Sociospatial segregation and education in the municipality of Campinas

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Introduction

The pattern of urbanization that took place in the Metropolitan Region of Campinas, in the State of São Paulo, Brazil, especially in its central municipality, Campinas itself, resulted in a complex territory that reflects the contradictory characteristics of the nature of economic growth and, as a consequence, the unequal distribution of wealth. This growth resulted in a process of occupation that, in turn, led to the growth of areas occupied by upper- and middle-income classes, especially under the form of gated communities, and high demographic concentration in these types of locations. Simultaneously, there was a concentration of poverty in the region's periphery, characterized by substandard urban infrastructure. In addition, shantytowns grew up on public and private land throughout the entire region (NEPO/NESUR, 2004).

Likewise, as has occurred elsewhere in Latin-America, such as in Santiago, Chile (Sabatini, Cáceres and Cerda, 2001), the spatial distribution of Campinas is characterized by a concentration of the wealth in more or less heterogeneous spaces in the region, whereas the poverty tends to be more uniformly concentrated in a very large area in one portion of the city, the southwest (Cunha, Jakob, Jimenez and Luhr, 2004).

As the city expands and creates increasingly segregated spaces, problems related to the quality and access to public services also result in new challenges for planners, especially in their responsibility to guarantee greater equality to citizens.

In this study, which deals specifically with the issue of education, the authors have sought to analyze the relationships that exist between socio-spatial segregation in the municipality of Campinas and certain indicators that reflect the quality of the infrastructure and the performance of students in state schools.

Based on data from the School Census[1] carried out by INEP/Ministry of Education, and SARESP, for 2000, the analyses presented here suggest the

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[1] The Brazilian Federal School census collects data on approximately 52,000,000 students and 266,000 public and private schools distributed throughout 5,507 municipalities in Brazil. The National School File [*Cadastro Nacional de Escolas*] is updated annually by the school census, through which information is obtained on the situation of the functioning and infrastructure of educational institutions, on the forms of organization in education, and on migration and performance among schools, as well as data referring to both students and personnel. The recent level of efficiency and

existence of an important effect of segregation on the quality of the education provided in Campinas. The mechanisms which cause this situation are also discussed.

I. Characteristics of public elementary education in Brazil

According to the Law of Guidelines and Bases of National Education (Law No. 9394/96, also frequently referred to as LDB), "Education for children is comprised of:
I - Basic education, consisting of pre-school education [*educação infantil*] (ages 4 to 6), elementary education [*ensino fundamental* (as of age 7, grades 1 to 8)], and secondary education [*ensino médio* (grades 9 to 11)];
II - Higher education [*ensino superior*]."

Besides these more common levels, other modalities of education also operate in the country, namely, special education, education of youth and adults, and professional education, as shown in Chart 1.

Since Brazil is a presidential republic administratively divided into 26 states, the Federal District and 5,506 municipalities, public schools may be either federal, state or municipal, depending on the level of operation. This vast system is highly decentralized in nature, consisting of 27 state systems and approximately 5,506 autonomous municipal systems.

The educational legislation defines public elementary education as the basic responsibility of the municipalities, that is, of the educational systems maintained by the municipalities. However, the state governments should set up forms of cooperation with municipalities in order to address the demand.

Elementary education lasts for eight years, and the government must offer public education to the population free of charge beginning at age seven, at the latest, although students may also qualify at age 6. The Law of Guidelines and Bases of National Education is quite flexible and gives the three levels of government (federal, municipal and state) and private enterprises the responsibility for deciding on how their schools will be organized. For this purpose, educational establishments may "be organized into grades by year, semesters, cycles, regular rotation of periods of study, non-graded courses based on age, competence or other criteria, and various other forms of organization depending on the needs of students in each locality." (Article 23)

The law also provides that the yearly minimum classload be 800 hours, distributed during at least 200 school days of actual academic work, not including time reserved for final examinations.

