

# PROMOTING ACTIVE LIFESTYLES AND HEALTHY URBAN SPACES: THE CULTURAL AND SPATIAL TRANSFORMATION OF BOGOTÁ, COLOMBIA

*Ricardo Montezuma*<sup>1</sup>

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## INTRODUCTION

This chapter describes the recent transformation in the lives of the citizens of Bogotá, Colombia, and in the urban environment they share. Statistics point to substantial qualitative and quantitative improvements in this large, bustling, cosmopolitan world capital. There are promising signs of increased physical activity, a situation that could provide useful input for the planning of a wide variety of public and private efforts aimed at counteracting the increase in sedentary lifestyles, obesity, and chronic diseases in this city. Indeed, scientific evidence shows that these health conditions can be prevented<sup>2</sup> by combating risk factors<sup>3</sup> through physical activity. Regular physical activity, combined with a proper diet and restricted tobacco and alcohol use, diminishes the likelihood of dying from chronic disorders related to overweight and obesity, such as cardiovascular disease (3), type 2 diabetes mellitus, and some types of cancer (of the colon, prostate, ovary, and endometrium) (4).

Despite important cultural and urban planning changes in Colombia, the general urban situation with regard to physical activity is very similar to that of other large Latin America cities: half the population, including all age groups over age 5, is overweight,

giving rise to an ever-increasing incidence of chronic disease, even among the very young. The incidence of these modern ills is growing in Colombia at an annual average rate of 10%; in some seven years, this could translate into more than 75% of Colombians being overweight. In Bogotá, most overall mortality is related to chronic illnesses (21.7% of deaths from ischemic heart disease, 14.1% from cerebrovascular problems, and 7.2% from diabetes mellitus).<sup>4</sup> Nevertheless, in the last six years, bicycling and walking have doubled—not counting recreational and sports purposes; if this trend continues, a moderate reduction in chronic disease in the future can be expected.

Although there is still scant scientific evidence of a correlation between improved urban milieus and increased physical activity, the study on the transformation of Bogotá described in this chapter should enrich

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<sup>1</sup>Director, Fundación Ciudad Humana, Bogotá, Colombia.

<sup>2</sup>"It is now clear that regular physical activity reduces the risk for coronary heart disease, diabetes, colon cancer, and several other major chronic diseases and conditions" (1).

<sup>3</sup>"Eighty percent of obese adults suffer from diabetes, high cholesterol levels, high blood pressure, [and] coronary heart disease" (2).

<sup>4</sup>Secretaría Distrital de Salud. Death certificates, 2001. Preliminary data.

the international discussion on the topic. Hence, more than providing definitive results and evidence for the entire country, this chapter presents the case of Bogotá, which interdisciplinary teams from the Public Health Institute of Colombia's National University and the Fundación Ciudad Humana have begun to study from a comprehensive perspective.<sup>5</sup> This interplay between diverse theoretical and practical approaches should contribute to additional reflection on the promotion of physical activity in other locales in the Region of the Americas.

Structural and functional changes in cities and in modern urban life—such as the increased use of motor vehicles and of automated technology—translate into habits that are conducive to a sedentary lifestyle, which, in turn, is one of the leading factors of higher levels of overweight and obesity among urban dwellers. Thus, the participation in Latin America of urban planners in efforts to prevent and fight against chronic disease, while a very recent phenomenon, is nonetheless timely. In the past 20 years, many researchers, especially in the United States, have paid special attention to the role of the urban environment or milieu in the maintenance and promotion of public health. This is because individual and collective well-being is closely associated with a series of physical, social, cultural, and economic conditions that influence the effectiveness of efforts to lower the incidence of disease among the population (5).

Factors related to urban layout and design, including topography and land distribution and zoning (public vs. private), directly and indirectly influence many forms of behavior that are determinants of physical

activity or inactivity. According to Schmid, Pratt, and Howze (6), changes in environment are more likely to encourage increased physical activity than are policies that attempt to influence individual behavior. Urban structure can influence physical activity and buttress public health efforts, or it can impede the success of health policies aimed at discouraging a sedentary lifestyle, especially in activities related to mobility and recreation. Indeed, the qualitative and quantitative characteristics of public traffic, as well as public spaces for pedestrians (parks, sidewalks, jogging paths, etc.) and cyclists (bicycle paths or routes), are some of the principal factors that determine physical activity or inactivity. However, the correlation between these topics (city living, urban design, physical activity, obesity, sedentary lifestyle, and public health) has barely been addressed by researchers of urban and public health issues in Latin America, and even less so by municipal policymakers and technical experts. And notwithstanding findings showing a correlation between physical activity and urban milieu discussed in this study, government officials and technical experts in Bogotá have not coordinated their efforts vis-à-vis urban and public health issues.

As will be elucidated further in the Conclusions section of this chapter, Bogotá's cultural and spatial transformation was the result of an overall process that was unplanned and, to a certain extent, unintended, in the sense that the various constituent parts were not necessarily coordinated, although they complemented each other. Citizen education campaigns, the recovery of public space, and the construction of walkways and bikeways—among other major achievements—contributed to persuading people to change their daily behavior related to physical activity. In the long run, these new habits may increase life expectancy and improve the quality of life in the city. In addition to the campaigns and efforts between 1995 and 2003, the urban transformation of the 1990s made it possible for these actions to have a

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<sup>5</sup>These two entities have begun a nationwide study funded by the Social Protection Ministry. The purpose of the study is to evaluate sedentary lifestyles and physical activity, and the (positive or negative) correlation between the characteristics of city life and physical activity. A subsequent study will attempt to introduce a model for urban transportation to demonstrate the possibilities for change in levels of physical activity in three of the country's departments, including Cundimarca, of which Bogotá is the capital.

very positive influence on physical activity. Some of these transformations are related to:

- population density, which rose to an average of 200 inhabitants per hectare;
- a reduction in average trip distances to approximately 8 km;
- the increased use of mass transportation, with buses in an informal private network accounting for more than 70% of the daily trips taken in motorized vehicles; and
- limited ownership and use of automobiles: only 13% of the population owns a private automobile, and merely 19% of trips are made in automobiles.

This chapter examines the above factors and is divided into four sections. The first outlines the changes carried out in the city and breaks these changes down into different categories. Hence, it analyzes the period in question from several vantage points—physical and functional, social, economic, and political—to present a point of reference for discussing the two major redefinitions undergone by the city in the next two sections. The first redefinition, that of citizen education, analyzes the transformations that have taken place, focusing especially on the term of Mayor Antanas Mockus Sivickas and the citizen education campaigns carried out during his administration. The second redefinition, that of esthetics, space, and function, examines the principal changes occurring during the term of Mayor Enrique Peñalosa: public space, mass transit, individual transportation, and nonmotorized transportation. The fourth section presents this chapter's conclusions, stressing the complementarity between the two types of redefinitions and their probable role in increasing physical activity.

## THE GENERAL TRANSFORMATION OF BOGOTÁ

Although Bogotá's transformation is especially noticeable in its spatial dimension, and

particularly in its transportation infrastructure and the characteristics of its public spaces, it has affected every facet of the city. Accordingly, before turning to the central issue examined in this chapter—Bogotá's cultural and spatial transformation—a brief overview of changes in the physical and functional, social, economic, and political dimensions is presented in separate subsections. This crosscutting examination of events in the Colombian capital is the principal starting point for understanding the origin and scope of changes of a general nature as well as those related to physical mobility, public transportation, and the behavior of the residents of Bogotá themselves between 1995 and 2003, in which the latter changes had to do more clearly with physical activity. To allow for a better understanding of the magnitude of the changes in the Colombian capital, the evolution of the principal indicators over a decade is presented, and an overview of the general characteristics of public transportation before these transformations occurred is given.

