INTRODUCTION

Social-spatial segregation has been one of the most studied issues within the area of urban studies for nearly one century.

The word segregation itself has to do with the idea of the separation of certain social groups within the space of societies. It can be considered as a consequence or manifestation of social relations that are established and based on social structure, stratification, rules and conduct codes in place then. In fact, spatial segregation expresses a larger concentration of a social group in a certain city area.

As regards residential segregation, the possibility of having access to land in different places and at different prices also has to be considered.

At first, the term ‘segregation’ may seem to refer to a self-explanatory phenomenon that requires no definition, for the social division of territory has existed in all cities and villages since remote times in history. A more careful look, however, allows us to note that every social division of space expresses forms of segregation and that the use of this term as a concept depends on the theory adopted to explain the phenomenon.

This paper intends to present the main theoretical approaches regarding urban segregation. It also aims at highlighting the importance of studying the spatial segregation process in order to understand social-inequality manifestations in the city areas. Thus showing how intimately related both processes are.

This reflection has been led by some questions:

- What are the main theoretical contributions to segregation studies?
- Can residential segregation be regarded as a “proxy” of social structure?
- What are the consequences of residential segregation in city areas?

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• Can segregation be measured?
• What are the main methods for studying segregation?

In the past hundred years, reflections about segregation have been influenced by different theoretical assumptions including those of:

- The sociology of the School of Chicago, in the first decades of the 20th century (Park & Burgess, 1925).
- The most recent approach anchored on the paradigm of Global Cities, whose major characteristic is social and spatial duality (Sassen, 1991; Marcuse, 1989; Sabatini, 2006 and Ribeiro, 2003).

I – THE VERY FIRST STUDIES

In the early 20th century, the social analysis of space was developed by the so-called “School of Chicago” and was based especially on the studies by Robert Park and Ernest Burgess who worked on the assumption of social ecology to explain the distribution of the population across cities.

The key idea was that there were “natural areas” where homogeneous communities emerged, with their own systems of values and specific symbolic relationships. According to Park (1926) these “natural areas” were found in every American city of a “certain size”. This ecological model was supposed to reflect the major characteristic of cities, which were organized in concentric circles occupied by administrative, commercial, industrial and residential activities.

In addition to that, the existence of an “urban way of life” (Wirth, 1928) was believed to be the result of this spatial morphology which allowed the identification of the communities that inhabited the city, making up neighborhood units with mutual help and social relationship networks based on reciprocity.

As regards the underlying theoretical paradigm, the idea of concentration of “natural areas” takes us to Durkheim’s concepts of Community and Society, sociability forms and social division of work (Durkheim, 1960). Based on such
concepts, segregation is understood as the specific location of a certain social group relative to others. Spatial distance is then regarded as an expression of social distance.

Individuals therefore are thought to group according to racial, ethnic affinities and social position as a means to protect themselves from the fragmenting effects of the individualization brought about by living in cities. In this sense, residential segregation is believed to be the product of individual logics, that is, the effect of individual choices (Park, 1926).

II - THE MARXIST DEBATE AND ITS INFLUENCE ON RECENT ANALYSES

According to a different conception inspired by Marxist Sociology, segregation is the expression of social inequalities within the territory of cities, and reflects the unequal appropriation of land, goods and services by different social classes. (Lojkine, 1979)

Residential segregation is therefore thought to have characteristics that are specific to capitalist societies. It is also thought to be the result of the social struggle, which in turn accounts for the unequal appropriation of the territory, consumer goods, and housing in its different forms.

Whereas neo-classical thinking considers the individual abilities and choices as the determining factors for the occupation of certain locations within city territories (Richardson, 1977), urban Marxist sociology emphasizes the role of the State as one of the social agents that contributes the most to urban structuring.

Marxist authors propose that the State should not be considered as a mere agent that acts on technical grounds, but one whose actions are guided by ideological imperatives.

Based on this current of thought, the State plays a key role in the social division of space in cities. At times the State is identified as a ruling-class interests representative, and analyses are also carried out where the State appears as an arena where the class struggles take place and where capitalist society contradictions are reproduced (Castells, 1977, Lojkine, 1979, Harvey 1989).
More recent analyses refer to the impact of globalization on cities and the increase in residential segregation. Three mechanisms are frequently regarded as the causes of the phenomenon (Sassen, 1991; 1994)

- *Dissemination of liberal ideas* throughout the planet caused by globalization which has prompted changes in urban policy regulatory model and contributed to the liberalization of the land market.

- *Real Estate prices* that have become one of the most important mechanisms to distribute and determine the residential venues within the city territory. Thus reinforcing the importance of income inequalities as concerns the appropriation of urban space (M. Smolka, 1992 & 2002).

- *Privatization of urban services* which increases inequality in access to public services and collective equipment, especially as regards the quality of such services.

All these factors are believed to contribute to social dualization, which is an effect of the production restructuring and transformations brought about in the urban space.

