

## Abstract

*This article focuses on the relation between the growing homicide rates in São Paulo, Brazil, and the realization of human rights, in particular to social and economic rights. The context in which homicides take place are examined in terms of residents' access to rights. Data from the 2000 census, complemented by data available from other official sources, provide profiles of situations in which homicide rates continue to grow. Results indicate that higher homicide rates are related to high concentrations of youth, fewer numbers of older persons, increased levels of poorly educated heads of household, crowded residences, and poor access to health (indicated by lack of hospitals, higher infant mortality rates, and poor sanitation), and few residents with higher levels of income and education.*

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*Cet article porte sur la relation entre le taux d'homicide croissant à Sao Paulo, Brésil, et la mise en oeuvre des droits de l'homme, en particulier celle des droits sociaux et économiques. Le contexte dans lequel les homicides ont lieu est examiné en termes d'accès des résidents à ces droits. Certains chiffres du recensement de 2000, combinés à des chiffres obtenus en consultant d'autres sources officielles, fournissent des profils de situations dans lesquelles les taux d'homicide continuent à augmenter. Selon les résultats, il existe une corrélation entre les taux d'homicide élevés et des concentrations élevées de jeunes, des pourcentages relativement bas de personnes âgées, des niveaux élevés de chefs de famille peu instruits, des logements surpeuplés, un accès inadéquat aux soins de santé (comme en témoignent le manque d'hôpitaux, des taux élevés de mortalité infantile et de mauvaises conditions d'hygiène) ainsi que le nombre réduit de résidents ayant des niveaux élevés d'instruction et de revenus.*

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*Este artículo mira la relación entre las tasas de homicidio en aumento de Sao Paulo, Brasil, y la realización de los derechos humanos, específicamente en lo que se refiere a los derechos sociales y económicos. El artículo estudia los contextos en los cuales se cometen los homicidios en términos del acceso que tienen los residentes de Sao Paulo a los derechos humanos. La información del Censo del año 2000, complementada con datos disponibles de otras fuentes oficiales, ofrece perfiles de situaciones en las que las tasas de homicidios continúan en aumento. Los resultados indican que las tasas de homicidio más altas están relacionadas con la alta concentración de jóvenes, una menor cantidad de adultos de mayor edad, niveles acrecentados de jefes de hogar con poca educación, hogares sobrepoblados, acceso limitado a las condiciones necesarias para la salud (indicado por la falta de hospitales, altas tasas de mortalidad infantil y malas condiciones de saneamiento), y con un bajo porcentaje de residentes con niveles altos de ingresos y de educación.*

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Articles

## HOMICIDE RATES AND HUMAN RIGHTS VIOLATIONS IN SÃO PAULO, BRAZIL: 1990 to 2002

*Nancy Cardia, Sérgio Adorno, and Frederico Z. Poletto*

The growth of violence in urban areas in Brazil (and in a number of Latin American cities) cannot be properly understood and prevented without recognizing that large sectors of those urban populations have little access to many social and economic rights. This article hopes to shed some light on the impact that this deprivation of rights has on the growing rate of violent crime—in particular, homicide—in areas of Brazil.

According to available statistics, homicides are often concentrated in urban areas where social and economic rights are limited; however, not all such areas have high homicide rates. This article therefore explores what combinations of poor access to rights result in increased homicide rates. As other variables—exposure to violence, poor social capital, and the abusive use of force by law enforcement agents—are seen to have a role, they are included in this analysis.

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This article focuses on São Paulo, in particular—one of the major metropolitan areas of Brazil where violence frequently erupts. Homicide is the primary cause of death for males between the ages of 16 and 24 in Brazil and is growing as a cause of death for younger males as well, particularly in São Paulo.<sup>1</sup> Lethal violence in Brazil is mostly an urban phenomenon and one that characterizes the country's recent transition (over the past 50 years) from a predominantly rural society to a mostly urban one. In fact, 38.8% of all homicides in Brazil occur within the metropolitan regions of São Paulo and Rio de Janeiro, both of which comprise only 16.8% of the country's population. Because lethal violence is not widespread throughout the country, its presence may mean that deprivation, neglect, and violations of human rights provide fertile ground for violence to flourish. Municipal and state governments provide little support to incoming residents to São Paulo who have to resort to their own means, often with support from other family members, to find housing and who must participate in collective action to gain access to the most basic infrastructure, including water and electricity, street paving, and lighting, as well as to schools, daycare centers, health facilities, and the like.