### Physical and Functional Aspects

Despite the profound crisis in the private construction sector,<sup>6</sup> Bogotá has seen a considerable change in physical and functional issues, due to the recovery of public spaces for pedestrians (promenades and tree-lined alamedas, among others), the construction of roads and related infrastructure, the building of bicycle paths (a total of 300 km, at a cost of more than US\$ 46 million), the recovery of parks and medians, and, especially, the implementation of the TransMilenio system.<sup>7</sup> This is a new

<sup>6</sup>Between about mid-1998 and 2003, Bogotá's construction industry experienced an acute crisis, closely linked to the national economic situation, disequilibrium in the financial system, and the elimination of UPAC (Unit of Constant Purchasing Power), a price index. Housing construction had come to a complete standstill by the end of this period.

<sup>7</sup>The name TransMilenio refers to the various components of Bogotá's new mass transit system. The company responsible for the system is referred to as TransMilenio S.A.

urban transportation system with lanes for the exclusive use of buses, fixed bus routes and stops, accordion (stretch) buses, and feeder (suburban to downtown) buses. TransMilenio operates like a subway-type mass transit system, sharply reducing travel time for some 13% of public transportation passengers.

In general, urban mobility has improved, especially during peak hours, reducing congestion and travel time (7). Indeed, whereas in the mid-1990s traffic moved at a speed of well below 10 kph during rush hour, by mid-2003 it had increased to 18 kph. The most significant functional change in transportation is the reduction by more than one-third in the number of private vehicles driven during rush hour and the rise in the number of trips on foot and by bicycle, from 7% to 11% and 2% to 4%, respectively, between 1998 and 2003 (Figure 1) (8). This has been made possible to a large extent by the citizen education programs and the improvement of public spaces, the building of bicycle paths, and the more rational use of automobiles during rush hour, among other factors. Automobile use was reduced through the program known as “Pico y Placa,” which takes 40% of private vehicles off public streets from Monday through Friday between 6 a.m. and 9 a.m. and 4 p.m. and 7 p.m.<sup>8</sup> This change has translated into significant progress both in relative and in absolute terms, because it has been achieved within the context of a constant increase in the total number of vehicles in the city and in the total number of daily trips taken in motor vehicles.

Despite higher rush-hour driving speeds,<sup>9</sup> one of the most important indicators of, and one of the most important achievements from, improved urban mobility is the consid-

erable reduction in traffic accidents—from 1,387 in 1995 to 585 in 2003, a decline of more than 50% (Figure 2) (9). This improvement stems from citizen education campaigns, successful efforts to discourage people from driving while under the influence of alcohol, and the transfer of responsibility for traffic control from the local to the national police. The decline in traffic accidents underscores one of the most outstanding features of the formal and functional improvement in the city: it can be said that today travel in Bogotá has become twice as safe, which has had a positive impact on economic, social, environmental, and, especially, public health issues.

## Social Aspects

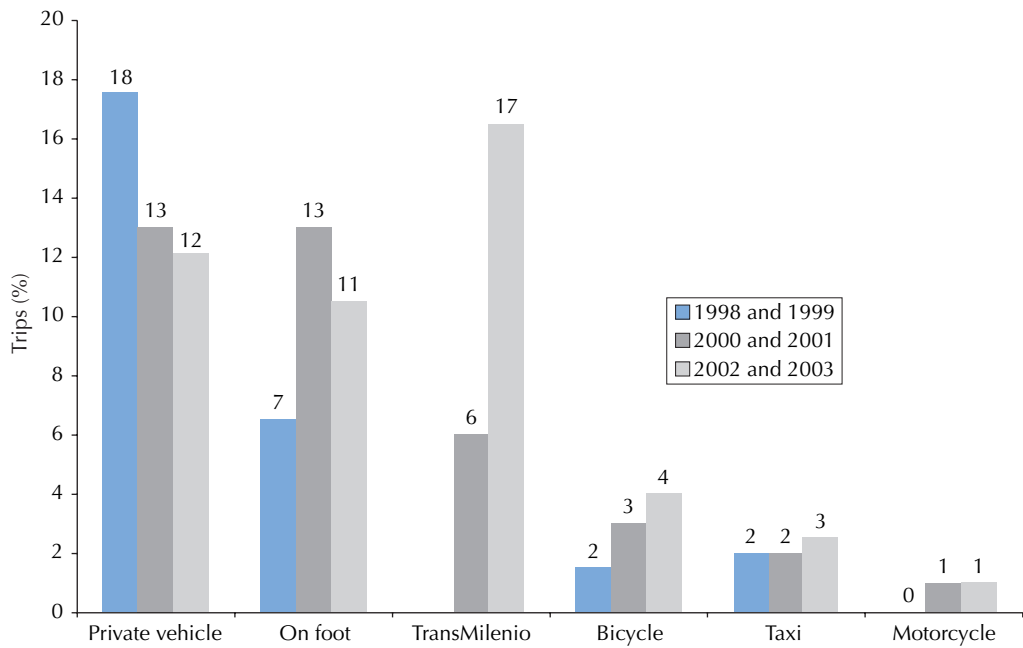
There have also been significant social changes, both in form and in substance. First, all public utility services now reach more households. Between 1998 and 2003, households with access to clean drinking water rose from 93% to 100%; those with access to adequate sewage disposal, from 84% to 95%; and those with access to gas energy sources from 50% to more than 80%. Most of these beneficiaries live in lower income neighborhoods. The process of providing these services and improving living conditions in these neighborhoods was called *desmarginalización* (poverty alleviation). During the mayoral term of Enrique Peñalosa (1998–2000) alone, 316 neighborhoods were incorporated into urban improvement plans, ensuring them drinking water and electricity and bringing them street-paving projects. Furthermore, more than US\$ 400 million was invested to benefit 650,000 low income residents (10). In the late 1990s, outlays for public education were doubled, and enrollment increased to 140,000 (11), thereby indicating that 98% of school-age children were being schooled by the end of 2003.

The social transformation of Bogotá has gone beyond investment in household public utility services and the provision of infrastructure. The mentality of its citizenry has

<sup>8</sup>Starting in August 2001, the “Pico y Placa” program was extended to public transportation vehicles, 20% of which have been taken off the streets from Monday through Saturday.