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credibility attained by the INEP in organizing educational information and statistics has favored the broad use of this type of tool for formulators and executors of educational policies. In fact, the programs and projects carried out through the FNDE are based on the diagnoses resulting from the statistical studies on basic and higher education, indicating the close connection between the system of information and the management of educational policies. The data obtained from this census is also used to calculate the resources to be allocated to Fundef.
Like all studies concerned with the reliability and validity of their results, and given the need to comply with the legal timeframes, the school census consists of a complex system of operations, and it is feasible only in view of the partnership established between INEP and the Departments of Education of the 26 states and the Federal District. Also important is the cooperation of the school community, which is responsible for filling out the questionnaire. It should also be noted that, since 1997, the results of the school census have been published the same year that the census is taken.

Schools in the state systems offer classes in up to three periods: two periods of five hours each during the day, and one evening period of four hours.

The co-existence of different educational systems directly reflects the diversity found among educational establishments in terms of their human, physical and material resources. This diversity can also be seen within the educational systems themselves, as we shall see farther below. In regard to teachers and other professionals of education, the law requires that each system give importance to its professionals by establishing by-laws and career plans (Article 67). For this reason, there is no single standardized set of laws that covers all professionals of education. These professionals are divided into six fields of work: teachers, administrators, planners, supervisors, inspectors, and guidance personnel (Arts. 62 and 64, LDB).

The forms for contracting personnel and determining their schedules in public schools is treated in internal norms of each educational system, and of the administrative sphere that hires them (the federal, state and municipal systems, and private schools). Persons may only be admitted into careers in public systems through competitive public selection processes.

There are three ways to fill managerial positions in the public elementary and secondary schools: a) through competitive selection processes; b) through indication by the mayor or governor, based on the person's qualifications for exercising the function; and, c) through competitive selection processes combined with indication by the principal.

The public schools themselves are managed at random and are extremely unstable in this aspect. One aspect of this fact is that the principals do not select the personnel who will work on their faculty. Placement is by choice of each individual teacher, who may then remain at the school as long as he or she wishes. This way of setting up faculties results in constant turnovers of both teachers and principals, making it impossible for the schools to consolidate stable teams of teachers and long-term educational projects.

In 1990 Brazil implemented a system of outside evaluation of students, known as the National System for Evaluating Basic Education [*Sistema Nacional de Avaliação de Educação Básica*]. This evaluation test is applied bi-annually by the Ministry of Education. Performance evaluations are carried out every two years on representative samples of students in public and private schools. The results of the performance tests in mathematics (2001), for example, showed a percentage of students in state schools at the very critical level, namely, 32.2%, whereas in the private schools this level was only 1.9% (MEC/april/2003). The results of these official performance evaluations make it clear that, even though state schools do not charge tuition and are providing ever greater numbers of openings and schools for elementary and secondary school students, the quality of the education is far below the minimally acceptable standards.

In the case of the municipality of Campinas, in 2000 the state was responsible for 75% of the students registered in elementary schools. Elementary education in the state system is organized into two cycles (first to fourth grades, and fifth to eighth). Tables 1 and 2 show the number of students registered in each of the two cycles, according to students' ages.

Table 1

Table 2

The principals and other administrators at the primary and secondary schools of the State of São Paulo are chosen by competitive selection processes.

In 1996 the São Paulo State Department of Education implemented its own system (*SARESP*) for broad-scale outside evaluations. [1]The objective of this system is to maintain a system for evaluating the performance of elementary and secondary school students in the various subjects on the curriculum. Its performance evaluations are applied at all state-run schools and optionally at public city-run and private schools. Tests were applied at the beginning of each year from 1996 to 1998, being characterized as evaluations of the students entering each grade. A new system was adopted in 2000 whereby students were tested at the end of the respective school year, and is now called the final evaluation.

The information obtained serves as a diagnosis to aid the schools in their planning. It is especially important for establishing curriculums in Portuguese, mathematics, science, history and geography, as it indicates critical aspects in the curriculum that require rapid intervention and priority by teachers, schools, departments of education and the entire educational system.

Saresp also provides information on intervening factors related to school performance and establishes relationships among them, such as relationships between the characteristics of the school and the students' interests.