### **Monitoring Violence and Gross Human Rights Violations**

Violence has been growing in urban areas in Brazil since the early 1960s. This situation is neither the result of revolution, civil war, a change from a lay government to a religious one, nor is it an unintended consequence of the transition from authoritarian rule to a democracy. It is merely a continuation of longstanding problems. During Brazil's military regime, no national data on violent crime were gathered, and the Ministry of Justice has yet to recover this role. Therefore, national statistics on violence are virtually nonexistent and almost impossible to obtain. The Ministry of Health does, however, collect reliable nationwide data on causes of death, of which homicide is one. At the state level, different public security secretariats should produce data on violent crimes, but the quality of their data varies dramati-

cally from state to state and from time period to time period.

Little external monitoring of the methods used by government to gather crime statistics takes place, and since the growth of crime is always a major issue during political campaigns, crime rates most likely do not reflect reality. Victimization surveys are generally not conducted, which further prevents validation of official data. Not surprisingly, the accuracy of homicide statistics is also questionable. Comparisons of figures provided by the Ministry of Health with those from public security secretariats show discrepancies. Moreover, the number of deaths listed as "undefined or suspicious" is very high and may include within them actual homicides, since post-mortem examinations, which would detect a homicide, are not conducted routinely.<sup>2</sup>

Despite all the problems associated with data collection, it is possible to ascertain that over the past three decades violent crime, as well as gross human rights violations, has continued to grow unabated.

### **Social Inequalities and Human Rights**

The Universal Declaration of Human Rights (UDHR) gave a framework to human rights aspirations that included the right to express political views and also broadened the protection of human life to include not only the right to physical integrity but also protection from torture, summary executions, disappearances, as well as the right to a life with dignity, including the rights to justice and well-being irrespective of gender, race, nationality, or other means of discrimination.<sup>3</sup> The debate about human rights, in particular the right to physical integrity, gained strength in the late 1970s and 1980s as a result of both the greater visibility of rights violations in countries and regimes throughout the world and the emergence of an international network of human rights nongovernmental organizations. If, during the early decades after adoption of the UDHR, priority was given to implement civil and political rights, then more recently there has been increasing consensus—globally and within Brazil—on the role of economic and social rights.

The Vienna Conference on Human Rights in 1993 reaffirmed that human rights are indivisible and interdependent

and therefore that social and economic rights are as fundamental to human rights as are civil and political rights.<sup>4</sup> In so doing, the governmental delegates at the Conference brought back to the forefront discussions about human rights that had been neglected since the outbreak of the Cold War: The protection of human rights implies equally the right to vote and access to social welfare policies.

Pinheiro and Poppovic, in a background paper presented at the Vienna Conference, observed that gross human rights violations usually accompany deep social inequalities and authoritarian regimes.<sup>5</sup> They also pointed out that regime changes do not necessarily improve inequalities or reduce human rights violations immediately. This observation has, in fact, been the case in countries in Central America, South America, Eastern Europe, and South Africa. Often what has been witnessed is that concurrent with changes to political regimes have been increases in rates of violent crime. Furthermore, and possibly linked to deep change in economic policies, are what all of these countries have experienced: increased inequalities and, despite the presence of a democratic regime, gross human rights violations perpetrated by agents of the state or by organized groups within that society.

Lynchings occur throughout Latin America and South Africa, as do death-squad activities and vigilantism. Abuses perpetrated by police are also common occurrences. What then is the link between violent crime—in particular, homicide—and violations of human rights? Why is it that democracy fails to eradicate economic and social inequalities, and that decision-making processes concerning allocation of public resources have not become more inclusive? What contribution does the persistence of institutional violence, itself perhaps a vestige of past authoritarian rule, make within this context of violence? Perhaps these newly installed democracies have little positive affect on violence and human rights violations because they fail to sufficiently incorporate mechanisms of accountability or neglect to provide mechanisms that would give individuals a say in resource allocation and in the way institutions work. It is no coincidence that despite changes to a country's political

regime, that country's justice system is often most resistant to change. A democracy in which people have limited access to justice is a very limited democracy.