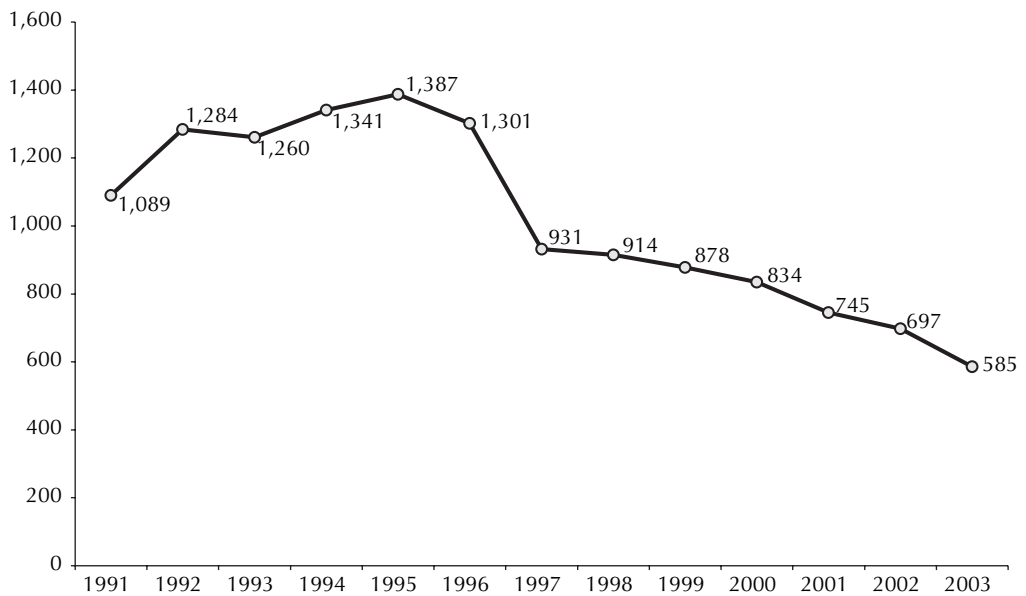
<sup>9</sup>According to a 1995 study by the Japan International Cooperation Agency, the average rush-hour driving speed was only 5 km/hour, whereas in 2003, the Bogotá Transit Authority determined that it had risen to 16 km/hour.

**FIGURE 1. Evolution of functional changes in transportation modes during rush hour in Bogotá, 1998–2003.**



Source: Encuesta Anual de Percepción Ciudadana del Proyecto “Bogotá, Cómo Vamos”, 2004.

**FIGURE 2. Reduction in deaths due to traffic accidents in Bogotá, 1991–2003.**



also changed, and though this is hard to demonstrate with statistics, the acceptance of many education and awareness-raising programs points to this change. In 2001 and 2003, surveys were conducted to gauge these programs' impact (Table 1). Although the results suggest that there have been considerable changes in this regard, the changes between 1995 and 2001 were, presumably, even more significant, because from 1995 to 1997 priority was given to programs to educate the population and encourage behavioral changes.

Some of the most significant achievements in the city are related to personal security, as seen in the decline in the violent death rate by 46.6% between 1994 and 2003 (Figure 3). This is one aspect in which the city has changed and improved the most. Nevertheless, most of the population is not yet completely aware of the improvements stemming from the declining violent death and crime rates. There is a large difference between statistics on and perceptions regarding or anecdotal evidence of insecurity. Furthermore, Bogotá's mass media did not actively support policies to improve security, unlike in other countries, for example, the "Zero Tolerance" campaign in New York, through which the number of police and law enforcement agents increased. In Bogotá, the foundations for this progress were education, gun control, reconciliation between antagonistic groups, peaceful conflict resolution, and citizen education, among other efforts.

## Economic Aspects

Changes have also been seen in the economic sphere, both in increased tax collection and in higher public investment. Between 1990 and 2003, tax receipts in Bogotá tripled, and the credit rating on domestic debt improved considerably, reaching a level twice as high as the rating given in preceding years. In the same period, tax revenues jumped from some US\$ 200 million to more

than US\$ 750 million. The revenue increase came from a higher surcharge on gasoline, the implementation of a plan to fight tax evasion, the updating of the real estate register, a simplification of tax laws, the assessment of a property tax for public works (known as *valorización de beneficio local*), the raising of public utility rates, and national funding for the TransMilenio system (12)—for 15 years, 52% of the total budget for this system will come from the federal government. The rise from 14% to 20%, and then to 25%,<sup>10</sup> in the gasoline surcharge was one of the greatest sources of revenue for the investment in transportation (a street grid known as *malla vial* and mass transit). In addition, there were two anti-tax-evasion plans,<sup>11</sup> and the district (capital) land registry was updated,<sup>12</sup> with which significant supplementary resources were obtained. In addition to these increases in general revenues, additional resources were created with the selling of part of Empresa de Energía de Bogotá to private investors, which yielded US\$ 485 million.

One of the greatest achievements in the management of the capital's finances has been the reduction in operational costs and the allocation of the resources saved to investment. Until 1994, more than 45% of the annual budget went to operational costs, compared with 52% in 1992. Since 1995, expenditure on this item has continued to decline and accounted for just 20% in 1999. Furthermore, investment rose from 30% of the budget in 1992 to 75% in 1999 (Figure 4). Sounder public finances increased residents' confidence in the city's managerial capacities, allowing additional voluntary taxes to be collected between 2001 and 2003. As the city council did not accept a proposal from the mayor to increase taxes, the mayor chose to ask citizens to voluntarily increase their

<sup>10</sup>Agreement 24 of 1997.

<sup>11</sup>The first anti-evasion plan allowed US\$ 30 million to be collected in 1999 and US\$ 35 million in 2000. The second plan allowed a 40% increase in the taxpayer roster.

<sup>12</sup>Agreement 24 of 1997.

**TABLE 1. Evolution of citizens' behavior and respect for laws in Bogotá, 2001 and 2003, by percentage.**

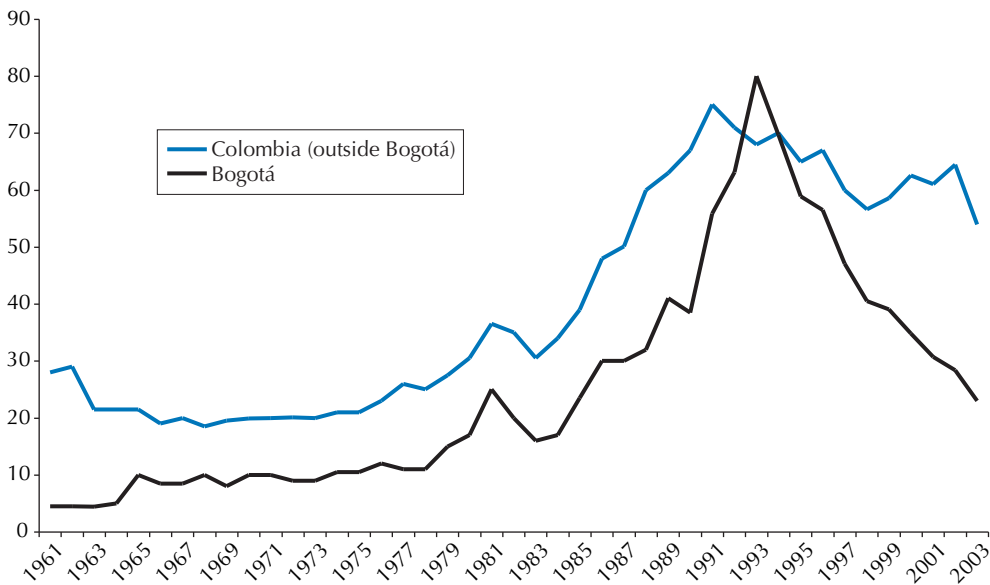
Indicator	2001	2003
Those who are familiar with and abide by safety belt laws	13.30	25.70
Those who do not justify breaking laws regarding parking in no-parking zones	62.00	84.70
Those who generally respect local laws	43.00	48.80
Those who justify breaking the law when doing so is the only way to attain their objectives	24.10	17.30
Those who justify disobeying laws that are customarily ignored	8.90	6.60
Those who justify breaking the law when it is economically advantageous to do so	11.80	7.50
Those who think that it is preferable to have a weapon for personal protection	24.80	10.40

*Source:* Observatorio de Cultura Urbana (Observatory of Urban Culture).

annual tax payments by 10%. Some 70,000 taxpayers accepted to do so and contributed more than required of them. This shows the degree of popular recognition and acceptance both of the mayor and of his management of the city. To a large extent, the residents who paid more did so as a way to express their appreciation for the city's great transformation and the improvements in public management. Hence, an additional achievement was the municipal government's renewed credibility in the eyes of the general population.

