is pushed not just by new residential condominiums or even gated communities but also by other forms of land use, such as commercial centers, industrial zones, and new recreational areas, which are also part of this process of urban sprawl. Considering the specificities of Latin American cities, Reis (2006) asserts that studies about this subject emphasize that gated communities are one important result of this new process of urbanization.

Gated communities have been traced to the first permanent structures built by humans. Ancient wallet towns were designed to protect inhabitants and their property, and demands of defense required walls. [...] System of walls, spatial segregation, and class division are also deeply ingrained in Europe as the means for wealthy people to protect themselves from the local population (LOW, 2004, p.13).

Maricato (1997) noted that housing is linked to price, i.e., the location or structure of housing depends on its commercial value. Locations, accessibility, and public service have a price that is always linked to urban expansion's location. Urban growth, which intensified with industrialization, caused the expansion of commercial areas and urban sprawl into areas previously considered rural or low-density urban. These areas have been reorganized with new features and

different types of housing, facilitating the development of new production methods in the city.

One of the features of this dispersion process is the growth of gated communities. Reis (2006) indicated that these changes are promoting a new pattern of metropolitan life, with greater demands on new ways of life in society. According to the author (REIS, 2006), the changes occurred in cities after 1970, when the real estate market divided the land that had been collectively or privately used in the Metropolitan Region of São Paulo where the first gated communities appeared. Maia (2006) affirmed that these new forms of urban occupation that now exist in Brazil were already common in the United States as suburbs, created exclusively for the elite social classes.

In United States, the first gated communities emerged in California, Texas, and Arizona, attracting retirees looking for better climates (LOW, 2004, p. 15). Setha Low also affirms these communities are "an integral part of the building of the fortress city, a social control technique based on the so-called militarization of the city" (LOW, 2004, p. 17). This author also explains that most residents decide on living in gated communities because they desire safety, security, community, and niceness "as well as want to live near people like themselves because of fear of others and of crime" (LOW, 2004, p. 9). This feeling is common for residents of gated communities in Brazil.

According to Caldeira (2000), after the 1980s, social segregation associated with gated communities increased. It was characterized by vertical or horizontal closed allotments, shopping centers, private hospitals and schools and by a privileged population's sense of security to access these structures of consumption, including walls, fences, and private security. The state has a strategic function in this mechanism. Corrêa (1999, p. 63) affirms that the state is an important agent that produces social segregation by giving financial support to construction companies and helping the capitalist accumulation process. The author also affirms that upper-class population is also responsible when they choose the most desirable places.

Explaining U.S. models of urban sprawl and regarding gated communities in Guadalajara, Caldeira (2000) and Barajas (2006) agree that this phenomenon does not occur in the same way and with the same intensity everywhere. According to Sposito (2006), when different studies analyze "gated communities in Brazilian medium size cities", this phenomenon began in some cities in the state of São Paulo after the 1970s, but just after the 1990s, it became an option as a way of life for the higher income population. In most cities of São Paulo, these gated communities share similarities in structure, which is related to ideological and economic trends.

In terms of similarity of shapes and locations, these trends can be understood by considering location and distance from the downtown, provided central areas are accessible, and the presence of public facilities. In some ways, it is necessary to convince the higher income population to choose to live far from shopping centers. Thus, it seems that high-income population accepts this new form of urbanization in the name of family security, the exclusiveness of living with their peers, and the infrastructure available in gated communities, which can increase the market value of their properties.

Caldeira (2000, p. 259) mentions that in mid-sized Brazilian cities, gated communities are normally located close to downtown areas, which is due to the availability of affordable land when compared to land prices in the metropolitan region of São Paulo, which enables deployment of implantation of allotments in the urban fringe: not so far that it becomes rural and not so near as to encounter urban problems, such as traffic, pollution, and violence. In mid-sized cities, these new developments in urban areas with rural characteristics became an ideal escape from the metropolitan lifestyle.

Reis (2006) indicated that the causes of these spatial changes occurred between 1970 and 1980 in the Paraíba Valley, which is in the western part of São Paulo state, Brazil. Along with the dispersion of industries, new forms of gated communities were created. These new forms caught the attention of commerce, and together, they migrated to nearby areas.