II. Sociospatial segregation in Campinas: a brief description[2]

Before beginning this brief presentation of the process of sociospatial segregation identified in Campinas, it might be well to bring up a few methodological considerations as to the meaning of this phenomenon and how it is measured.

Although studies on segregation of housing in the United States often examine spatial differences from the perspective of populational groups categorized according to color, populations can also concentrate geographically according to their socioeconomic position, age and/or ethnic group (Frisbee and Kasarda, 1988). In the case of Brazil, it is evident that socioeconomic position is, without the slightest doubt, a better predictor of a person's residence than his or her color. (Telles, 1992 and 1995). In any case, no matter what variable is used, it can be safely said that residential segregation refers to the phenomenon where two or more social groups live in areas that are physically distant from one another in the urban fabric (Massey and Denton, 1988). It is important to recall, however, that residential segregation (that is, physical distance) is not necessarily equivalent to social exclusion (that is, social distance), although it can be considered an indicator of this process (as argued by Park, 1967). Nevertheless, researchers have accepted the idea that residential segregation is a complex phenomenon and should therefore be evaluated from multiple angles.

Five dimensions of segregation are identified in an article by Massey and Denton on residential segregation in the U.S.A.: instability, exposure, concentration, centralization, and grouping (Massey and Denton, 1988; Massey and Denton, 1989). However, as other researchers warn (such as Sabatini, 2004), not all these five dimensions of segregation are applicable to studies on urban areas in Latin America.

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[2] This section is based entirely on Cunha and Jimenez (2006).

Considering the specific character of this study in relation to the need to associate the locations of households with the conditions of the schools and the average income of the students who live in the neighborhood, it was decided to emphasize only one of these dimensions, namely, "grouping." Grouping refers to the way a population is distributed in space, and is related to the question as to whether the sub-areas occupied by a part of the population with the same characteristic (being poor, for example) are spatially close together or dispersed throughout the urban area.

For the effects of the present study, the Local Moran Index was used as a measure,[3] since it allows one to identify the areas of concentration of poverty and of wealth on an intra-urban level, known as the "hotspots" and the "coldspots." [4]The Global Moran Index, on the other hand, sums up the local indexes and indicates the degree to which the characteristics of a given area are sufficient to predict the characteristics of its neighboring areas. (Anselin, 1995)

Even though this indicator has some analytic advantages, it too is affected by the choice of the area and the scale by which the segregation is measured. The problem of the variability of the units of areas (MAUP) often appears in spatial analyses because of the arbitrary nature of the designation of the spatial units (for example, census areas). In fact, as usually occurs, including the present case, spatial units are arbitrarily designated on the basis of methodological facility, and do not reflect the neighborhoods where people live.

To attain the objectives proposed here, data from the Brazilian Demographic Census of 2000 at the level of census sectors (the lowest level of information available) was used.

As for the indicator to be used as a standard for characterizing segregation, in view of the limitations of the use of income levels or other rates, such as poverty line,[5] a combination of indicators is used in this text that reflects not only the main characteristics of the human capital in the households, but also factors related to the quality and the composition of the houses and neighborhood.

Two sets of indicators of socioeconomic position were used. As was done in the study by Torres, Marques and Ferreira (2002), a factor analysis was carried out to obtain, for each census sector, concise poverty indexes on the basis of the "factorial scores" of the significant factors identified. Three distinct factors were arrived at, namely, socio-economic position (or poverty factor), characteristics of the neighborhood, and family life cycle. For the effects of this study, only the first factor was taken into consideration.

II. 1. Campinas: a city divided between rich and poor

The first observation to be made regarding the process of segregation in the region of Campinas is that the rates attained in the municipality itself were

[3] The well-known Dissimilarity Index is frequently used in studies on segregation. Although it is a fast and easy way to synthesize segregation, it does not deal with distribution of the population within a territory. That is, it consists of measurements that do not take space into account. The use of this type of indicator therefore tends to mask the differences in levels of segregation present in an urban fabric.