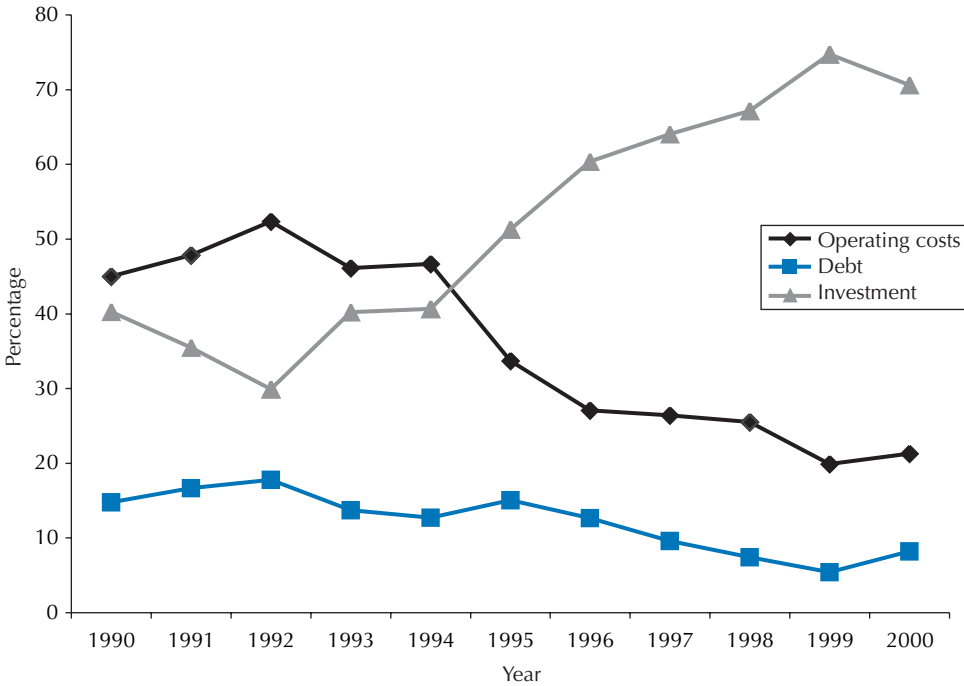
### Political Aspects

There have also been considerable changes in the political realm, both among elected officials and among their constituency. Elected officials have taken important, innovative actions in favor of the redefinition of community participation and the use of public space. And voters, through the mayoral elections, have expressed their disagreement with the traditional political class and bipartisan system by casting what is called an "opinion vote," which is a new

**FIGURE 3. Homicide rates per 100,000 inhabitants in Bogotá and outside of Bogotá over the last four decades.**

*Source:* Instituto Nacional de Medicina Legal y Ciencias Forenses.

**FIGURE 4. Percentage in evolution of investment costs, debt servicing, and operational expenses, 1990–2000.**



form of public expression that has opted to eschew traditional clientelistic voting patterns. Interestingly enough, this alternative vote has manifested a different expression in each election. On the one hand, persons not linked to the traditional political machinery have been elected—such as professor Antanas Mockus (1995–1997), Bogotá’s first mayor of “civic or alternative” origin;<sup>13</sup> on the other hand, voters have rejected populism—as personified by the candidate Carlos Moreno de Caro—when, in the following elections, they chose to embrace a politician, consultant, and university professor named

Enrique Peñalosa (1998–2000). Both Mockus and Peñalosa operated in a context that strongly favored major policy transformations, allowing, among other things, an increase in the efficiency of civil servants and a reduction in corruption, through an improved public sector procurement system.

**An Overview of the Factors Leading to Change**

As regards the transformation of Bogotá, this subsection looks at the factors that explain the general changes, and, in particular, those related to transportation. The initial assumption is that the transformation of Bogotá was the result of a sea change in the political sphere,<sup>14</sup> which translated into a

<sup>13</sup>In Colombia, a mayor of “civic or alternative” origin is one who is elected by popular vote and whose political roots do not lie in either of the two large centrist parties, the Conservative Party and the Liberal Party. In addition, such candidates come from different sectors of the public administration; generally they are academics or representatives of lay or religious civic movements (e.g., leaders of unions or associations, demobilized guerrilla movements, ethnic minorities).

<sup>14</sup>“The political dimension is not limited to a group of men, but rather to all groups and to all men, without exception . . . and the political dimension is related to the joint action of citizens for the attainment of common good” (13).

redefinition of the roles of actors both at the at-large and the individual levels.

As we saw in the previous subsection, in the political sense, this redefinition has included both voters and elected officials, with the voting populace expressing their collective will through use of the “opinion” vote, and with the officials elected in two successive mayoral terms spearheading a redefinition of citizenry participation and the use of public spaces. Moreover, these officials have striven to defend public interests over private interests and the general good over partisan priorities. This political stance represents an aberration in traditional Colombian politics, which in earlier years had produced a series of governments characterized by a distinct lack of will in defending the public’s best interests and safeguarding the rights of their citizens.

The unfavorable political climate for traditional politicians and the sociocultural transformations characteristic of the 1990s led voters to opt for alternative proposals, such as the election of Antanas Mockus in 1994. This shift in voter preference in Bogotá had been presaged in other cities of the country and was even replicated in national and local elections in many other countries and cities of Latin America. It has brought into power a diversity of new players that includes civic leaders (both lay and religious), representatives of unions and not-for-profit and business associations, and ethnic and political minorities—such as members of indigenous groups, black communities, left-wing parties, and former guerrillas—as well as nationalists, intellectuals, populists, and entertainers (singers, actors, comedians, and sports commentators, among others).

Factors encouraging changes in transportation and physical mobility are closely tied to political issues. Hence, in Bogotá, change took place within the framework of determining the role of the principal stakeholders: city hall, transportation companies, and the general public. City hall promoted changes in the way people conceived of

transportation and how it should function; transportation companies accepted and followed through on making internal changes in the sector’s organization; and citizens changed their thinking by accepting new laws, standards, and programs related to the creation of infrastructure projects. To better explain the magnitude of these changes, the next subsection examines the characteristics of urban mass transit in the late 1990s.

### **Urban Transit Prior to the Transformation**

Starting in the early 1980s, when the urban area was burgeoning and there were limited new alternatives for managing existing urban transportation infrastructure, the quality of daily transportation in the city progressively deteriorated. Then, in the early 1990s, urban transportation further worsened due to the massive introduction of vehicles, spurred by a macroeconomic policy that opened the borders and cut import tariffs.

Bogotá, as well as nearly every other major population center in the Region of the Americas, found itself a victim of what became known as “the transportation problem,” a dangerous dichotomy marked by widespread automobile gridlock and a woefully inadequate system of public thoroughfares to accommodate the swelling number of vehicles in circulation. In Bogotá, this situation led to considerable changes in the city’s socioeconomic and spatial structure until the physical boundaries could no longer continue to expand. Hence, there was a series of positive and negative occurrences, among which the most important were:

- a higher population and housing density;
- displacement of the downtown business district toward the north of the city;
- consolidation of several “subcenters” within the city and of one metropolitan “hypercenter”;

- radical changes in the criteria used by residents in choosing a place to live; and
- consolidation of a once-unreliable mass transit system.

