# IS ALL SOCIOECONOMIC INEQUALITY AMONG RACIAL GROUPS IN BRAZIL CAUSED BY RACIAL DISCRIMINATION? 

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# IS ALL SOCIOECONOMIC INEQUALITY AMONG RACIAL GROUPS IN BRAZIL CAUSED BY RACIAL DISCRIMINATION?* 

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#### Abstract

This Working Paper addresses the issue of whether current racial discrimination is the decisive determinant of the wide and persistent inequalities in socioeconomic conditions between Whites and Blacks in Brazil. The paper highlights three main conclusions. The first is that factors, such as region of residence, parental education and household income, together, are responsible for the major proportion of the racial gaps that are observed today, but that racial discrimination remains a major source of inequalities among racial groups. The second conclusion is that whenever educational outcomes, such as literacy, can be easily attained, the ceteris paribus effect of race on the probability of attainment is small and diminishes as household income increases; but when outcomes are more difficult to attain, such as for secondary or higher education, the racial gap is large and increases with income. In other words, the effects of racial discrimination tend to be amplified when Black Brazilians are competing with White Brazilians for highly valued but low-supply social resources, such as higher levels of education. The third conclusion is that although younger age cohorts of Black Brazilians are advancing relative to their parents and to the Brazilian population as a whole, they are not advancing relative to their own age cohort. Thus, although younger age cohorts might be advancing relative to older age cohorts, young Black Brazilians remain in the same relative position vis-à-vis young White Brazilians as older generations of Blacks did vis-à-vis Whites. Thus, in a relative sense, there has been virtually no social mobility for Black Brazilians in the last three decades.


Keywords: Racial Discrimination, Educational Attainment, Intergenerational Mobility. JEL Classification: J15, I21, J62

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## 1 INTRODUCTION

Brazil is regarded as one of the most unequal countries in the world. Indicators of income concentration have always ranked it among the top five countries with the highest level of inequality-although the stability of its inequality has been challenged recently. ${ }^{1}$ But when one discusses inequality in Brazil, there are important dimensions to consider besides the distribution of income. One of them is socioeconomic inequality among racial groups, which empirical evidence suggests has been as persistent as income inequality.

The geographical origin of Brazil's people, which was readily identifiable by phenotype, was a strong factor of stratification during colonial times. Racism was originally forged in this period, emerging from the asymmetric social relations among Indigenous peoples, enslaved Africans and European settlers. And racist ideas became so entrenched in Brazilian culture that race remains today an important factor of social stratification.

This situation is something of a paradox. As polls have shown, ${ }^{2}$ Brazilians do not regard themselves individually as racists, but they recognize that racism is widespread in society. Brazilians do not manifest overt prejudice in public; this is regarded as a sign of rudeness. But in the private sphere, among friends and relatives, they express prejudice with ease. Because of this strange etiquette of social relations, many Brazilians do not feel comfortable if they have to talk to a Black person about her colour. And they believe that it is demeaning for their interlocutor to 'remind' them of her racial affiliation.

Although Brazilians recognize racism's existence, many of them believe that it has little consequence for people's life, and that individual merit prevails over skin colour. They believe that study, hard work and initiative are the main factors that lead to a person's advancement in society, regardless of race and even of social origins.

This mix of beliefs mirrors well the so-called ideal of 'racial democracy'-the selfrepresentation of Brazil as a country without racism and a racial divide. Many Brazilians have a sincere commitment to this ideal, even those who might practice racial prejudice. There are others, however, who regard the ideal of racial democracy as a myth, divorced from the everyday experience of Black Brazilians.

Foreigners who have arrived in Brazil from such countries as the United States and South Africa, where there is a pronounced racial divide, have often pointed out that in Brazil relations among racial groups have a friendly, pacific and tolerant character. This corresponds, to some degree, to reality. There are Blacks in the upper echelons of Brazilian society, there is interracial marriage and friendship and there is not pronounced residential segregation. There is also cultural syncretism, which has given Brazilians a rich culture built on the heritage of all the peoples who have migrated to the country (as well as its Indigenous members).