[4] In general, a "hotspot" can be described as a zone where a sub-area (in this case, a census sector) with high levels of the variable chosen for the analysis is surrounded by others with similar values. In contrast, a "coldspot" is a zone where sub-areas with low levels of the variable in question are surrounded by sub-areas that also show low values.

[5] See broader discussion in Cunha and Jimenez 2006.

very similar to those seen in the metropolitan region in general. This means that, on the one hand, the city of Campinas also shows a clear definition of agglomerations of affluent and poor households, even though, in certain regions, especially those closer to downtown, this division is not so clear. On the other hand, this result shows that the situation in the metropolitan region as a whole does in fact reflect, in general, what has been taking place in Campinas itself.

It should also be noted that the Global Moran Indexes show a slight reduction in the degree of segregation, especially regarding the socioeconomic level, which will hereinafter be referred to generically as the "poverty index" (Table 3). This reduction does not necessarily reflect any improvement for the needier sectors of society, and much less any greater social "blend," as will be seen farther below.

Table 3

In fact, the spatialization of the Local Moran Index makes it clear that there is a very broad separation between rich and poor in Campinas. For the effects of this analysis, the poverty index shows a clear and unmistakable division in the city between the locations of housing for the population with the lowest living conditions, and for the more comfortable.

In this regard, there is a clearly delimited and uniformly poor zone in the southwestern portion of the municipality and in the extreme eastern portion. On the other hand, the central areas and the neighborhoods to the north and northeast of Campinas are populated primarily by the brackets with higher income and better material living conditions in general (Map 1).

Map 1.

It is also interesting to note that this division, so clearly separated in geographical terms by the Anhangüera Highway,[6] is related to historical determinants involving the process of urban occupation that, in its early stages of growth, reserved the central areas of the city to the higher-income population, and the areas considered less aristocratic (to the south of the highway) to the poor population. More recently, the areas of fertile land (to the north of the highway), which, were so valued for agriculture in the past, especially for coffee plantations, began to be occupied by new forms of settlements, especially, the so-called "gated communities."

In view of the situation described above, the authors of this study sought to analyze the relationship existing between this sociospatial configuration and the conditions of the state elementary schools in the municipality, based on two aspects: their infrastructure and the average performance of their students. In the first case the data was obtained from the School Census of 2000, published by INEP. In the second case, the average grades attained by the fifth grade students of each school on the SARESP test, in mathematics[7] and Portuguese, also in 2000, were considered.

[6] Via Ananhgüera is a major highway connecting the city of São Paulo with the northern region of the State of São Paulo, and passes through Campinas.

[7] Barbosa (2005) asserts in his investigation on the relationships between the quality of schools and the results of the students, that the evaluation in mathematics made it possible to better detect the influence of school factors, whereas the language test (Portuguese) proved to be more sensitive to family variables.

This analysis is based on the assumption that school performance is related to a multifaceted set of variables. This has usually been explained either by, a) the individual characteristics of the students; b) the formal education of the parents, income levels, ethnic group, etc.; and c) by the characteristics of the schools, as can be seen in the most recent literature on the determinants of the number of years school was attended, and school performance.

In regard specifically to the role of the school, there is a line of research that has emphasized that the school performance of the poorest is influenced by the performance of those who are better off economically, when students of different social groups are mixed together in the same schools. This type of approach is suggested by Flores (2006), for example, who presents data gathered in Santiago, Chile, and it would seem to encourage an interesting line of investigation. However, this situation might be a little different in the case of Brazil because the public schools are mostly attended by the lower-income population.

In addition, to understand educational performance one must also realize that one very important factor is the location of the schools whether they are in the rural areas, in small or medium-sized towns, or in densely populated areas. In our case, this means that the location of the schools in intra-urban space should have strong impacts on students' performance, regardless of other factors.

In the case of the municipality of Campinas, 58% of the elementary schools [*Ensino fundamental* - 1st to 8th grades] are operated by the São Paulo state government and 15% by the municipal government, while 27% are private (Table 4). As can be seen in Map 2, the distribution of the schools clearly shows the reality of the sociospatial segregation that exists. It is very clear that the great majority of the private schools are located in the affluent neighborhoods, a fact that stresses the characteristic, mentioned above, that public schools tend to be frequented by students from the poorer classes.