The last item in this list requires closer examination, in view of the fact that the transformation of Bogotá's once-unreliable transportation system has significantly contributed to increasing the amount of time residents spend walking. Indeed, the current TransMilenio system, with its fixed bus stops and the long distances that need to be walked to reach these stops, stands in sharp contrast to the traditional system, in which buses allowed passengers to disembark wherever the latter requested. Prior to the construction of TransMilenio, passengers of the traditional system accounted for more than 80% of daily trips in the city. The population's unruliness was reinforced by a semi-informal organization of the traditional transportation system that forced drivers to seek out passengers in order to guarantee their income. Hence, drivers had turned the city into a type of battlefield in what became known as the "centavo war." Nevertheless, in practice, the unreliability of collective transportation was due in part to the particular way the system was operated. The poor service—with the lack of set bus schedules, disregard for stops, irregular routes, and generalized overall lack of discipline—was not the result of the "centavo war," the lack of civility, or the drivers' socioeconomic and cultural characteristics, as is frequently suggested. Rather, the "centavo war" was built into the structure of this type of transportation system, requiring buses to be filled to capacity despite the low profit margins this ridership produced.

These problems were not exclusive to Bogotá in the 1990s: precarious organization and management of collective transportation are characteristics common to a number of Latin American cities. To a large extent, this situation is the result of a lack of political will on the part of local governments as well as

their inability to organize, control, and/or manage municipal transportation systems, on the one hand, and, on the other, the serious obstacles small, informally organized transportation enterprises often face in evolving into more stable entities. Over time, these latter types of companies have become consolidated into a de facto transportation management system. As noted by Coing and Henry (1989), "an exhaustive assessment makes the organization of transportation [in developing countries] a true 'system,' even if this system has nothing to do with our standards [those of industrialized countries]. . . . Very strong social and functional regulations hide behind apparent disarray. . . . [Within this apparent disarray] there can be regulation mechanisms, almost always based on stakeholders' roles" (14).

## THE CULTURAL REDEFINITION OF BOGOTÁ

On 30 October 1994, Antanas Mockus was elected *Alcalde Mayor* (i.e., mayor of the entire metropolitan area) of Bogotá. In garnering a large majority of the votes—64%—he scored an impressive victory over Enrique Peñalosa, the candidate for the Colombian Liberal Party, who received 30%.<sup>15</sup> His rise to power followed a novel and unusual electoral campaign, known as *Ciudadano en Formación*, one of whose fundamental tenets was named the "No P;" as in No Publicity, No Politics, No Money (*plata*), and No Parties. This campaign was decidedly the most eccentric and least expensive<sup>16</sup> in the history of the city and the country.

In the District (capital) Development Plan for 1995–1997, called "Forming a City," the Mockus administration gave priority to six

<sup>15</sup>Registraduría del Estado Civil (vital records and electoral oversight office), information from 1994 national elections.

<sup>16</sup>The approximate cost of the campaign was 8 million Colombian pesos, or US\$ 8,000 at the 1994 exchange rate.

topics, in the following order: citizen education, public space, the environment, social progress, urban productivity, and institutional legitimacy (15).

## Citizen Education

Education of Bogotá's citizenry became the linchpin of Mockus's efforts, which focused mainly on facilitating or strengthening behavior changes—changes in the way the city's inhabitants relate to one another and gain control of the places where they carry out their daily activities. Citizen education was defined as "the set of shared attitudes, customs, actions, and minimum rules that generate a sense of belonging, facilitate urban coexistence, and lead citizens to respect common heritage and recognize their rights and duties" (16). Furthermore, it "consists of facilitating, from a position of political authority, a greater convergence of law, morality, and culture, through the promotion of self-regulating and mutually regulating processes. A familiarity with and internalization of cultural norms that are considered desirable and that set limits on social action in highly heterogeneous social and cultural milieus should promote socially acceptable behavior without the threat of legal punishment, which is the last resort of state control. In sum, the result should be education for a new expression of *social obligations*, a new citizen morality constituted by new patterns of coexistence" (10).

The promotion of citizen education played a leading, strategic role in the administration's actions. It was both a project and a strategy, encompassing several topics initially proposed as strategies of the government's plan. For the first time in the history of Colombia, and perhaps in all of Latin America, an administration focused its efforts on educating citizens and devoted a significant portion of its resources to that end, which had been part of candidate Mockus's *Ciudadano en Formación* and "Forming a City" electoral platform. Under this plan, more

than US\$ 100 million was allocated to the Citizen Education Program for a period of four years, starting in 1995. The program was carried out by the District Institute of Culture and Tourism (IDCT).

The three basic strategies on which citizen education was based were: citizen self-regulation, modification of contexts, and institutional incentives. These strategies were aimed at bringing about harmonious relations among citizens through conflict resolution and the overcoming of racial and social prejudices.

The implementation of the citizen education concept was carried out through programs designed to teach Bogotá's residents by entertaining them and leading them to reflect on the importance of improving their everyday behavior within the context of the city's physical and social environment. The programs developed were numerous and highly varied in their approach. The actions—promotional signage and other types of street representations and events—were symbolic, ingenious, and thought-provoking. However, very unpopular measures were also adopted, in an effort to reduce violence, lower the rate of alcohol-related accidents, and reduce the number of gunshot wound victims. One special focus was the restriction of arms possession among civilians carried out through anti-gun campaigns. A "semi-dry" law known as the "carrot law" or "carrot hour" was created, forcing nighttime establishments to close at 1:00 a.m., and the production, sale, and use of gunpowder for recreational purposes were prohibited. Despite their initial unpopularity, these measures later came to be widely respected. According to surveys conducted after their enactment, the anti-violence efforts were approved by 92% of the population; the steps to curb alcohol consumption, by 81%; and the restrictions on gunpowder, by 77%.<sup>17</sup>

<sup>17</sup>Bogotá, Centro Nacional de Consultoría. *Conocimiento y evaluación del programa "Cultura Ciudadana."* Unpublished report, 1998, p. 108.

One important component of the actions was based on entertainment and communication: the idea was to teach people by encouraging them to have fun during the learning process. The main focus of the efforts was interpersonal communication through entertaining street activities. Games were created, such as one using a *perinola* (a small top) and another with white and red “citizen cards”: the game with the top was meant to symbolize participation, with anyone being able to win or lose, and the card game was intended to signal citizen approval or rejection, similar to the cards used by soccer referees. To encourage the population to reflect, a series of “urban theater” skits were staged using street mimes and actors. In March 1995, the first of these skits sought to teach citizens to respect pedestrian crosswalks (called “zebras”), to wear safety belts, and to refrain from honking horns. The actors, disguised as cloistered monks, were to encourage citizens to reflect on the importance of lowering noise levels in the city. These and other types of skits were designed to “bring about a sense of belonging in a city [traditionally] characterized by inhospitality and a weak citizen-oriented culture.”<sup>18</sup> After a series of activities utilizing an interpersonal strategy had concluded, much more broad-based efforts were introduced, characterized by programs and actions known as “Bogotá’s Charm,” “the Capital Card,” “the Rules of the Game,” “Bogotá Is to Be Won or Lost,” and “We All Chip In,” among others.

One of the actions that received the most attention nationally and internationally was the utilization, starting in March 1995, of street mimes to raise the population’s awareness of the need to use crosswalks. These skits were widely covered by the media, which greatly helped to publicize the efforts

and their objectives. Hence, with the tacit support of the media—an unexpected ally that contributed free airtime—the actions to raise the population’s awareness through skits and symbolic representations achieved a large part of their objectives.