### **The Link Between Social Inequalities and Gross Human Rights Violations**

When democracy returned to Brazil, gross human rights violations and violent crime neither disappeared nor diminished. The abusive use of police brutality, lynching (whether encouraged by police or not), vigilantism, and death-squad activities have survived the transition, and various organizations and major newspapers in Brazil continue to document these activities. To develop a clear picture of both lethal and non-lethal violence, data were analyzed using statistics from various sources (Appendix 5: Sources of Data), including the database maintained by *Núcleo de Estudos da Violência*—the Center for the Study of Violence—at the University of São Paulo, which has been gathering information over the past 20 years on lynchings, abusive use of force by police, and death-squad activities and is one of the few reliable sources in Brazil that monitors such events.<sup>6,7</sup> According to this database, national newspapers reported 6,303 cases of lethal force used by police at the national level from 1980 through 2000. Each case reported resulted in at least one death. More than 64% (4,056) of the cases reported have occurred since 1989, when the country's new constitution was enacted. At one time, the rise in reported crime and violence since the return to democracy was thought to have resulted from increased interactions between police and suspects. This cannot be ascribed to greater reporting freedom since common crime was never a priority for censorship during the dictatorship.<sup>8</sup> Analysis of documented cases occurring before and after the return to democracy, however, indicates that no changes were made to the methods police used to stop and search suspects or to the frequency and use of firearms in these interactions.

### **Violent Crime: Homicide in São Paulo**

Between 1996 and 1999, the city's reported homicide rate jumped 15.3%, from 55.6 homicides per 100,000 resi-

dents to 66.9.<sup>9</sup> These increases were not distributed evenly throughout the city. Some districts (19.7%) have continually had much higher homicide rates than the city's average, which creates major differences in homicide rates across districts. Moreover, homicide rates in those areas whose rates had previously been higher than average seem to have increased more rapidly than the city's average. For example, during that same period, homicides grew by 23.1% in Jardim Ângela (116.23 homicides per 100,000 residents), and by 48.43% in Jardim São Luiz (103.75 homicides per 100,000 residents). In time, this epidemic of homicides will likely spread to neighboring districts. This growth suggests that impunity combined with multiple sources of stress and deepening deprivations may have created a toxic combination that increases incidents of lethal violence. This also indicates the magnitude of work the criminal justice system and local administrations must do to curtail this growth.

#### **Overlapping Deprivations and the Growth of Homicide: The Impact of Neglecting Economic and Social Rights**

What characteristics are shared by the areas that present the highest homicide rates? What factors indicate high concentrations of extreme deprivation?<sup>10</sup> To answer these questions, the homicide rate per 100,000 residents in each census district was examined in terms of the following: population growth, concentration of youth, population density, overcrowding, income and educational level of head of household, presence of groups vulnerable to violence (children and youth), access to health, infant mortality, access to infrastructure (sewage systems, in particular), and access to jobs. Variables selected to determine the realization of economic and social rights included the following:

- **Less than 3 minimum wages** (1 minimum wage = \$54.79 [U.S.]): percentage of heads of household with no income or earning less than \$164.37 (U.S.) a month (2000).<sup>11</sup>
- **More than 20 minimum wages:** percentage of heads of household earning more than \$1,095.80 (U.S.) a month (2000).

- **Population growth rate:** 10 to 14 years of age, geometric growth rate for the population between 10 to 14 years of age (between 1991 and 2000).
- **Ratio of elderly persons:** persons older than 65 compared to persons 14 years old and younger (2000).
- **Overall population growth:** between 1991 and 2000.
- **Hospital beds:** number of hospital beds per 1,000 residents (2000).
- **Infant mortality:** mortality rate of infants under one year of age per 1,000 live births (2000).
- **Jobs:** number of jobs per 100 residents (1997).
- **Overcrowding:** number of residents per room (1991).
- **Sewage:** percentage of residences who are connected to the sewer system (2000).
- **Low educational achievement:** percentage of heads of household with fewer than 4 years of schooling (2000).
- **High educational achievement:** percentage of heads of household with 15 years or more of schooling (2000).

#### **Statistical Treatment of the Data**

It was assumed that highly disadvantaged neighborhoods would be highly susceptible to violence and would also encounter multiple obstacles to any manifestation of social capital—particularly in relation to adults' ability to defend those most vulnerable to violence. Because the rise in homicide rates was not evenly distributed throughout these areas of the city, the study examined the homicide rates within the 96 districts of São Paulo in relation to the previously listed variables in an effort to detect patterns that would explain why the rates differed.