Table 4

Map 2

The importance of public education in the municipality, especially the education controlled by the São Paulo State Government, can also be analyzed by looking at the distribution of registered students. Table 5 shows that 84% of the students in elementary schools in Campinas were at public schools (60% in state-run schools).

According to Barbosa "these results are compatible with the hypotheses raised by Bourdieu (1979) on the different levels of the process of socialization. The formation of the primary *habitus* would seem to occur on the basis of family life, which is also responsible for the stronger or weaker mastery of the native language. This means that the evaluation of performance in language is highly affected by the socioeconomic position of the students' families, as was also shown by Basil Bernstein. It is obvious that performance in mathematics is a more clearly and strongly taught subject, and is therefore more susceptible to the characteristics of the schools where the children study." (p. 111) (Barbosa, Maria Ligia de Oliveira: *A qualidade da escola e as desigualdades raciais no Brasil*, in Beltrão, K et al: *Os mecanismos de discriminação racial nas escolas brasileiras,* IPEA and Ford Foundation, 2005.

Table 5

However, in view of the data available, the present analysis will concentrate only on the state-run schools. This choice immediately imposes a limitation on the study because the comparison between state-run and city-run schools could probably shed more light on the analysis.

In a study on the quality of the public school system and other aspects, Rus Perez (2000)[8] described the great heterogeneity existing during that period. Based on this study, Rus Perez noted that the public schools in the State of São Paulo were far from being uniform. According to him, however, this fact would not justify people going about decrying the calamity of schools in general. There are distinctions within the systems. In other words, some schools are able to provide a good-quality educational product and others fail to provide their students with even the minimum opportunities for progress.

Also according to Rus Perez, several hypotheses could be raised to explain the origin of this distinction, such as the age of the school and the fact that construction standards for school facilities changed with time due to factors related to the financial resources available. The location of the schools is another important factor, since those in the more central regions of the city indirectly benefit from the usually better infrastructures existing in these neighborhoods. The constitution of more stable team of teachers and other professionals, who are better organized and better able to obtain resources from intermediate organs of the State Department of Education and from the city governments. In addition efforts by parents' and teachers' associations are also significant, and such associations differ from one another according to the social origin of their clienteles.

Among the intervening variables in the process of differentiation among schools, the urban agglomeration where a school is located can also play an important role. Schools in small municipalities in the interior of the state have better chances of receiving support from their respective city governments and schools run by large municipalities in the interior and in the metropolitan region tend to be larger. In addition the faculty at schools in the large cities in the interior often have greater numbers of certified teachers, and parents are often quite active at schools in small municipalities in the interior of the state.

However, Rus Perez's analyses indicate that the heterogeneous character of schools is closely related to the social backgrounds of their students. According to him, this represents a vicious circle, or a beneficial circle. Most of the bad schools are attended by students with lower social origins. But there also seems to be a negative process of discrimination of schools, especially in regard to those located in outlying areas. According to Rus Perez, this occurs not only when one distinguishes a good school in a middle-class neighborhood from a school in an outlying area. It would seem that there is a process of discrimination of schools even among the populations of the respective neighborhoods, with the poorer students ending up attending the more poorly equipped schools.

The data analyzed here for the year 2000 seem to show that the conditions described by Rus Perez in 1991 continue valid in the 21st century. It would be no exaggeration to state that, since public schools operate on the basis of a single educational policy (same wages, forms of access and composition of faculty, school

[8] This analysis was carried out on the basis of a study conducted in 1991, whereby questionnaires were mailed to principals of public schools operated by the government of the State of São Paulo, based on a large sample (630) of state schools. The rate of return of the questionnaires was 39.6%.

lunch programs, educational material, training of teachers, etc.), there would be no reason why these schools, especially those operated by the state government, which are being analyzed here, should be especially heterogeneous, at least from the point of view of their infrastructures.

However, the information on schools in Campinas show that there are major differences from one school to another and, more importantly, that this difference is closely related to the location of the schools within the municipality.