The process of expansion of gated communities has intensified in Brazilian mid-sized cities, indicating that they have adequate resources for these new homes, not only in terms of infrastructure but also in the economy needed to promote local public policies. However, this expanding spatial segregation process occurred as a new model of urban fabric that was modeled after industrial expansion from the São Paulo Metropolitan Region and towards the Paraíba Valley, where the real estate market has increased land value.

3 THE REGION OF THE VALLEY OF PARAÍBA RIVER - BRAZIL: CHARACTERISTICS OF URBANIZATION

The medium-sized valley of the Paraíba River is a region covering the eastern part of the state of São Paulo in Brazil (Figure 1). Composed of 32 municipalities, it stands out for its considerable share of Brazil's GDP. According to Muller (1969), the origin and evolution of urban areas in this region dates back to three centuries of development and is one of the oldest areas in the state of São Paulo. Occupation began in the seventeenth century, during the economic cycle of gold, prospered during the production of coffee (nineteenth century), and intensified during the industrialization process (after the mid-twentieth century). The twentieth century was decisive for the process of urbanization in this region. It intensified after 1950, when the municipalities of the Valley of the Paraíba River assumed industry as the focus of this process. Industrialization became central to development policies by the Federal Government after 1950. For Muller (1969, p. 67), this period was the most important for the region's urban definition, as cities began to acquire their current characteristics.

The dynamism of the region can be observed when viewing the region's contribution to the total population of the state of São Paulo, which rose from 7.2% in 1960 to 9.1% in 1980 and 10.4% in 2010. In this respect, the highlight is the micro-region of São Jose dos Campos (Figure 2), which accounted for 43% of the regional population in 1980 and 62.4% in 2010, having the second largest GDP in the state of São Paulo and the country's fourth largest GDP. Comprising eight municipalities, this micro-region had the largest population and economic development of the Valley of Paraíba Region and nearly quadrupled its population from 1970 to 2010.

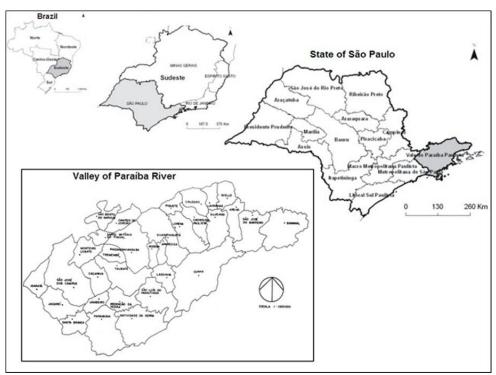


Figure 1: Valley of the Paraíba River in the context of state of São Paulo.

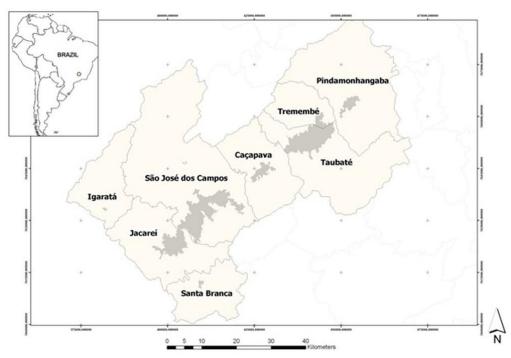


Figure 2: Study area, located in the state of São Paulo, Brazil.

The municipality of São José dos Campos is the largest economic core of the region, containing high-tech industries and aerospace industry. According to Souza (2008), in recent years, São José dos Campos presented considerable economic indices based on industrial and economic development. In 2002, the municipality had the country's ninth highest GDP in the same year and in 2004, the third highest GDP in the state of São Paulo. In 2006, São Jose dos Campos contained more than 1,150 industries, employing approximately 47,000 individuals. It is considered the second largest exporter in the country, behind only the municipality of São Paulo.

Considering these regional aspects, Reis (2006) states that the municipalities of the Valley of Paraíba are now organized in an integrated way, as a metropolitan area, which is reflected in the daily lives of its population, even for smaller municipalities, such as Igaratá and Tremembé, and as a model of life, mobility, and consumption. Old neighborhoods became more dynamic as did rural areas, which were incorporated into urban areas, reflecting a particular model of urban sprawl. This model is discussed here, emphasizing the characteristics of three different municipalities in terms of population and economy: Igaratá, a small city, Caçapava, a medium city, and São José dos Campos, a large city.