In spite of these auspicious characteristics, race remains a crucial factor of social stratification, although being Black is not, ex-ante, an automatic condemnation to poverty. Poverty is certainly higher among Black Brazilians, and this condition has prevailed throughout Brazilian history, even without the legal grounds for segregation and discrimination. But not all Blacks are poor and race is certainly not the single structural source of inequality.

Race has always been an important issue for Brazilian society. One of the most debated subjects of the 19th century in Brazil was the abolition of slavery. Then, at the end of the 19th century and during the first half of the 20th, there was a major debate on the allegedly nefarious effects of miscegenation. After the Second World War, the debate shifted to whether

Brazil was a 'racial democracy'—namely, a society where race did not influence one's standing in society. If such a democracy indeed prevailed, the inferior socioeconomic status of Blacks had to be explained not by racial discrimination, but by other factors, such as class position.

In more recent times, race has become again one of the main themes for discussion on the national political agenda. The renewal of interest of public opinion in race was driven by the adoption of quotas for Black students by Brazilian public universities. At the end of 2001, the state legislative assembly of Rio de Janeiro passed a law that created a quota system for admission into its two state universities. The same happened in the state university of Bahia. Later in 2003, the University of Brasilia was the first federal public university to adopt quotas for admission. From then on, many other federal and state universities adopted affirmative action policies for admission.

The debate on quotas is very passionate. On one side are those who oppose the quotasand affirmative action policies in general. They do not deny the existence of inequalities among racial groups in Brazil, nor racial prejudice. What they question is whether these are due to racism or to other factors such as regional, educational and income differentials. Some of them think that the adoption of affirmative actions-particularly quota systems-would enforce racism, instead of combating it, by exacerbating racial polarization.

On the other side are many Black activists who think that racism is the major source of Brazil's inequalities and that the country is already polarized. Consequently, they demand affirmative action policies as a remedy. What is being disputed, essentially, is whether discrimination is or is not the dominant cause of the socioeconomic inequalities among racial groups. The related dispute centres on the effectiveness of quotas as the primary means to address such a problem.

In this Working Paper, we focus precisely on the major issue of the importance of discrimination in explaining disparities among races. Since we assume that our intended audience does not have a thorough knowledge of racial inequalities and their historical context in Brazil, we devote some sections to a brief characterization of the evolution of the Brazilian racial divide.

As race is a socio-historical construct, we start by explaining the racial classification commonly used in Brazil, and its history, development, uses and political implications. Then we move to a description of income and educational inequalities between the two major racial groups (Blacks and Whites), as well as a description of how racial composition varies by region-as well as how income levels differ by region. This review will help show, we believe, that the broad racial gaps that are revealed by national indicators cannot be entirely attributed to racial discrimination, although the latter certainly cannot be ruled out as a major current determinant of inequality.

Since processes of educational achievement are often regarded as the core mechanisms of the reproduction of racial inequalities, we will also follow a relatively young cohort of Brazilians (born during 1973-1977) from childhood to adulthood in order to evaluate in depth the importance of racial discrimination in explaining the achievement of literacy and higher levels of education. After a description of the datasets and variables used throughout this Working Paper, we will present a brief socioeconomic profile of the cohort that we follow. This profile will show that in adulthood the Black members of the cohort remained in relatively the same socioeconomic position from which they had started in childhood.

## 2 THE BRAZILIAN RACIAL CLASSIFICATION AND ITS SCIENTIFIC AND POLITICAL USES

The Brazilian population is nowadays composed of the descendants of Europeans, Africans, Asians and pre-Columbian Indigenous peoples. The racial classification customarily used for social research, political discussion and policy making in Brazil has five categories, four of them representing these originally geographically defined groups. This classification is historically tied to the occupation of the Brazilian territory and to the stratification system left as a historical legacy by colonialism. Since most of the current population is descended from peoples from other continents, the classification is also tied to migratory inflows into Brazil.

The first Europeans that came to Brazil were the Portuguese settlers and adventurers. The Dutch and the French also tried to establish colonies in Portugal's colonial territory, the former having succeeded in doing so for only three decades in the Northeast. But up until the 19th century, the greatest proportion of Europeans in Brazil were Portuguese.