To do this, a matrix (Appendices 1, 2, and 3) was developed to present the data available for each census district in São Paulo, in relation to each of the variables listed above.<sup>12</sup> Three statistical techniques were tried: Initially the homicide rate of each census district was analyzed against each of the variables using Pearson's correlation.<sup>13,14</sup>

The results show that high homicide rates correlate with high population growth, a higher percentage of preadolescents and adolescents (10 to 14 years) in the local population, fewer elderly residents, absence of heads of house-

hold with higher incomes, higher concentrations of poorly educated heads of household, higher population density, higher infant mortality rates, limited access to sewer systems, and fewer hospital beds per person. Next, two other approaches were tested: multiple linear regression (problematic as the variables considered are not independent) and factor analysis with Varimax rotation (Appendix 4).<sup>15,16</sup> Both techniques were explored and factor analysis proved to be more fruitful. Two sets of factors explained the 61% variance of the 12 variables considered: The first showed that areas in which homicide rates were highest also had rapidly rising population growth, large concentrations of preadolescents and adolescents, high household density (overcrowding), low aging ratio (fewer elderly residents), limited access to public sewers, limited availability of jobs, and low educational achievement. The second showed that areas with lower homicide rates had more heads of household who were more highly educated and earned income above 20 minimum wages, had more hospital beds per capita, and lower infant-mortality rates. This tentative analysis is the first step in exploring causal relations between the different variables. Poverty alone does not explain higher homicide rates but works in combination with other factors.

### **Poverty and Other Deficits**

In São Paulo, poverty, like homicide rates, is concentrated in specific areas of the city. Most of the poor live in high poverty neighborhoods, 35% or more of the population are poor, and most heads of household earn less than \$164 (U.S.) a month.<sup>17</sup> Most higher income heads of household live in the central part of the city of São Paulo, and the areas that form a ring around the city have the highest concentrations of poverty. This process of economic exclusion started in the 1960s and indicates the failure of social and economic policies to foster inclusion and social mobility.

Homicides proliferate in areas that not only have high concentrations of extremely poor people but that also have high concentrations of youth and fewer older individuals. Problems are compounded by a lack of adult supervision, the absence of jobs, and poorly educated heads of household, as

well as the absence of public policies and investments that would alleviate the impact of extreme poverty, provide more adequate housing, and improve the availability and quality of public infrastructure and public health.

### **Concentration of Youth**

Social cohesion can play a significant role in protecting children and youth from violence. A population's stability, or lack of it, can in some way be measured by the rate at which a population grows or shrinks. Areas with high incidents of homicide usually have populations that are growing at many times the average for the city: 0.88% a year. In some homicide-ridden districts, population growth has been measured at 8 times the average. Not surprisingly, these districts also have greater concentrations of children and youth and fewer older people.

As previously mentioned, children and youth are more vulnerable to violence, and greater numbers of young people living in conditions of concentrated poverty increase their susceptibility to and the likelihood of violence. In such conditions, parents have greater struggles to ensure their children's survival, which often means that they are frequently away from home and that their children have limited adult supervision. An imbalance in the number of children to adults also results in fewer adults being available to supervise young people's activities and protect them from trouble.

Greater population growth and the resulting net population density also increase the probability of household overcrowding. That, in turn, results in less privacy, increased tensions, and greater opportunity for conflict as competition for scarce living space develops. Although this problem was identified in the mid-1990s, little has been done in São Paulo to develop housing alternatives or to provide low-income people with mortgages and other types of support. As a result, despite reductions in average family size, the effects of housing shortages remain and have likely worsened.

### **Jobs, Schooling, and Income**

Areas prone to high levels of lethal violence generally have few available jobs and high levels of unemployment. In

fact, when employment levels in the city are mapped out, it clearly shows that job availability is concentrated in areas where populations are wealthier, more highly educated, and older. This concentration of opportunity results from the lack of social and economic policies that encourage investment in poorer areas. Without external incentives, local businesspeople will not risk investing in areas where consumer activity is limited and where violence abounds. Left to the forces of the market, the vicious cycle of poverty and violence will continue.

When the formal market cannot provide jobs, heads of household resort to the informal job market to survive: odd jobs in the building industry, working as street vendors, in the informal transport system, or in small industries. What the different sources of informal income have in common, besides strong competition, is a lack of job and financial security, as well as a lack of access to social security. Additionally, prolonged unemployment can affect family and interpersonal relationships since a work ethic is deeply rooted in Brazilian society in prosperous and poor neighborhoods alike. The presence of unemployed adult males in public spaces during the day feeds gossip, upsets social bonds, and, on a personal level, damages self-esteem, all of which can lead to increased alcohol use and to violence.