4 URBAN SPRAWL IN THE REGION OF VALLEY OF PARAÍBA: GENERAL CHARACTERISTICS IN THE SUB-REGION OF SÃO JOSÉ DOS CAMPOS

In this study, we used Hasse and Lathrop's (2003) discussions to define urban sprawl, where it is considered a distinct form of urban growth, not adjoining main urban areas, scattered and inefficient, disorganized in its configuration, and strongly dependent on automobiles. We used satellite images, obtained in October 2010 by the Thematic Mapper sensor of Landsat 5, to elaborate a mapping of urban sprawl for the sub-region of São Jose dos Campos (Figure 3).

The mapping obtained illustrates the distribution of this process in the eight municipalities within the sub-region of São Jose dos Campos. The results showed that 63.2% of the mapped areas refer to the contiguous urban area, i.e., urban areas concerned with the process of concentric growth of the city, and 36.8% of the mapped areas refer to urban sprawl.

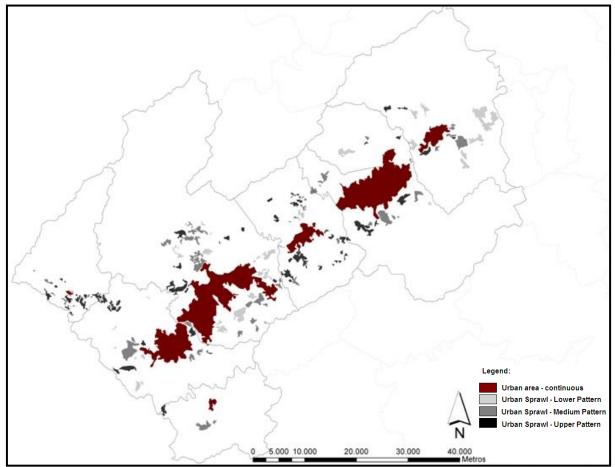


Figure 3: Satellite image (a) and the resulting mapping (b) of urban sprawl in the sub-region of São Jose dos Campos.

Figure 4 illustrates the importance of urban sprawl in the cities studied. The main contribution to the total urban sprawl in the sub-region comes from the city of São Jose dos Campos, which is responsible for approximately 32% of the total urban sprawl, followed by Pindamonhangaba (27%), Jacareí (12%), and Caçapava (12%). Taking a local view of the total area mapped and the area of urban sprawl (Figure 4), it is possible to notice that the municipality of Igaratá has the highest area of urban sprawl: 62% of the urban area is related to urban sprawl, followed by Pindamonhangaba (46%), Santa Branca (45%), and Caçapava (37%), smaller cities in terms of population that have physical space available far from the city center that can be allocated to real estate investments.

One main purpose of this mapping was to explain social and spatial characteristics of urban sprawl in this sub-region. Studies of Brazil have shown that urban sprawl is predominantly occupied by high-income or middle-class gated communities, and we aimed to quantify the percentage of urban sprawl, their social aspects, location, and other specificities. The results showed an equitable distribution for this variable: 32% of the areas of urban sprawl are occupied by low-income populations, 33% by high-income populations, and 35% by the middle class.

Igaratá is also the city with the largest number of gated communities occupied by the upper-class population, i.e., 83% of lots are occupied by high-standing condominiums. Urban sprawl in the municipality of Caçapava is predominantly occupied with upper-class condominiums (72%). São José dos Campos, the most developed municipality of the region, has 19% of urban sprawl subdivisions occupied with high-standing gated communities, 42% with lots occupied by the middle class, and 39% occupied with popular neighborhoods, representing ideas about the Brazilian urban periphery discussed by Bogus and Taschener (2000).

Regarding distance from the city center, the results revealed a predominance of high

standards (78% of the area) and medium standards (22%) of condominiums in the areas of urban sprawl located 15 kilometers from downtown, reinforcing Caldeira's argument (2000) about the location of these developments.

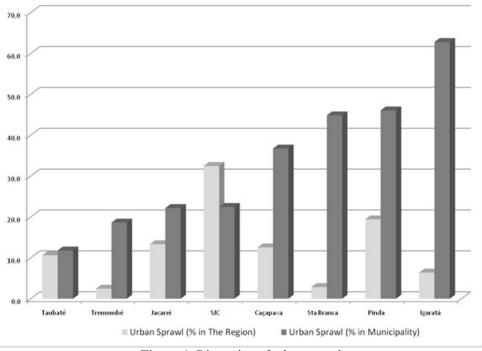


Figure 4: Dimension of urban sprawl.