From the 19th century to the first half of the 20th century, Brazil was the destination for an extensive influx of European immigration. Immigrants from Italy and Germany predominated. They were mostly peasants, who were brought in order to substitute for slave labour, although immigrants with other profiles and from other corners of Europe came as well. Also, in the first half of the 20th century, Brazil received immigrants from Japan, and small numbers from other Asian nations. But the inflow of immigrants from Asia was never as large as that from Europe, partly because there was strong prejudice against Asians, particularly against the Chinese.

Up to roughly the first half of the 19th century, millions of Africans were forcefully taken as slaves to Brazil, and became the majority of the 'Brazilian' population. Slavery deeply affected in many ways Brazilian society and culture. For example, the country was the last one in the Americas to abolish slavery, i.e., in 1888.

There was still strong resistance at that time to abolition. This opposition can be understood by the fact that in the 19th century, almost all free citizens in Brazil had at least one slave, and even freed slaves had slaves as well. Therefore, not only did large landlords have many slaves, but also even poorer people depended on slave labour for a livelihood. Urban slaves worked in all sorts of occupations for the benefit of their owners.

The other large group subject to discrimination from the beginning was composed of the various Indigenous peoples that lived on the Brazilian territory. They were also used intensively as slaves in the first 150 years of colonization. However, as colonization progressed and Brazil's shores were taken over by plantations, the Indigenous peoples who survived moved further inland.

Those who did not move (and did not succumb to the diseases inadvertently inflicted upon them by the Portuguese) were slowly assimilated into Brazilian society. By the beginning of the 20th century, many scholars thought that the Indigenous peoples would soon be extinct or fully assimilated. Today, the Indigenous population of Brazil is small in relative terms, but it has been growing at a faster pace in the last two decades due to the protective policies of the government.

Since the Asian immigration was small and late historically, the majority of the almost 190 million inhabitants of Brazil in 2007 are descendants of three major stocks: European, African and pre-Columbian. Nevertheless, there remains a fairly large proportion of the population
that cannot be readily identified with only one of these races. In the early period of colonization, as Freyre (1994) has stated, there was an absence of European women. Thus, there was extensive intercourse between the Portuguese, on the one hand, and Indigenous peoples and Africans, on the other.

As a result of this history, most Brazilians today, even those regarded as White, could trace some lineage to African or pre-Columbian Indigenous peoples. This is reflected in genetic studies of mitochondrial DNA (Pena et al., 2000). The reverse is also true: many Brazilians regarded as Black could trace some European and Indigenous descent.

Although Brazil does not have a legal racial classification, it has had an official statistical classification since the first national census in 1872. This racial classification, which has remained almost unchanged, uses skin colour to represent the major racial groups. The current classification is comprised of five categories: White (Branca) for Europeans; Black (Preta) for Africans; Yellow (Amarela) for Asians; Indigenous (Indígena) for Indigenous peoples; and Brown (Parda) for people of mixed descent.

The category Yellow was incorporated into the classification in the 1940 census to account for Asian immigrants. The category of Indigenous, which is the only one not characterized in colour terms, was introduced in the 1991 census. Prior to 1991, Indigenous peoples were classified as "Caboclos", an indigenous word" for people with copper-coloured skin or 'mixed people'. The censuses between 1890 and 1940 did not have information on skin colour. From 1940 to 1990, ${ }^{4}$ Indigenous peoples did not have their own category, and thus would have been classified as Brown (Parda).

The most controversial category of the classification is Brown. Many people think that the word 'Parda' is demeaning, or even offensive or racist. Others think that it is a meaningless word because some of the people that are classified as Brown do not have brown skin at all. Another objection is that it acts mostly as an intermediate category between White and Black, but its boundaries (the colour lines) are blurred. There is no 'objective'5 definition, it is claimed, for distinguishing the three categories.