Thus, over time Bogotá residents came to recognize the significance of a government administration’s efforts to raise awareness about the need to improve urban life. Although statistics are not very accurate indicators of the scope of the change in thinking generated during Mockus’s first term, in the “mind of the imaginary Bogotá dweller,” there is the idea that citizen education has been one of the most profound changes in the capital’s recent history. The work carried out in Mockus’s first period will be vividly remembered for a long time. However, unlike other administrations, it will not be remembered for its landmark public infrastructure projects—as has been the custom in Bogotá’s history—but for the transformation in its citizenry resulting from large-scale education initiatives.

Residents’ overall assessment of the citizens’ education program was extremely positive. It scored 7 on a scale of 10; 61% considered it the most important and concrete action carried out by the Mockus administration, and 96% felt that the program should continue. When asked to choose from a list of proposed phrases in the same survey, 44% of the respondents associated the program with the idea of “educating people to be more civilized,” and 23% with the idea of “improving the work of the police and the authorities to reduce feelings of insecurity in the city.”<sup>19</sup>

The citizen education program was complemented by the founding of the Observatory of Urban Culture in September 1996 as a vehicle to facilitate the study and monitoring of the city and its changes by “constructing a multidisciplinary structure for the observa-

<sup>18</sup>Taken from a 1995 presentation given at the Observatory of Urban Culture by the Center of Social Studies. “Memoria y evaluación del Instituto de Cultura y Turismo, Programa de Cultura Ciudadana.” Bogotá, National University of Colombia, School of Human Sciences, IDCT. Unpublished report, 1998, pp. 102–104.

<sup>19</sup>Bogotá, Centro Nacional de Consultoría. *Conocimiento y evaluación del programa “Cultura Ciudadana.”* Unpublished report, 1998, p. 108.

tion, research, collection, and rigorous and periodic systematization of information on the culture of Bogotá; and by promoting a confluence of interests by researchers and by city government in order to analyze and evaluate urban processes and the results of the actions of the various city government agencies in the capital.”

### THE REDEFINITION OF ESTHETICS, SPACE, AND FUNCTION

In 1997, in a more hotly contested election than the preceding one, Enrique Peñalosa, running as an independent candidate, captured 48% of the votes, defeating the “populist” candidate, Carlos Moreno de Caro, who received 31%. The District Development Plan for 1998–2000, called “For the Bogotá We Want,” stressed the following topics and projects: poverty eradication, social integration, a city on a human scale, transportation, urban planning and services, security and coexistence, and institutional efficiency. In addition, the following “megaprojects” were drafted: an integrated mass transportation system, street construction and maintenance, the creation of a land bank, a district park system, and a district library system.

The definition of these megaprojects clearly set the priorities for the actions to be undertaken. Hence, the most notable achievements of the Peñalosa administration were directly related to these projects. Furthermore, the particular statute for the megaprojects allowed teams outside the government to be formed, even with young managers almost completely unfamiliar with urban issues or with the specific field of work involved, but who were responsible for concrete tasks and strategic projects—known as macroprojects.<sup>20</sup> The administration’s dis-

course and actions from 1998 to 2000 were punctuated by an overarching invitation to the inhabitants of Bogotá to envision a new city, to move “discussion on the city beyond the subject of potholes and security, so that we will become aware that we can build anything we imagine” (17). The first 24 months were very taxing for the mayor, however, in the sense that he experienced difficulties in conveying to his constituency what he was thinking, proposing, and carrying out for Bogotá—the creation of “a city that today seems utopian; [a city that is] reforested, that has bicycle paths, beautiful promenades, is full of parks; [a city] with nearly navigable, clean rivers; with lakes [and] libraries; [a city] that is clean and egalitarian” (17).

Although improving the city’s appearance was not one of the priorities of the development plan, it was one of the mayor’s principal concerns. Despite the large amount spent on advertising for actions to improve the city’s image, such as the well-known campaign called “Bogotá, 2,600 Meters Closer to the Stars,” launched in August 1998,<sup>21</sup> the mayor encountered challenges in getting across his message of encouraging people to imagine a new city. Indeed, Peñalosa’s proposal was only fully understood after the projects had been completed. The reasons for this were, on the one hand, the relatively felicitous effort to convey ideas and provide information on projects in progress, and, on the other, the fact that most of Bogotá’s residents had only limited points of comparison, which effectively prevented them from imagining a different city.

In the search for an “egalitarian” city with “beautiful promenades,” public space and physical mobility became the central elements. Proposals and actions of the Peñalosa administra-

<sup>20</sup>Very few project managers were highly specialized in fields related to the projects being conducted. One exception was the head of the Metro project, Dr. Darío Hidalgo G., a transportation expert.

<sup>21</sup>“The campaign seeks to convey the notion that Bogotá is a humane city, owned by all its residents, and that its dwellers are proud of it. It wants to instill in residents a sense of belonging and appropriation. . . . This is the legitimization of a characteristic conceived as part of the city’s heritage, a recognizable emblem of its identity vis-à-vis the country and the world” (18).

tion were designed to create a friendlier and more humane city, with public spaces allowing people to come together (promenades, plazas, parks, tree-lined avenues—mistakenly called “alamedas”<sup>22</sup>), and where these spaces could be used by all citizens regardless of social class.

Enrique Peñalosa’s management has been recognized both nationally and internationally for the important innovations it introduced in urban transportation. This recognition has been expressed in many ways. According to a December 2000 survey conducted by the Colombian daily *El Espectador*, more than 40% of the population described his administration as “excellent.”

### **Mobility and Transportation: The Redistribution of Public Space**

Between 1998 and 2000, there was an authentic transformation in the approaches used to respond to the issues of physical mobility, transportation, and public space. The nature of these approaches can be regarded as a radical break from the way these urban issues traditionally had been addressed. Indeed, there is now widespread consensus among the city’s dwellers that the effect of the Peñalosa administration’s policies regarding mobility transcended physical projects such as TransMilenio, the creation of bicycle paths, the recovery of green space, or programs such as “Pico y Placa” and “Without My Car in Bogotá.” From a practical standpoint, these efforts offered Bogotá’s populace the opportunity to get from one point to another in the city in a new way, but on another plane, they enabled the citizens of Bogotá to reclaim their city and take back its public spaces for their own enjoyment and benefit.

Peñalosa’s administration made TransMilenio a high priority and the centerpiece for the transformation of mass transport in

the city between 1998 and 2000. Within the framework of the Bogotá Development Plan, nearly US\$ 300 million was allocated in 1998 to the bus system as the backbone of the mass transit service. Most of this amount was used for investment in roads and related technical infrastructure required for the implementation of an efficient transportation system, and it brought about a new physical and functional structure for the organization and operation of mass transport. The service’s planning, organization, infrastructure construction, coordination, and control were placed under the responsibility of a “district” (municipal) company named TransMilenio S.A. (10). Yet private transportation companies were made responsible for the system’s actual operation; that is, for providing the buses and hiring the drivers.

The type of physical infrastructure chosen followed the lead mainly of experiences in the cities of Curitiba, Brazil, and Quito, Ecuador. The structure is an integrated system made up of a high-capacity arterial network and feeder networks. Along the bus routes, there are fixed stations where passengers can pre-pay before boarding. These are divided into simple, intermediate, and head stations. There are also stations along the feeder routes.