The educational system embodies the perverse effects of civil servants' lack of commitment to the sectors in which they work: Students who attend schools in these deprived areas score worst on national standardized tests. In these schools, teachers are often absent, which leaves those students who have the greatest need for assistance with the least attention.

Poor schooling also increases the likelihood of job insecurity and low income. Poorly educated heads of household help to explain the lower incomes, and poorly educated parents reduce the probability that their children will complete their schooling. Jardim Ângela, for instance, has almost twice as many (30%) poorly educated heads of household (4 or fewer years of school) than São Paulo's average (17.8%). Conversely, only a fraction of heads of household in Jardim Ângela are better educated (15 or more years of education):

1.8%, compared to São Paulo's average of 14.1%. This means that Jardim Ângela has 15 times the number of poorly schooled individuals (30%) as better educated ones.

Poorly educated heads of household will find more competition for less skilled jobs, in particular when an area's industrial sector undergoes major changes in production, resulting in declining job opportunities. This is the case in São Paulo. The risk of violence increases when heads of household have no income. Moreover, heads of household who are not wage earners have less power and are more likely to have their authority challenged. Youngsters in such families are less likely to have successful role models who can guide their aspirations and behavior. Such scenarios of economic uncertainty create additional tensions within a family that can also fuel violence.

### **Health Indicators**

Poor quality of life in some districts is poignantly reflected in their higher infant-mortality rates. Some districts' rates surpass the city's average significantly. In 2000, the city averaged 15.8 deaths per 1,000 live births in the first 12 months of life; the infant-mortality rate in some areas exceeds the average by more than 20%. Jardim Ângela had 18.9 deaths per 1,000 live births.

Areas with higher mortality rates also have limited access to hospitals and inadequate or nonexistent sewage systems. Although this coupling of problems may not be surprising, the fact that higher homicide rates accompany other deplorable conditions clarifies the high level and cost of neglect that certain populations must withstand. Thus a higher infant-mortality rate synthesizes the quality of life. It suggests that women have little or no access to prenatal and postnatal care or to vaccination against preventable illnesses. Infant mortality may also indicate parents' educational level, as well as quality of housing and access to infrastructure, including properly treated water and adequate sewage systems. In addition, except for the three central areas, most of the high homicide districts lack hospital facilities.

When emergencies occur in these areas, health and rescue services often have difficulty reaching the people in

need and getting them to the nearest hospitals, which can be very far from the site of the accident or illness and can only be reached by heavily traveled, overcrowded roads.<sup>18</sup> It is possible that infant mortality and deaths caused by interpersonal violence could be reduced if emergency and medical services were more conveniently located. Even areas that are heavily populated—some housing nearly 300,000 people—still have no hospitals nearby.

Health centers, which are usually the closest health facility, are open only from Monday to Friday during business hours and are, in general, poorly equipped and poorly staffed to deal with complex cases (such as gunshot wounds). Worse still is the unease most health workers feel about working in highly violent areas, which results in high turnover of personnel that can hinder the development of bonds between health professionals and local residents.

### **Discussion: The Overlap of Neglected Economic and Social Rights with Exposure to Violence**

The overlapping of lethal violence with violations of social and economic rights is neither new nor exclusive to Brazil's metropolitan areas.<sup>19</sup> Similar conditions can be found throughout the world. Increased violence in areas where other deprivations exist is common even where gaps in inequality are narrower than they are in Brazil and where some form of welfare state still exists, such as in Norway.<sup>20</sup> Still, areas such as São Paulo and Rio de Janeiro differ from other places by the scale of deprivation and the extent of inequalities. Youngsters who are victims of homicide manifest the level of cruelty brought about by gross inequalities to opportunities and are the visible evidence of its human toll—a cost that can no longer be ignored.

The data presented here reiterate that high numbers of poor families are confronting daily multiple challenges with no social safety network, which provides a context that fosters violence. In neighborhoods that have multiple deficits, competition between residents for housing, jobs, and other basic necessities of life can erupt into violence, especially when access to justice is limited. Areas with high homicide rates do not attract civil servants—teachers, doctors, social

assistants, and police officers—who will work or remain at work there. These individuals often regard such appointments as a punishment. Often political connections are used to facilitate relocation as soon as possible. Qualified professionals have no incentive to stay in these areas and to provide good quality work. The high turnover of professionals also prevents the development of commitment to community members and the emergence of some form of mediation between residents and the public administration. As a result, public services that are available are of poor quality. Civil servants' feeble commitment to the communities they serve means that they are unlikely to develop a "voice" for them. Instead, their experience may consolidate existing prejudices that provoke competition within the area and perpetuate the perception that some citizens are more deserving and more entitled than others.