Since 'Parda' is regarded as a demeaning word, many people who fall within this category tend to classify themselves as having tanned ('Morena') skin when they are prompted to describe themselves. However, most of the people who spontaneously choose to classify their skin colour as 'Morena', instead of 'Parda', will choose 'Parda' when prompted to classify themselves into one of the five official colour categories. In addition, this term has been used to designate the racial category of the population of mixed descent at least since the 18th century, and in the Spanish colonies it has also been widely used in the same sense.

### 2.1 USE OF THE CLASSIFICATION IN THE SOCIAL SCIENCES

There are numerous studies of the history of the Brazilian racial classification, the effectiveness of different methods of classifying people (e.g., classification by those interviewed or by the interviewers) and the social relevance of the five categories, ${ }^{6}$ as well as studies relating racial classification with other socioeconomic aspects, such as income and education (Petruccelli, 2002, 2006; Osorio, 2003a; Telles, 2003; Almeida et al., 2002; Piza and Rosemberg, 2002; Valle Silva, 1999a, 1999b; Telles and Lim, 1998; and Turra and Venturi, 1995).

Another interesting aspect of the classification, which was revealed by a survey done in 1998, is that few Brazilians tend to think spontaneously of their racial category in terms of geographic origins. When prompted to do so, the vast majority declare themselves as

Brazilians. That is to say, Brazilians tend to understand race by phenotype, particularly by skin colour and hair type.

Generally speaking, those who have studied the racial classification in Brazil have come to the conclusion that although far from perfect, it is suitable for research on racial inequalities in the country. Although the classification has been a subject of passionate public debates, when specialists gather to discuss changing it, they end up suggesting its maintenance, such as for the 2000 census. The best proof of the suitability of the racial classification for social research is its wide use. The race variable is used not only in studies in which the socioeconomic and/or cultural distinctions among racial groups are under scrutiny, but also in studies in which race is not a matter of concern at all, but just a control variable.

In Chart 1 we present the racial composition of the population from 1976 to 2005.7 The White group is the largest, about half of the population, followed by Brown, Black, Yellow and Indigenous, with the first three classifications accounting for around 99 per cent of the Brazilian population. However, the Brown group has grown slowly over time, causing the decrease of the proportion of Whites. Colour is a classification that is self-declared. But since it is common in household surveys to have one person responding for absent members, and adults responding for children, in the end what we have is a mixture of self-identification and identification by someone close to the person.

CHART 1
Racial Composition (Per cent). Brazil, 1976-2005


Source: IBGE, Pesquisa Nacional por Amostra de Domicílios (National Household Survey), 1976-2005.

### 2.2 POLITICAL USE OF THE CLASSIFICATION

The racial classification has been at the centre of the political debate on racism and socioeconomic inequalities among racial groups. Before the end of the 1970s, the official statistics on race were limited to the racial composition of the population at the national and
regional level. Seldom publicized were any cross tabulations performed with other relevant variables. Although some sociological studies had made use of special census tabulations, or analyzed the findings of specific surveys in order to relate race to other variables, the results were known just to a very small community of social scientists.

But in the 1980s the situation changed, and a renewed Black social movement found in social indicators disaggregated by race both a confirmation of its claim that Brazil was a racist country—not a racial democracy, as stated by the official history and common belief-and a basis for its policy demands.

This renewed Black social movement has distinguished itself from previous generations in many substantive aspects (Guimarães, 2003). One of them is a specific political use of the racial classification: the merging of the Black and Brown into a single category 'Negro'. The word 'Negro' has always been used by the Brazilian Black movement for self-identification. Thus, some clarification of the Portuguese meanings of 'Preto' (Black) and 'Negro' (Negro) is in order.

In English, Negro is currently almost always an offensive word. In Brazil both words can be offensive, depending on the context and on how they are uttered. But they can also be used to refer to people in non-discriminatory ways. The political preference of Black activists for 'Negro' seems to be related with the way that the word 'Preto' was commonly used, particularly in the $19^{\text {th }}$ century, to refer to submissive Black persons, who would not question their social standing. In contrast, 'Negro' was applied to those who rebelled and were runaways. ${ }^{8}$

Past analyses of racial inequality in Brazil have almost always treated separately the three large categories: White, Black and Brown. The latter was commonly represented in tables not with the term 'Parda', which was used in data collection, but with the term Mulattoes ('Mulatos'), depicting the fact that although the category applies to any kind of mixture, descendants of intermarriages between Whites and Blacks were the prevalent proportion.