In addition to developing TransMilenio as a new concept of mass transport, the Peñalosa administration also promoted alternative forms of transportation through such programs as “Pico y Placa” and “One Day without a Car,” both intended to counter the predominance of private automobile use and to encourage the construction and improvement of promenades and bicycle paths, so as to stimulate an increase in nonmotorized transportation activities such as walking and bicycling.

Public discourse and actions discouraging the use of individualized transportation were, in general, innovative, coherent, and on-target. Discourse on the impact of automobiles on the urban environment was also relevant, stressing the tenuousness of de-

<sup>22</sup>In Spanish, *alamedas* should be used only in reference to poplar groves.

pending on this form of transportation in the medium and long term. In this regard, it was frequently pointed out that “if we do not succeed in getting people who own automobiles to utilize public mass transportation, the functioning of our city will become unviable, for both economic and environmental reasons, not to mention the collective despair [this will cause] our citizenry.”<sup>23</sup> The Peñalosa administration steadfastly pointed out that personal vehicles “are the most serious threat the city will have in the future . . . private automobiles are the worst threat to quality of life in this city” (20).

As mentioned above, people were encouraged to use their automobiles rationally through peak-hour controls known as “Pico y Placa.” This consisted of a non-coercive restriction designed to reduce rush-hour traffic so that automobile owners would not feel so dependent solely upon this form of transportation and to discourage the purchase of additional family vehicles. This measure succeeded in taking more than one-third of private vehicles off the street each day.

Mayor Peñalosa’s anti-automobile and pro-sustainable-city discourse made it possible to conduct a trial run of what the city would be like without cars. On 29 February 2000, Bogotá held its first “Without My Car in Bogotá” day; as with similar experiences in many cities of Europe, the city functioned for one working day without automobiles being driven. The objective of the event was to encourage reflection that would allow citizens to imagine a new, more humane, and sustainable city. Despite the many missteps characteristic of such a large-scale trial, residents generally supported the event and voted in a referendum for it to be carried out annually.

The importance given to public space was one of the most important contributions of the 1998–2000 administration. Public space, which once “belonged to no one and was not

given serious attention by city government, [and which] anyone could take for his or her exclusive use, without any consideration for [other] human beings . . . came to be the pre-eminent space in the city” (21). Although much remained to be done in terms of theoretical studies, in practice considerable strides were made: an Office to Defend Public Space (*Defensoría de Espacio Público*) was created<sup>24</sup> and given the responsibility of recovering land illegally occupied or seized. Furthermore, large public spaces were set aside for pedestrians through the establishment of formal and technical standards governing the placement of promenades, park benches and fences, picnic tables, bus stops, public phones, and other fixtures; tree planting and landscaping; signposts; and lighting.<sup>25</sup> All told, 836,143 m<sup>2</sup> of public space was created (22); 1,034 park areas were taken back, improved, and maintained—approximately 54% of the city’s total of protected green areas. Almost 70,000 trees and 183,651 garden plants were planted; and 202 km of thoroughfares and 280 ha of parks were protected. All of this was done at an approximate cost of US\$ 100 million.

The actions to recover, improve, and maintain public space also led to progress in the construction of a network set aside for nonmotorized vehicles. The Bicycle Path Master Plan proposed the construction of 450 km of paths exclusively for bicycles (called *ciclorrutas*): 300 km (two-thirds of the total distance) have been completed to date, making the network in Colombia’s capital the largest in Latin America and one of the largest in the developing world. The sizeable investment (US\$ 46 million through 2001)

<sup>24</sup>Agreement 18, 26 August 1999.

<sup>25</sup>Many executive orders were issued on the design and construction of promenades, through the following documents: Executive Order 682, 4 August 1998; Executive Order 758, 4 September 1998; Executive Order 170, 17 March 1999; Agreement 38, 13 December 1999; Executive Order 198, 21 March 2000; Executive Order 822, 28 September 2000; Executive Order 1003, 14 November 2000.

<sup>23</sup>Agreement 4 of 1999.

has resulted in a number of impressive technical and construction achievements, including the fact that the largest expanse of the bicycle path network was completed in less than three years, a very short time for such an ambitious undertaking.

### **CONCLUSIONS: THE COMPLEMENTARITY BETWEEN ISOLATED ACTIONS AND INDEPENDENT ACTIONS**

The conclusions of the author of this chapter regarding both the increase in physical activity among Bogotá's residents, as discussed in earlier parts of the chapter, and the city's physical and spatial transformation, described in subsequent sections, are very similar, not only because of conceptual similarities but also because of the interdependence of these topics. Indeed, both changes stem to a large extent from a complementary process of isolated political actions that were independent from one other in terms of the issues at hand as well as in terms of when and where they were carried out. Although today Bogotá city dwellers walk and use bicycles more than ever before, this achievement is due to effective urban transportation policies and not, in all fairness, to successful public health efforts or the promotion of increased physical activity per se. This occurrence serves to illustrate that if a public policy is channeled in the right direction, its positive effects may extend well beyond the sphere or issue that was originally targeted. This unintended interconnectedness between different disciplines and aspects within the same geographical framework nonetheless provides a strong and convincing argument for the value-added nature of comprehensive and well-coordinated efforts. The experience in Bogotá demonstrates the positive efforts to be derived from the formation of teams to address both challenges related to urban transportation as well as those related to improving public health status,

particularly as regards sedentary lifestyles and physical activity. The question arises that if the world-class capital city of Colombia has unintentionally attained unprecedented coordination and results in the transformation of its human and physical characteristics, what would occur in other cities if urban planning and the design of transportation structure were to adopt from the outset as the criterion for socioeconomic evaluation the benefits that this type of infrastructure would bring to the health and well-being of the population? Based on the experience in Bogotá, many fields of research and reflection open up for future exploration of the concrete strengths to be offered by conscious coordination between teams of urban development and public health specialists. Consequently, this chapter's conclusions have been divided into two parts, which detail, on the one hand, the factors leading to cultural and spatial change, and, on the other, the elements that may contribute to an increase in physical activity through changes in the way populations mobilize themselves from one area of the city to another.

### **The Recent Transformation of Bogotá**

Bogotá's recent transformation is the result of a long process that lasted approximately a decade, the most significant aspect of which was the complementarity and continuity between actions that redefined the roles of citizens and those that redefined public esthetics, space, and function. However, it should be noted that no "macro" or overarching plan for the transformation was followed by the two government administrations, nor was there continuity in terms of policies or parties between the first and the second mayor—indeed, Antanas Mockus and Enrique Peñalosa were political opponents in the 1994 election. Still, the achievements in transportation underscore the complementarity between the goal of improving transportation and changing the population's behavior. Although the projects involving concrete and asphalt have

strongly impacted the way people move about in the city, this achievement is also related to a change in thinking regarding the city in general and mobility in particular. In recent years, there has also been a structural change in the way transportation is thought of and provided, entailing both municipal authorities and the citizens they serve. First, there were citizen education campaigns; then, for the first time in the city's history, mass transit was made a top priority, based on the rational use of automobiles, the implementation of the TransMilenio project, the taking back of public space, and the creation of options for getting around not requiring motor vehicles. Hence, the intention was to strike a new balance in the use of public space. In this regard, Mayor Peñalosa took a very bold public stance by declaring that private automobiles were not a viable, long-term alternative for daily transportation in a city that wished to be efficient, equitable, and humane.