Moreover, recent studies on segregation and social-spatial inequality take into account the fact that spatial transformation in large cities has different origins, and varies according to the social and historical matrix of each country which implies the need to further reflect on the issue.

According to Sabatini (2006) “residential segregation consists of a spatial relation: territorial separation or proximity between persons and families that belong to the same social group, whatever its definition may be”. Therefore, although residential segregation is related to income and social differences, and may influence them - increasing or reducing inequalities by enabling contact between different social groups - the concept refers to a phenomenon with an essentially spatial nature.

It is also worth noting the difference between geographic (spatial) segregation and sociological segregation. There are cases where there may be a greater level of sociological segregation and a lesser level of geographical segregation (White, 1983).
In regard to this, two paradigmatic examples may be mentioned: the cast system in India and the coexistence of different social classes in the Brazilian coast cities, whose beaches are considered democratic leisure spaces. Besides that, the proximity between *favelas* (shanty towns) and high-income neighborhoods (such as luxury gated communities and condos) in many Latin American and Brazilian cities, are good examples of situations that combine physical proximity and social distance (Marcuse, 1989; Ribeiro, 2003; Pasternak & Bógus, 2003).

**III - THE RESIDENTIAL SEGREGATION AS A “PROXY” OF SOCIAL STRUCTURE**

A very important aspect in analyses on segregation has to do with the formation of spaces with a high degree of social homogeneity both in rich and upscale areas and in run down areas with a large concentration of poor people. The formation of these areas fosters the emergence of subjective perception forms about highly segregated places of residency (Sabatini; Sierralta, 2006).

These perceptions may be positive, in terms of the prestige that some exclusive areas attach to their inhabitants and/or usual frequenters, and negative, in the case of degraded urban areas which are marked by a certain “malignancy” that stigmatizes their inhabitants.

The run down neighborhoods are found in most contemporary capitalist cities, and, as is the case of many North American cities, may have characteristics of a de facto ghetto, with ethnic tones, as stated by Wilson (1978) in his studies about the issue.

In the case of low prestige segregated areas, social exclusion is also considered by many authors as a phenomenon that is closely linked with residential segregation. In those areas the occurrence of various processes related to urban poverty (e.g. unemployment, low income, illiteracy), feed each other creating a vicious cycle that is difficult to break (Katzman, 1999).

In the run down inner metropolitan Brazilian areas, as in their peripheral zones, unemployment rates as well as family disintegration, drug consumption and
criminality have rocketed mainly among young people. Two sets of factors may be mentioned as accountable for this situation in the last thirty years:

- *Changes regarding production restructuring and increased competitiveness among markets as a result of the globalization mechanisms.* These changes caused the elimination of jobs, the dismantling of the social security protection system, the extinction of collective work contracts and the increase of informal labor (Sassen, 1994).

- *Factors related with conditions of class.* In several Brazilian metropolises - mainly in the São Paulo Metropolitan Region - inner urban areas and peripheral zones which are strongly marked by the traits of exclusion, have overlapping needs. The outcome of this is that only the low-income-class families tend to remain in the degraded inner city areas in a segregation process centered basically on poverty (Bógus and Pasternak, 1999).

Segregation takes the form of spatial and social isolation due to the distance from territories that are well equipped in terms of urban services and cultural equipment. Higher levels of family disintegration and social disqualification were also pointed out by Castel (1995) and Paugam (1991) for European cities.

This attests to the reach of globalization harmful consequences as social exclusion is reproduced in a similar manner in different nations, thus bringing about new forms of segregation in the space of cities.

**IV- SOCIAL-SPACIAL SEGREGATION AS AN OPERATIVE CONCEPT**

It is vital to consider the need of improving efforts to fully understand the segregation scope concept and its explanatory power, as well as the reach and the limits of residential segregation as an operative concept. In this sense, time length, process nature and territorial dimension of the phenomena must be taken into account.
Whether in European, North American or Latin American contexts, unequal and/or polarized access to society’s opportunity structure within cities reinforces and is in turn reinforced by the spatial segregation of different social groups.

Segregation then produces two types of consequences:
- Creates opportunities in city’s elite areas;
- Blocks opportunities of access in areas that are more vulnerable to poverty and social exclusion.

According to Katzman (1999) the “neighborhood effect” (which grows stronger as spatial segregation grows) may increase or block opportunities of work, employment and access to formal education, thus fostering or blocking social mobility. Such effect is applicable both to elite and poor areas.

The studies on residential segregation help us understand the social-spatial processes that account for the structuring of cities and the mechanisms that produce interaction and sociability among different groups and social classes.

In such context, it is essential to consider the importance of territory-related urban policies. They allow cities to fight against the mechanisms that produce urban residential segregation and/or minimize its effects. The policies enhance social blending in cities increasing access to urban services, thus reducing socio-spatial inequalities (Torres e Marques, 2004).