As social statistics went beyond description to inference and hypothesis testing, roughly from the 1960s onward, many analysts started to merge the Black and Brown groups. This was done primarily for statistical reasons: since the Black group has been relatively small, their numbers in survey samples would prevent their separate treatment in statistical analyses. In other words, most of the results would turn out to be non-significant. Later, the merging of the Black and the Brown groups found another justification in the statistical homogeneity of the socioeconomic characteristics of both groups (Telles and Lim, 1998; Souza, 1971).

Another justification for treating both groups together stems from the fact that in Brazilian racial relations, a Brown person is identified with her Black origins. Even when some person who can be regarded as White has very curly hair ('bad hair'), dark skin or a flat nose, he can be said to have 'a foot in Africa' (or 'in the kitchen', or 'in the senzala' (slave house)). When a Brown person suffers discrimination, it has the same essence as that directed towards a Black person. Therefore, since the groups are statistically similar and the kind of prejudice that they face is similar, the merging of both groups is not regarded as a problem for analyses; it is even recommended.

If a political issue arises, this would be due not to the merging of the Black and the Brown categories but to the name that is given to the resulting group. The first social scientists who merged Black and Brown in their analyses did not name the resulting group as Black ('Negro'). Instead, they used the term non-White ('não-Branca'). A notable exception was Souza (1971), who anticipated the practice of contemporary Black activists by calling the resulting group

Black. Still today, many researchers prefer to use the term non-White to designate the Black and the Brown population together (see, for instance, Ribeiro 2006).

Strictly speaking, non-White would have to include the two other racial groups yielded by the classification, Yellow and Indigenous. These groups are so small that, statistically, it would not make any difference to merge them with the Black and Brown categories. However, since the Yellow group tends to be privileged in its socioeconomic characteristics, either it is merged with the White group, or it is simply not considered in the analyses. For the opposite reason, Indigenous is either merged with the Black and the Brown category or it is not considered.

Why not name the group that results from merging Black and Brown as Black? Adversaries of Black activism and of affirmative action policies claim that Browns do not see themselves as Black (although there is no empirical evidence to support this claim or its opposite). Therefore, they argue that Black activists cannot speak for them. Consistent with this argument is their criticism of the statistics that treat Black and Brown as a single group named Black (since they would prefer non-White).

Relying on statistics that underscore the similarities between both groups and the countless reports of prejudice against Brown people due to identification with being Black, Black activists insist that the Browns are Black for all intents and purposes. What is at stake for the activists is that they will speak for either half of the Brazilian population (the sum of the Black and the Brown categories) or only for a racial minority of around six per cent (those strictly defined as Black). Nowadays, Black activists have succeeded in pushing forward the conceptual merging of the Black and the Brown classifications. One barometer of their success is that all affirmative action programmes implemented in Brazil since the mid-1990s have targeted both racial categories.

This Working Paper follows Souza (1971) in designating as Black the group that merges the Black and the Brown categories of the original classification, while not considering the Yellow and Indigenous groups in its analyses. I have chosen to do so primarily because I think it is inherently odd to designate a group by negation, namely, by what it is not ('non-White').

## 3 THE BLACK BRAZILIANS IN THE SOCIOECONOMIC STRUCTURE

### 3.1 INCOME DIFFERENTIALS

In order to begin analyzing the position of Blacks in the Brazilian socioeconomic structure, we choose the distribution of household income per capita as a representative dimension. We start by calculating for the 1976-2005 period: a) the ratio between the average income of the White population and the average income of the Black population; and b) the concentration indices that show where the Black population is situated in the income distribution. The concentration index ${ }^{9}$ ranges from -1 to 1 , with negative values representing the concentration of the Blacks among the poorer segments of the distribution, and positive values representing the opposite situation.