As can be seen in Map 3, the "hotspots" of poverty (in red on the map) do truly tend to show the highest concentrations of poorly equipped schools,[9] whereas the better or best equipped schools are closer to the central area and/or located in areas where the more affluent live. It can therefore be seen that most of the schools with the lowest quality (such as those that have only one piece of equipment) are located in the peripheral areas of the municipality, although some are located in the central region. This does not mean, however, that better equipped schools cannot be found in poorer areas.

Consequently, this dimension in itself indicates a significant difference among schools and the effect of their location on this situation, even though this simple fact did not explain why this is true.

9 The following pieces of equipment were considered in this study: sports court, science and computing laboratory, and library.

Map 3

Table 6 complements the information presented on Map 3. It shows that approximately 45% of the state schools are located in the "hotspots" of poverty, while only 18% are located in more prosperous areas of the city. They also show the strong heterogeneous character seen in 2000 among schools in Campinas, especially in regard to their having a data-processing laboratory.

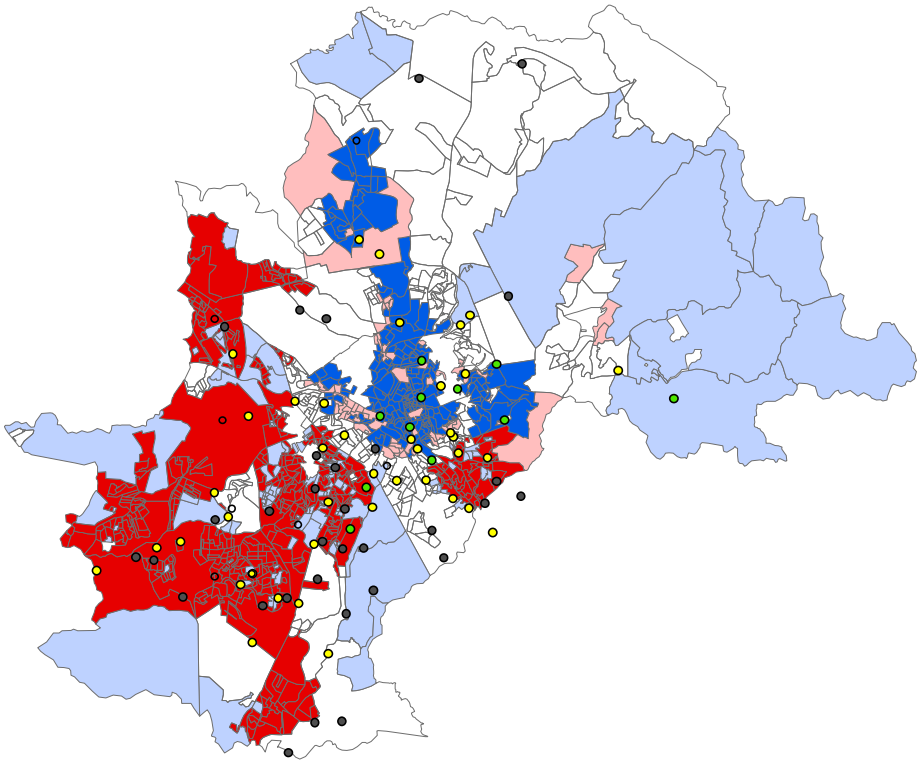
Table 6

The other aspect related to the schools considered in this analysis is their students' academic performance. The first point to be noted is the low average scores attained by the students in the municipality (Table 7), with the lowest score of all being in mathematics. However, even with this low average, significant differences can be noted among schools, especially if one compares the more central schools with those located in the hotspots of poverty.