As stated previously, these areas also have the fewest adults who are able to supervise and provide surrogate family support and control, as well as who can be protective of youths living there. High homicide rates increase the chances that residents will be exposed to violence, which exacerbates psychological stress and diminishes social cohesion. This negative impact on individuals and communities is compounded when both law-enforcement agents as well as area residents perpetrate acts of violence. To explore the possibility that other variables may intervene in such areas a more in-depth look at the communities is needed using more ethnographic studies and longitudinal studies that would allow an exploration of the relationships between the pressures from multiple deprivations and exposure to interpersonal and institutional violence.

Witnessing the effects of prolonged unemployment, and rampant competition for work in the informal sector may deeply affect young people's ethics, values, and beliefs, particularly when they compare their situations to those of the middle and upper classes. How this comparison affects residents of poorer communities would seem an important consideration. But this has not yet been measured. These themes are being explored in ongoing research as are those of unemployment and lack of positive role models. Still one

point needs to be emphasized: Despite the circumstances in which these young people are living, which includes some of the highest levels of inequality in the world, the fact that very few of these youth do deviate is a true miracle.<sup>21</sup> This should motivate public officials to consider this population as the country's most valuable resource.

### Appendix 1: Correlation of Homicide Rates with Other Variables.

Variable	Correlation	p-value
Jobs	-0.09	0.395
Sewage	-0.43	<0.001
Aging population index	-0.73	<0.001
Heads of household		
>20 minimum wages*	-0.62	<0.001
>15 years of schooling	-0.52	<0.001
Hospital beds/ratio	-0.37	<0.001
Infant mortality	0.47	<0.001
Heads of household		
<4 years of schooling	0.59	<0.001
<3 minimum wages*	-0.01	0.908
Population growth, ages 10–14 years	0.67	<0.001
Housing density	0.60	<0.001
Overall population growth 1991–2000	0.44	<0.001

\*1 minimum wage = \$54.79 (U.S.)

### Appendix 2: Correlation Between Factors and Variables.

Variable	Factor 1	Factor 2
Jobs	-0.57	0.23
Sewage	-0.66	0.26
Aging population index	-0.67	0.61
Heads of household		
>20 minimum wages*	-0.33	0.80
>15 years of schooling	-0.24	0.86
Hospital beds/ratio	-0.25	0.60
Infant mortality	0.22	-0.51
Heads of household		
<4 years of schooling	0.46	-0.70
< 3 minimum wages*	0.07	-0.09
Population growth, ages 10–14 years	0.80	-0.59
Housing density	0.78	-0.50
Overall population growth 1991–2000	0.84	-0.22

\* 1 minimum wage = \$54.79 (U.S.)

### Appendix 3: Correlation Matrix of Exogenous Variables.

Variable	Jobs	Sewage	Aging pop.	>20m min. wage*	>15y of School	Hosp. beds	Infant mortal.	<4y of school	<3 min. wage*	Pop. growth 10-14 y.	Housing density
Jobs	0.34										
Sewage	0.49	0.55									
Aging population index	0.33	0.40	0.77								
Heads of household	0.42	0.36	0.61	0.76							
> 20 minimum wages*	0.29	0.25	0.58	0.58	0.55						
> 15 years of schooling	-0.07	-0.41	-0.47	-0.51	-0.43	-0.35					
Hospital beds/ratio	-0.43	-0.63	-0.67	-0.62	-0.86	-0.48	0.52				
Infant mortality	-0.12	-0.04	-0.04	-0.17	-0.11	-0.13	-0.02	0.04			
Heads of household	-0.60	-0.66	-0.93	-0.77	0.66	-0.55	0.50	0.75	0.12		
< 4 years of schooling	-0.70	-0.58	-0.87	-0.66	-0.60	-0.55	0.40	0.64	0.13	0.9	
< 3 minimum wages*	-0.50	-0.72	-0.69	-0.44	-0.40	-0.32	0.30	0.58	0.10	0.78	0.69
Population growth ages 10–14 years											
Housing density											
Overall population growth, 1991–2000											

\* 1 minimum wage = \$54.79 (U.S.)