In Brazil, the average income of the White population is more than twice that of the Black population, as presented in Chart 2 (measured on the right vertical axis). ${ }^{10}$ Not surprisingly, this is due to the fact that Blacks are concentrated among the poor in all years for which we have information on race (the concentration index being measured on the left vertical axis). Both series are relatively stable and the income ratio tends to be lower, as one would expect, in the
years of less concentration of Blacks among the poorer segments of the population. From 1997 onwards, however, both the income ratio and the concentration index start to decline. These measures suggest that the racial gap has declined, albeit only modestly.

CHART 2
The White/Black Income Ratio and the Concentration of the Black Population in the Income Distribution. Brazil, 1976-2005


Source: IBGE, Pesquisa Nacional por Amostra de Domicílios (National Household Survey), 1976-2005.

The stability of the concentration indices and of the ratios of average incomes does not imply the absence of changes in the relative position of Blacks in the income distribution. In fact, some small but relevant changes took place over the period 1976-2005. To highlight those changes, we have calculated the coordinates of the concentration curves of the Black population for some selected rounds of the Brazilian National Household Survey.

The concentration curve is just a scatter plot of two cumulative relative frequency distributions ranked by household income per capita, namely, the distribution of the whole population (represented by the $x$ axis) and that of the Black population (represented by the y axis). The concentration curves for 1976, 1987, 1996 and 2005 are shown on the left panel of Chart 3.

The first outcome revealed by the shape of the concentration curves shown on the left panel is that for any given poverty line, all poverty measures would be greater for the Black population (since the curves do not cross the diagonal line). This statement is true for all years for which we have information on race. Although we have not plotted them on the left panel of Chart 3, the curves of all the years for which we have calculated the concentration indices presented in Chart 2 do not cross the perfect equality (P.E.) line.

As the concentration index does not change much over the period, either in terms of degree or pattern, it is difficult to recognize any subtle differences between the curves.

To solve this problem, we present in the right panel of Chart 3 the difference of the curves of the three earlier years with respect to 2005, when concentration reached its lowest level. Since the curves intersect, the representation of the Black population among the richer segments is not always smaller in the years of its higher concentration among the poor or vice versa. For instance, although 1976 was one of the years with less concentration of Blacks among the 30 per cent poorest of the population, they were as just as rare among the 30 per cent richest as in 1987 and 1996.

CHART 3
Concentration Curves of the Black Population in the Income Distribution (Left Panel) and the Differences with Regard to 2005 (Right Panel). Brazil, 1976-2005


Source: IBGE, Pesquisa Nacional por Amostra de Domicílios (National Household Survey), 1976-2005.

The decrease of the ratio between the average income of the White population and the average income of the Black population is related to the overall fall of income inequality (Barros et al. 2007), which started in 1997 (with a modest rise again only from 1999 to 2001). When inequality goes down, it is expected that the distance between poorer and richer groups diminishes as well. Since the Black population has always been concentrated among the poorer deciles, their distance from the White population also diminishes as general inequality decreases.

In Chart 4 we present the Theil T and the Theil L entropy measures of inequality for the period 1976-2005 (left vertical axis). We also present in the Chart the standard decomposition of both Theil measures for the two racial groups, the Whites and the Blacks. Between-group income inequality for the two groups has been very stable, even more stable than income inequality itself. Even at the end of the 1980s, when inequality seemed ${ }^{11}$ to rise sharply, the between-group component stayed almost constant.

A very interesting trend revealed by the decompositions is that between-group inequality does not start to fall along with inequality after 1997, but only after 2001—when the fall of the concentration index of the Blacks becomes more pronounced. Therefore, one might suspect that the fall of income inequality, although surely responsible for a large proportion of the decrease of the racial gap, might not explain all of it. We leave this particular issue for further study in the future.

CHART 4
Theil T and Theil L Inequality Measures and Between-Group Inequality as a Percentage of Total Inequality. Brazil 1976-2005

$\longrightarrow \square T \quad-\square L \quad-\quad T(\% B t w) \quad-\quad L(\% B t w)$

Source: IBGE, Pesquisa Nacional por Amostra de Domicílios (National Household Survey), 1976-2005.