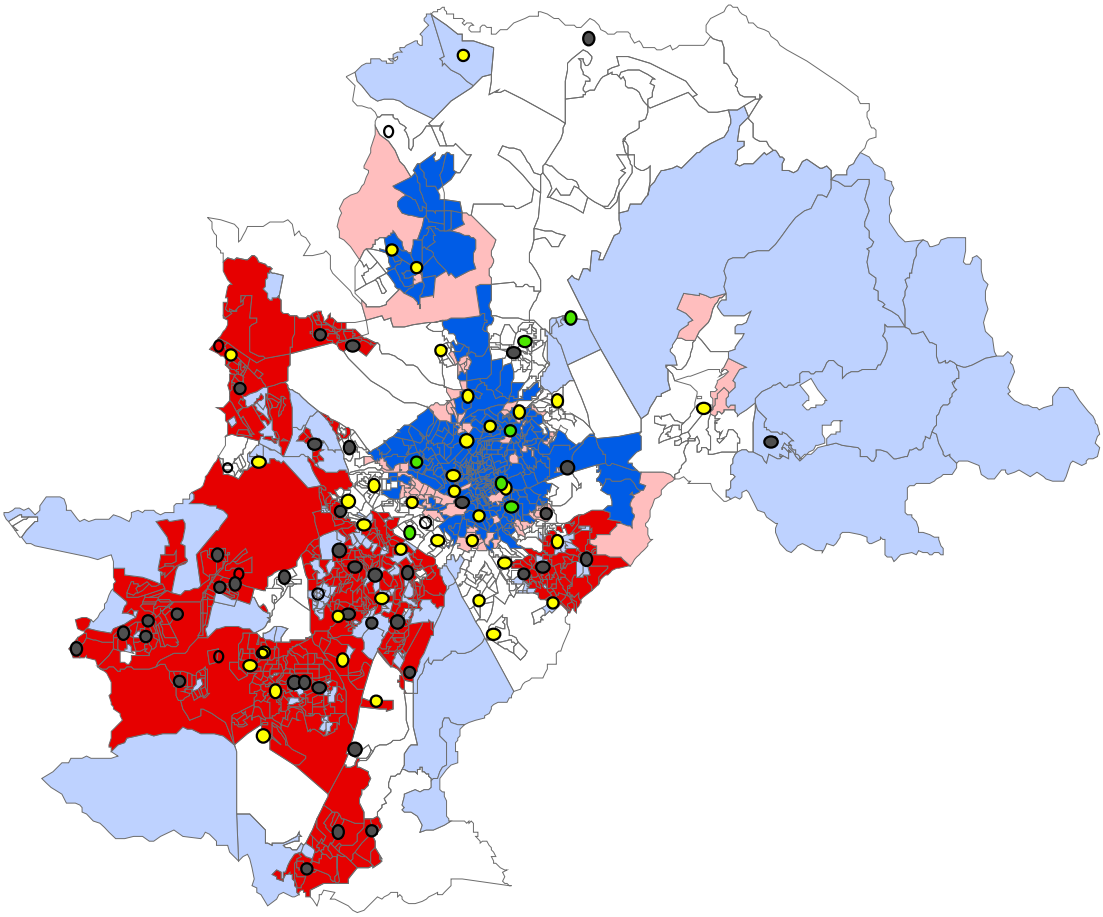
As can be seen in Table 7, there is a considerable difference between the grades attained in the hotspots of poverty and those achieved in the cold spots. This fact can be best visualized on Maps 4 and 5.

Table 7

As was noted on the basis of the analysis of the school's equipment, Maps 4 and 5 also show the high correlation between school performance and the location of the school in the city. The maps show that, in general, the lowest grades (lowest third) were found in the most distant and poorest outlying areas.



Map 5



State-run Schools with 5th to 8th grades

Av. Math Scores (SARESP-2000)

- No Data
- 28.13 - 42.18
- 42.19 - 56.24
- 56.25 - 70.30

Census sectors (2000)

Poverty Indicator (2000)

- Not Significant
- High-High
- Low-Low
- Low-High
- High-Low

Another observation would also seem to be in order. Although a number of public schools are located in the central region of Campinas, this does not prevent many students living in the periphery from attending them. Luhr and Cunha (2004) showed this fact very clearly when discussing the case of one of the oldest schools in Campinas (EE Gomes), located downtown and, therefore, in one of the richest areas in the municipality. But this fact does not reduce the importance of the results presented here since the law (which is hard to enforce) requires that children study at schools as close as possible to their homes. In fact, very few students in Campinas frequent schools located far from their immediate neighborhood. This fact can be verified on the basis of the information collected in the origin/destination survey[10] carried out in the region in 2003.