V- SCALES, MESURES AND TYPOLOGIES TO ANALYSE SPATIAL SEGREGATION:

Some remarks are to be made concerning the scales of spatial segregation and the ways used to its measurement. In Social Sciences the procedures to measure the unequal distribution of social groups across the space of cities have been discussed by geographers, urban planners, sociologists and economists.

As of the mid 20th century, many studies proposed a series of residential segregation quantitative indicators. Among these, we may highlight those on
dissimilarity indexes (Duncan and Duncan, 1955) and on exposure indexes (Massey, Denton, 1988).

According to Sabatini (2006), the degree of concentration and territorial dispersion of different social groups and the greater or lesser social homogeneity of each city area (considered by him as the two “objective dimensions” of segregation), have been studied in its most by means of indexes that refer to the composition, per group, of city residents.

The primary statistical methods used to measure are the above mentioned indexes of dissimilarity (which reflects the spatial concentration of a group) and exposure (which measure the degree of social isolation of the group).

The limitations and the explanatory power of these two statistical methods are discussed in depth by Sabatini (2006:174-190). In addition to case studies of a qualitative nature that can allow the capture of segregation “subjective dimensions”, the author highlights the importance of conducting empirical quantitative work that can contribute to improve measurement techniques.

Quantitative analyses with the employment of statistical techniques and methods were developed, at first, in the studies on factor ecology in the United States (Rhein, 1994). In France, the first of such papers was published in the early 1970’s, and among the more recently studies N. Tabard (1993) and E. Preteceille (1992) are especially worthy to be mentioned.

Preteceille (2004:16) also made an important contribution when he pointed out a disadvantage of using these indexes: the fact that they can hardly be used to tell whether there is more segregation in one city than in another one, an issue that becomes even harder to be resolved when comparing cities in different countries.

A widely used approach nowadays is the typological approach. It allows the grouping of spatial units studied in “types”, “classes” or “clusters” which are defined according to the similarity of distribution profiles of different social categories that are present in each of the social units considered (Sposati, 2000; Preteceille, 2004).

With the use of factor analyses, these typological studies can capture the social-spatial structure in its complexity, thus overcoming the consideration of binary oppositions between the categories of dissimilarity analyses.
Not only do these studies consider the social-spatial structures in their complexity as a proxy of the social structure, but also define types of spaces that can be analyzed according to several dimensions and in a longitudinal fashion. However, the major advantage of such studies is the possibility of analyzing changes in social-spatial segregation patterns in time and in the different contexts compared, considering the incidence of conjunctural phenomena, including the effects of public policies (Preteceille e Ribeiro, 1999).

In the case of Brazil, the use of this methodology allowed the development of a networked research – led by Ribeiro since 1998 - in order to compare the behavior of segregation and its patterns in the main metropolitan regions during the last 25 years (Ribeiro, 2005). In this study, the variables selected to compose the typology were: income, schooling and occupation of residents of areas and cities studied. Once combined, these variables made up an index: the social-occupational category.

The homogeneous areas were built based on factor analyses. The use of the same data source (the demographic censuses) and the same methodology guarantee the comparability of the studies among metropolises. Quantitative data are also supplemented by qualitative analyses allowing to capture the “subjective” dimension of spatial segregation by means of case studies (Ribeiro, 2005, Preteceille and Ribeiro, 1999).

Regarding São Paulo Metropolitan Region, the use of this methodology has inspired and enabled the work of Pasternak and Bógus (1999;2001;2007), that has followed the process of social spatial segregation up throughout the last 25 years. This study came to be added to other empirical studies led by Sposati, (2000),Sposati and Koga,(2003) linking the segregation processes to different forms of social exclusion observed in Brazilian cities since the 1980’s, as a result of social economical changes.

The group of these recent studies using the geo-processing have enabled the mapping of variables referred to urban poverty, showing thus the areas where segregation occurs the most.
FINAL REMARKS

To conclude, it is worth highlighting that even when the studies on social-spatial segregation are based on different theoretical frameworks they invariably point out to the negative consequences of the social groups’ involuntary isolation in certain spaces within cities whatever the cause of such type of isolation.

Even in the case of voluntary isolation of high-income groups in residential gated communities the disadvantages may be related to the restrictions imposed to forms of sociability frequently restricted to intramural areas (Caldeira, 2000) or to adjoining areas as a defense reaction against what has been gaining ground in third world cities: violent sociability

A deep knowledge of spatial segregation and its manifestations in cities is a crucial tool to enhance public policies designed to fight the expansion of spatial segregation and the related social-spatial processes.

The State, through its multiple forms of action, interferes in the mechanisms of space production, whether through the expansion of the public services network, private enterprises support, or specific legislation concerning land-use and occupation. This promotes the increased value of certain areas and/or the devaluation of others, bringing about consequences for the resident population, and interfering also on the segregation generator mechanisms.

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