## Appendix 4: Final Scores from Factor Analysis with Linear Regression.

Variable	Final Scores
Jobs	-0.1
Sewage	-0.6
Aging population index	-0.5
Heads of household	
>20 minimum wages*	-1.1
>15 years of schooling	-0.9
Hospital beds/ratio	-1.1
Infant mortality	1.9
Heads of household	
<4 years of schooling	1.8
<3 minimum wages*	0.1
Population growth, ages 10–14 years	9.3
Housing density	37.4
Overall population growth 1991–2000	3.9

\* 1 minimum wage = \$54.79 (U.S.)

## Appendix 5: Sources of Data

Data from the Fundação IBGE-Census Bureau were used to draw the socioeconomic and demographic profiles of the population in the metropolitan region of São Paulo. The IBGE census data are being slowly released to researchers. As a result, data from the year 2000 census were mapped as they became available. Very little data from the full census questionnaire have been released, which has made it impossible to refine and update information on the quality of housing and has hindered efforts to identify levels of overcrowding, among other things, since information on average number of rooms per house and per census district is not yet available. The only available information on housing is from 1990; more recent data on housing quality are available only for certain municipalities and not the entire metropolitan area.

The IBGE also provided information from the National Household Surveys, which are held every two years. The most recent was conducted in 2001. The problem with this data is that it cannot be disaggregated for territories other than municipalities. This is a major restriction because census districts represent too broad a territory (with large populations). To do more in-depth analysis of the districts that present greater incidence over time of gross human rights violations, census tracts (of which São Paulo is divided into more than 14,000) are beginning to be used. A working agreement with the Instituto de Pesquisas e de Planejamento Urbano of the Federal University of Rio de Janeiro has provided census tract data between 1980 and 1990, which will in turn allow the socioeconomic and demographic context in which gross human rights take place to be followed over time.

Data on criminal offenses were collected from Fundação Seade,

Secretaria de Segurança Pública, Ministério da Saúde, Pro-Aim (Secretaria Municipal da Saúde/Serviço Funerário do Município de São Paulo). Most of the data, when disaggregated, were provided according to the police station where the offenses were recorded. The area covered by the police stations does not match that of census districts. Here there is still a major problem to solve: how to conciliate the two territories in order to interpret the criminal offense statistics with reference to the actual population of the area. Resorting to census tracts is a tentative approach to bring the census data closer to that of the police stations.

Utilities companies and major planning authorities provided data on urban infrastructure, which are complemented by census 2000 data as they become available.

Data on the number and quality of schools came from Municipal and State Secretariats of Education, as well as from a survey of the schools in the periphery of São Paulo, from reports produced by youth as part of the Human Rights Observatory, and from interviews with teachers and headmasters/mistresses and firsthand observations of schools in the periphery.

Data on employment and unemployment, from the Fundação Seade and DIEESE and disaggregated by census districts, allowed changes in employment and unemployment to be followed since 1985 (when this survey started being conducted regularly). Indications are that deep changes in the nature of the market may have a profound impact on both violence and human rights violations. The job market has suffered deep changes: Low entry-level jobs or less-skilled jobs have become scarce, the number of informal jobs has increased, as have temporary and unstable jobs, all of which result in unstable and unpredictable pay. Decreasing income security and access to social security (a result of informality) can have deleterious effects on young people and the way they engage in the adult world.

State and Municipal Secretariats of Health and health workers allocated to the periphery provided data on access to health, including number of hospital beds, infant mortality, and maternal deaths at time of birth.

Data on access to culture, leisure, and sports were provided by the State and Municipal Secretariats of Culture, Sports, and the Environment.

## References

1. M. H. Mello Jorge, “Os adolescentes e e jovens como vítimas da violência fatal em São Paulo” in: P. S. Pinheiro (ed.), *São Paulo sem Medo: Um Diagnóstico da Violência Urbana* (São Paulo: Garamond Ed., 1998), pp. 97–120. In 1995, for instance, the homicide rate for youth in São Paulo was 186.7 homicides per 100,000 persons between 15 and 19 years old and 262.2 homicides per 100,000 persons between 20 and 24 years old. Less is known about the nature of the perpetrators as few cases are cleared and the aggressors (and their motives) are unknown.
2. In the city of São Paulo alone, 12,000 cases a year—an average of about 18% of all deaths—are classified as “undefined/suspicious deaths.”
3. Universal Declaration of Human Rights adopted by the General

Assembly 10 Dec. 1948, UN Doc. A/RES/ 217 A (III).