Lastly, as a way of demonstrating the statistical relationship between the location of schools and school performance, a linear regression model was built up to estimate the effect of location on academic performance (Table 8). This aspect was represented by each school's average scores on the Saresp Test. The predictive variables were the location of the school (represented by the Moran Local Index), the characteristics of the head of household, the average number of years studied, monthly average income, and the characteristics of the school. All these variables are dichotomic for the existence or not of the equipment.[11] The result of this exercise can be seen in Table 8.

Table 8

As can be seen here, the most important predictor was spatial location, which surpassed both the characteristics of the head of the household and those of the schools. Therefore, when all other variables are controlled, the fact of being located in a hotspot of poverty lowers a school's average on the Saresp Test by more than two points.

Another important variable is in regard to the existence of a computing laboratory. In fact, it is felt that, rather than indicating that the presence and use of computers implies improved performance, this result could also be understood as an indication of the impact that a school's infrastructure, size and characteristics of management have on the performance of its students.

Therefore, from the statistical point of view as well, there is a clear indication of the effect that the location in the city may have not only on the quality of a school's facilities but, primarily, on its students' performance.

Tentative conclusions

[10] The origin/destination survey was performed for the first time in the Campinas Metropolitan Region in 2003 by *Companhia Paulista de Planejamento Metropolitano S/A* (EMPLASA). This organ of the State Department of Economic Planning has the task of measuring and qualifying the daily commuting carried out by persons within the region.

[11] The limitations of this model are clear. The information made available fail to indicate the individual data of the grades on the Saresp Test and of the respective heads of households. The results are a mere approximation and an analysis that runs the risk of being called an "ecological fallacy."

The urban system of the Campinas Metropolitan Region shows a pattern defined by social, demographic and economic segmentation and distinction, as well as by the expansion of peripheral areas with low quality of living, substandard housing, and deficiencies in urban infrastructure and social equipment. Public schools (the focus of this study) stand out especially in this area of problems in infrastructure.

There seems to be consensus that education is one of the factors that contributes to reductions in inequality in a country's income distribution. Schools are therefore an essential aspect for providing opportunities, especially to children from low-income families. Schools could contribute to the minimization of sociospatial segregation, which is an important characteristic of these regions.

By using an analytic approach that enables researchers to advance in the understanding of the sociospatial distinctions that exist on the intra-urban plane, the authors hope to have provided information that may contribute to the formulation of social policies, especially in the area of education. It is presumed that such policies will aim at increasing the capacity of families to react to the many risks existing in the urban space.

However, it was seen that mechanisms of segregation operate intensely, even when policies are universal and therefore presumably offer the same level of educational services to all students, regardless of the location of the schools. Thus, contrary to expectations, the location of schools in the intra-urban space is seen to have significant impacts on school performance, independently of other conditions.

A mechanism of segregation can therefore be seen, originating from or even generating unfavorable situations, including discrimination against certain schools and the management of these schools (since there may be no carefully drawn up and long-term educational project and no level of accountability). Another important factor is the level of teacher qualification because the most highly qualified professionals earn higher scores on evaluation tests and can thus more easily work at the schools they prefer, which are usually those considered the best or the most conveniently located. This situation results in considerable turnover of teachers, since they tend to stay at schools for relatively short periods, giving rise to interruptions in continuity and preventing the consolidation of an educational project. Absenteeism is also a serious problem and is highly prejudicial to a school's management and the progress of its students.

These, then, independently of individual characteristics, would seem to be the mechanisms through which the question of socio-spatial segregation affects students' performance and the quality of schools. More consistent conclusions concerning this matter could be drawn up on the basis of individualized information on the students and their households. In addition, broader case studies are still needed that would provide researchers with closer contact with these realities.

Therefore, although the entire discussion is still in a process of maturation, the authors hope to have presented a contribution by pointing in new directions toward the establishment of so-called equality in education.