A high degree of reflection regarding mobility has been attained, and significant actions have been taken. Furthermore, a high level of coherence has been achieved between theory and practice, which, in and of itself, is an extremely rare phenomenon in today's society. Indeed, although many large metropolitan areas have elected officials who claim to prioritize collective and nonmotorized transportation, in practice they do not question the indiscriminate use of automobiles, perhaps due to the high political cost of doing so. If the majority of elected officials fail to carry out programs that encourage the rational use of private vehicles or that propose to take back public space, it is most likely because such actions could directly affect their image or their possibilities of being reelected.

The transformation of Bogotá over the past decade has been a complex process requiring an inordinate reserve of political will, coherence between plans and actions, an important investment in collective and nonmotorized transportation, and especially,

the participation and education of citizens and the creation of an ongoing dialogue with them. For example, although the taking back of promenades has benefited most residents, the measure was apparently rejected at first, due to what has been called a "lack of points of comparison." It has been demonstrated that residents' lack of comparison with other urban realities—either within the city or outside of it—prevented them from clearly perceiving the magnitude of the problems in the infrastructure they used every day. The case of the promenades has parallels with collective transportation. Despite its previous inadequacies, public transportation has traditionally been evaluated positively and has scored relatively high in surveys in recent years, despite the worsening of driving conditions. In the case of the recovery of public promenades, the beneficiaries—the vast majority of Bogotá's citizens—did not have a true point of comparison to assess what it meant to see uncongested thoroughfares and clearly marked and respected pedestrian crosswalks, since these phenomena had never formed part of their shared history.

Changing the way people think was one of the most important challenges taken up by the two administrations, since it entailed bringing about a radical transformation in the type of city and citizens that had existed until then. Indeed, the emerging metropolis of Bogotá had been structured much more around the automobile than around mass transportation. Private automobiles had enjoyed privileged status during successive governments (both national and local) even though historically only a minority of residents had owned one. Models of urban development centering around the indispensability of automobile use reflected the distinct influence of the United States, the traditional source of emulation by Colombian society's middle and upper classes.

Yet since the late nineteenth century, the considerable influence of the United States, particularly in the socioeconomic and politi-

cal spheres, when not clearly detrimental, has produced decidedly mixed results. For example, some urban sectors of Bogotá increasingly resemble cities in the United States; nevertheless, a closer look reveals that this similarity harbors many of the limitations characteristic of a Third World city: Bogotá's northern sector has seen a considerable expansion of infrastructure to accommodate automobile use, while the center has become increasingly overlooked from this standpoint. The appearance of much of the city, and in particular the north, is closely linked to the predominance of the automobile, as seen in the proliferation of streets and in the formal characteristics of private residences and of consumption patterns and in the choice of leisure-time activities. The preference for the automobile is most obvious in the structure of the city, since the most important infrastructural elements to facilitate driving benefit the north, at the expense of the rest of the city—particularly the south—thereby aggravating the city's traditional socioeconomic and spatial segregation. This segregation, in turn, has led to an important imbalance that is currently spreading throughout the metropolitan area.

In this sense, by vigorously limiting the use of private automobiles and instead promoting collective and alternative forms of urban transportation, Bogotá is setting a precedent for many other cities in Latin America. Hence, the achievements in physical activity described in this chapter and their possible future impact on preventing sedentary lifestyles and chronic disease are important additional arguments, albeit in a different discipline, that enhance the analysis of Bogotá's transformational experience.

### **Public Health and Physical Activity**

The budding achievements in public health and physical activity strongly resemble other changes in the city, which stem more from the convergence of isolated, complementary factors that originated indepen-

dently from one another rather than from purposefully planned efforts coordinated among various public entities. Indeed, there was no overall or sectoral plan regarding urban issues, transportation, or public health to mobilize the people of Bogotá on a large scale. Although there have been sectoral efforts focusing on physical activity, these likewise have been partial and somewhat marginal for a city of this size. And while programs have been created that focus on physical activity, they have targeted relatively small groups of individuals, such as the employees of specific private or public enterprises. Still, the "Sunday Bicycle Path," a program that every Sunday makes more than 100 km of streets available for nearly one million people to walk, skate, or ride bicycles, is more than 25 years old and has become part of the city's recreational heritage.

The changes in Bogotá can be defined as a succession of well-focused and well-thought-out public actions that have complemented one other in different ways. Although these policies have not been coordinated, due to the issues they address and due to time and space constraints, they have favored increased physical activity. Indeed, two mayors and three city governments between 1995 and 2003 consolidated highly diverse actions that on the whole led to a substantial increase in physical activity. The unifying factor in all these actions appears to be the complementarity between campaigns focusing on changing citizens' behavior (citizen education) and the construction of public spaces and infrastructure for mass transport and alternative forms of mobility. Nevertheless, it must be recalled and emphasized that, in addition, there have been improvements on other fronts, such as the considerable reduction in crime and traffic accident rates, increased citizen participation, and higher housing density, among others. Although almost two-thirds of the half-hour of universally recommended daily physical activity is met through the time it

takes for most commuters to walk to the nearest station of the TransMilenio system, the elimination of parking on public streets has also forced drivers to engage in additional physical activity, since the distances from their parked automobiles to their offices or other downtown destinations have likewise increased.

However, and despite the progress seen with regard to physical activity, ongoing research<sup>26</sup> points to an important discrepancy between what the residents of Bogotá perceive with respect to their physical activity or inactivity and the amount of activity in which they actually engage. Indeed, two-thirds (66%) of the respondents consider themselves to be physically active, which, technically, refers to a maintenance level of exercise. If this perception were accurate, it would have very positive implications for the population's health and well-being, because it would mean that the vast majority engage in physical activities at periodic moments throughout their daily lives. Nevertheless, an analysis of the levels of activity at different times throughout the day shows that the citizens of Bogotá are sedentary during at least 75% of their spare time, 90% of their work hours, and 79% of the time they spend commuting.

Another particularly worrisome finding produced by this research is that the barriers or impediments to undertaking physical activity are related more to individual than to societal reasons or causes. Indeed, it would appear that people are sedentary more out of a lack of willpower (30%) or energy or time (20%) than because of general, socioeconomic, and spatial issues in cities. The possible lack of space or of safety are very rarely mentioned as barriers to physical activity. Another important contradiction, especially

since walking, running, and climbing stairs cost nothing, is that 25% of the respondents point to a lack of money as the principal impediment to doing physical exercise.

Both the study of chronic disease and efforts to prevent it lead to an attempt to bring about behavior changes, which can only occur through a minimum, gradual adaptation to individuals' internal or external conditions. The internal factors are related to educational and cultural level, socioeconomic class, sex, age, physical activity or inactivity, and daily work routine, among others. The external factors are related to physical and environmental, as well as sociocultural, conditions. Physical and environmental conditions encompass the availability of recreational, sports, and urban infrastructure; geographical and climatic characteristics; and the conditions in which mobility takes place in a city, among others. Sociocultural conditions include collective awareness and behavior and citizen culture; personal safety; notions or frames of reference regarding urban transportation; physical activity; and the city itself or information available within the city. In this sense, the experience in Bogotá makes it possible to presume that, on the one hand, the recovery of public space and the construction of infrastructure for nonmotorized transportation, and, on the other hand, citizen education campaigns, the reduction of the number of violent deaths, and increased respect for rules, can contribute, within an urban context, to behavior change, by discouraging sedentary lifestyles and encouraging physical activity, thus helping to improve citizens' quality of life and increase their life expectancy.

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<sup>26</sup>See footnote 5 in this chapter for a description of the comprehensive study being carried out by the Public Health Institute of Colombia's National University and the Fundación Ciudad Humana with funding from the Colombian Social Protection Ministry.

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