4. World Conference on Human Rights, Vienna, 14–25 June 1993, UN Doc. A/CONF.157/23.

5. P. S. Pinheiro, M. E. C. Poppovic, and T. Kahn. “Poverty, Marginalization, Violence and the Realization of Human Rights,” World Conference on Human Rights, Vienna, UN Doc. A/CONF.157/PC60/Add.3.

6. Monitoring gross human rights violations continues to present multiple challenges to researchers, human rights activists, and even official statisticians. Using multiple sources of information and comparing data is a technique used whenever possible, but most official sources categorize events according to the department in which they work (e.g., the police, Ministry of Justice), or who determines the cause of death (e.g., Ministry of Health), or where the complaint originated (e.g., police ombudsman) and not by the nature of the event (group action) that led to a death or injury or the nature of the group (organized or spontaneous; temporary or permanent). Also, the use of force by the police only recently became a focus of attention of the recently created police ombuds offices and even so in only a few of the states in Brazil. Official records on police use of force (whether produced by the force itself or by a public complaints organization), besides being recent (mid-1990s onward), produce very mixed results in terms of the quality of the information as well as in terms of the periodicity in which this information is made available.

7. See “The Role of Núcleo de Estudos da Violência in the Struggle for Universal Access to Human Rights in Brazil” in this issue of *Health and Human Rights*.

8. Since the mid-1970s, the dictatorship had started a process of political liberalization, called *abertura*, which involved, in part, lifting restrictions imposed on the media to report political and cultural events.

9. *Fundação SEADE*, or the State of São Paulo Foundation for Socio-Economic and Demographic Data.

10. R. J. Sampson, J. D. Morenoff, and F. Earls, “Beyond Social Capital: Spatial Dynamics of Collective Efficacy for Children,” *American Sociological Review* 64/5 (Oct. 1999): 633–660.

11. Minimum wages in Brazil refer to an amount set annually and are valid for the entire country. At present, 1 minimum wage represents \$54.79 (U.S.). In theory it represents the amount of money that a family requires to get through a month. In practice the minimum wage is but a standard. The census bureau in Brazil uses the minimum wages to represent earnings. This is a legacy from long periods of inflation when reporting income on a nominal basis was meaningless as wages were inflation indexed and changed monthly. Income was broken down into two variables: concentration of poverty, defined in the percentage of heads of household with fewer than 3 minimum wages a month, or \$164.37 (U.S.) and concentration of wealth, defined in the percentage of heads of household with greater than 20 minimum wages a month, or \$1,095.80 (U.S.).

12. Education levels are broken down into two variables: low educational achievement is defined as 4 or fewer years of education, and high educational achievement is defined as 15 or more years of education.

13. Correlations measure linear dependence between two variables. This dependence is expressed by a quantity between -1 and 1. A “zero” correlation means that the two variables do not have a linear relationship, and a “value 1” indicates a perfect relationship. Positive correlations are obtained when the greater the values of one variable, the greater will be the values of the second variable. Negative correlations indicate the opposite, that the greater values are for one, the lower the values are for the second.

14. E. G. Noether, *Introduction to Statistics: The Nonparametric Way* (New York: Springer, 1991).

15. Factor analysis is a way of summarizing the variables into a new index. When the indexes do not allow a clear interpretation, techniques of rotation are used. Varimax is one of the techniques to rotate, and in this case it allowed for a clear interpretation of the relations between the variables.

16. D. W. Wichern and R. A. Johnson, *Applied Multivariate Statistical Analysis*, 5th ed. (New York: Prentice Hall, 2002).

17. M. A. Turner and C. Hayes, *Poor People and Poor Neighborhoods in the Washington Metropolitan Region* (Washington, DC: Urban Institute, 1997), available at [www.urban.org/neighborhoods/dcpov.htm](http://www.urban.org/neighborhoods/dcpov.htm). In Washington, D.C., most of the poor live in low poverty areas, only 14.3% of the poor live in areas where 30% or more of the population are poor.

18. Some residents are as far as 40 kilometers (approximately 25 miles) from the nearest hospital.

19. Rights recognized as such by the Brazilian Constitution are the right to education, to housing, to health, and to a life with dignity.

20. W. Pedersen, “Adolescent Victims of Violence in a Welfare State,” *British Journal of Criminology* 41 (1997): 1–21.

21. United Nations Development Program, *World Report on Violence and Health* (Geneva: World Health Organization, 2002).