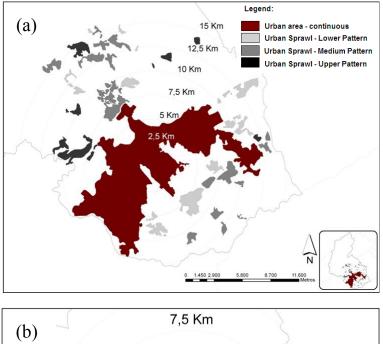
4.1 A Close view of urban sprawl in the sub-region of São José dos Campos: examples of Igaratá, Caçapava and São José dos Campos

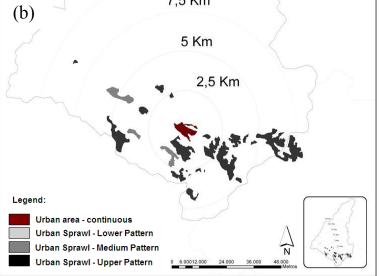
Urban sprawl in the sub-region of São José dos Campos can be easily noticed if we take a close look at some municipalities. We selected three examples of cities: the small city of Igaratá, the medium city of Caçapava, and the large city of São José dos Campos (Figure 5).

Igaratá is a small-sized municipality with 8,825 inhabitants, and 80% of its population lives in the urban area. The economy of Igaratá is based primarily in tourism activities. Its landscape, dominated by the reservoir of Jaguari, is one factor responsible for increasing the local real estate market, which was directed toward building gated communities. According to urban sprawl mapping, 86% of these areas are occupied with upper-class condominiums that were often vacant or under occupied. According to Census 2010 (IBGE, 2011), 34% of the residences in the urban area are classified as "occasional use".

In Figure 6, it is possible to visualize some images of these areas. In terms of distance from the city center, 94% of the urban sprawl (and gated communities) are located less than 5 kilometers away. This municipality greatly influences the city of São Paulo, and most of these condominiums' residence owners live in that city.

Caçapava is considered a medium-sized municipality, with 84,844 inhabitants, of which 88% are urban. Its economy focuses on industries and services. The expansion of the urban area of Caçapava, adjacent to already urbanized areas, depends on the population's accessibility to urban infrastructure. This expansion has predominantly been along the President Dutra Highway. Not only has there been an increase of populated areas but also of industrial areas, which although small, have impacted urban growth. With the decentralization of labor in the metropolitan area, there has been an accumulation of labor in other industrialized urban centers.





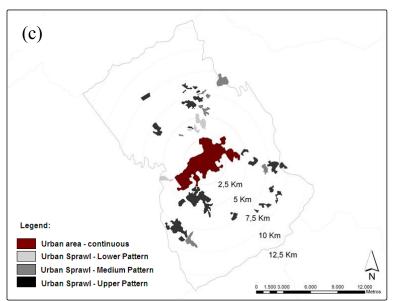


Figure 5: Distance of urban sprawl from the city centers: (a) São José dos Campos; (b) Igaratá; (c) Caçapava. Source: Forlin (2011).





Figure 6: Example of a gated community in Igaratá, showing the pattern of an upper-class condominium: (a) Reservoir of Jaguari; and (b) examples of condominiums. Source: Google Earth (2010).

The President Dutra Highway was inaugurated in 1954 to facilitate interconnection between the cities of São Paulo and Rio de Janeiro. The municipality of Caçapava attracted industries that were located along the President Dutra Highway, transforming the rural town of the 1960s into the current mid-sized city. With the intensification of urbanization, Caçapava began to expand in accordance with the development and installation of industries located throughout the city. Gated communities began to appear in Caçapava at this time.

Considering the mapping produced, 71% of urban sprawl is occupied with upper pattern houses (Figure 7). Most of this urban sprawl is gated communities and was built after 2000; 58% of

these new developments were built after 2005. Another important point is the distance of these new developments from the city center: most (90%) are located less than 10 kilometers from downtown.

The city is located between the two major urban centers of the Paraíba Valley, São Jose dos Campos and Taubaté, which places it in a privileged position for facilitating commuting between these two centers of production and consumption. Due to its proximity, the municipality became characterized as a dormitory town, with people who chose to live in these new gated communities working in nearby towns or even living in neighboring towns, but they chose Caçapava as the ideal place to build high-quality recreation areas and farms in a place with easy access, using the President Dutra Highway.

An example of gated communities found in Caçapava can be observed in Figure 7. It is a new development located in a rural area and contains high-standing houses. Some houses can be purchased for approximately US \$250,000.



Figure 7: Gated community located in Caçapava. The high-standing pattern of the houses is evident.

The municipality of São José dos Campos, the most important municipality in the region, has more than 700,000 inhabitants, and 98% of its population lives in the city. Its urban area is the largest in the region (144 sq. km), and its urban sprawl is much more expressive than other municipalities, corresponding to 33% of the total area (47.9 sq. km).

In this city, the process of urban sprawl is an old phenomenon. The first spread began during the 1970s driven by migration as a result of industrial development, which required workers that could not be found in the city. At the time, no local habitation politics directed at low-income population existed. These workers occupied the urban fringe by acquiring cheap lots in the eastern part of the city. After the 1990s, new developments were built in the western part, an area opposite to the first urban sprawl process. This new process was dominated by high-standing gated communities (Figure 8).

Some houses in these communities are sold for US \$500,000 and occupy more than 1,000 square kilometers.

When studying gated communities in São Jose dos Campos, we performed a mapping of different topologies of condominiums. Despite the philosophy hidden in this way of life (e.g.,

proximity of environment, peaceful life, protected by a security system, more space available for recreational areas, distance from downtown), these areas are not as homogenous as we thought, presenting differences in terms of density of occupation, green areas, size of lots, and distance from city center. This research also determined that 50% of condominium residents are not satisfied with their living choice.



Figura 8: Examples of gated communities in São Jose dos Campos: (a) an old high-standing condominium; (b) proximity between houses in a condominium complex. Source: Godoi Maria (2008).

In the city of Caçapava, we also could verify differences among gated communities. While fortified enclaves may seem homogeneous, they can actually be classified by major differences. Distance from shopping centers is a factor that contributes to this segregation: only 8% of the fortified enclaves of the city of Caçapava are located 8 km away from the shopping center, and 20% of the fortified enclaves are only 2 km away. These projects represent a new concept of housing that is being adopted by a society that increasingly seeks to differentiate the patterns of interaction between classes and distance from the chaos of urban centers.

The cities of Caçapava and São José dos Campos are examples of space as a field of debate, expressing more clearly the social contradictions of the current economic system. Diverse and scattered areas in cities increasingly demonstrate the process of fragmentation of the area, with "cities within a city" that are unknown and strange (SPOSITO and WHITACKER, 2006, p. 131-132).

According to Caldeira (2000), the rules that organize urban space are essentially patterns of social differentiation and segregation. Thus, a society that seeks separation from the center is looking for distance from activities that occur in urban areas and the society that participates in them. Therefore, it is understandable why these changes have occurred in the urban space of the mid-sized city of Caçapava and the large city of São José dos Campos.

5 FINAL REMARKS

The results presented in this paper are the first observations of research that is connecting conclusions. Nevertheless, it is possible to affirm that the sub-region of São Jose dos Campos produces a very peculiar model of urban sprawl. Some characteristics are very similar to those found in metropolitan areas of Brazil, such as a mix of social classes in the urban periphery and the existence of gated communities in these areas. However, there are some interesting specificities of the sub-region, e.g., short distance from downtown, lot size, proximity of household, and lack of community.

It is clear that the region studied is influenced by the metropolitan area of São Paulo, and its contiguity to it is making the sub-region an alternative for its population, far from traffic, pollution, and violence. It is important that policy makers comprehend urban sprawl as a process to be included in public policies and to be avoided because cities built as a result of this process are negative to urban ideology.

These features attract people who desire the concept of safe housing, without the day-today urban chaos, and these factors are particularly favored by the acceptance of public officials who encourage organizing urban space. Society will always look for lifestyle innovations, as stated by Professor Milton Santos. The definition of the types of gated communities proposed in this paper is determined according to the desire of different social classes that are served by these new developments. In addition, the state has adopted regulations that allow these types of housing to continue to expand.

Understandably, urban space is constantly changing, but when these changes favor the wealthier in society, enabling them to have the best locations, different socio-spatial conflicts in the city may be generated. These factors can lead to the creation of cities within the city, and increasing the walls.

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