### 3.2 EDUCATIONAL DIFFERENTIALS

Another important socioeconomic characteristic, strongly correlated with income, is education. Educational differentials between the Black and White populations are sharp. The average educational level of the Brazilian population has increased significantly over the period 1976-2005. Access to primary education, for instance, was nearly universalized during the 1990s. However, completion of primary education is still a problem, and access to secondary schools is a bottleneck in the educational system. Nevertheless, educational indicators disaggregated by race show a diminishing proportional gap. At the same time, the absolute gap, depending on the indicator chosen, could be stable or even increasing.

To illustrate such trends, we have constructed Chart 5, which shows the generalized concentration curves only of the adult population ( 25 years or older) with completed secondary education (note that people with higher levels of completed education were not counted in the numerator). The curves can help us to see where, in the income distribution, Black and White populations are located. And since the curves are generalized-i.e., the cumulative distribution of the relative frequency of people with secondary education was multiplied by the proportion of each population with secondary education-the last point on the right axis shows the proportion of adults of each racial group with completed secondary education.

In 1976, only around 8.2 per cent of Whites and 2.6 per cent of Blacks had completed secondary education. The proportional gap was thus about 3.1, that is, the relative attainment of the White population was about 3.1 times higher. The absolute gap between the two groups
was 5.6 percentage points. In three decades, this indicator jumped to 25.1 per cent for Whites and 18.3 per cent for Blacks-so that the proportional gap was 1.4 but the absolute gap was 6.9 percentage points.

CHART 5
Generalized Concentration Curves of the Adult Population with Completed Secondary Education in the Income Distribution. Brazil, 1976-2005


Source: IBGE, Pesquisa Nacional por Amostra de Domicílios (National Household Survey), 1976-2005.

The value of this indicator for Blacks in 1987 was worse than that of Whites in the earlier year of 1976; and the same could be said about a comparison of the level of attainment for Blacks in 1996 and that of Whites in the earlier year of 1987. But by 2005, the level of attainment of the Black population was slightly better than that of Whites in 1996. So there was some limited degree of convergence during these years.

Comparing the shapes of the generalized concentration curves of Whites and Blacks in each year reveals two noteworthy trends. The first is that the adult population, White or Black, with secondary education is in all years richer than the total population, since such a group is concentrated in the richer segments of the income distribution. However, attaining secondary education benefits Whites more than Blacks: in all years, the White adults are more concentrated than the Black adults toward the top of the income distribution.

### 3.3 REGIONAL DISPARITIES

Income and education are certainly two fundamental dimensions for understanding the socioeconomic differences among racial groups in Brazil. But no characterization or analysis of such differences would be complete without taking regional disparities into
account. Brazil has a huge territory that is very diversified both in terms of socioeconomic characteristics and racial composition.

Its territory is divided into 27 federated states and almost 6,000 municipalities. But it is common to aggregate the 27 states into five regions. ${ }^{12}$ The southern regions of the country have larger concentrations of Whites than the northern regions because they received the larger proportion of European immigration into Brazil during the 19th and 20th centuries. This can be seen in Chart 6.

CHART 6
The Blacks as a Percentage of Regional Populations. Brazil, 1976-2005


Source: IBGE, Pesquisa Nacional por Amostra de Domicílios (National Household Survey), 1976-2005.

The Brazilian regions also differ significantly in terms of income levels. In the period 1976-2005, their ranking almost does not change: the poorest region is the Northeast, followed by the North, in all years; the South was the third poorest region in 1976 and in 1987, but it switched position with the Midwest in 1996 and 2005; the Southeast is the richest region in all four years.

However, as we see in Chart 7, the Whites in the Southeast and the Midwest have an income level above the Brazilian average, while the income level of Blacks in those regions is only just above half of the national average. Notwithstanding the different regional levels of income, it is striking that the ratio between the income averages of Whites and Blacks is close to two in all regions and for all years.

CHART 7
Income averages (Brazil=100) and the White/Black income ratio in Brazilian regions, 1976-2005


Source: IBGE, Pesquisa Nacional por Amostra de Domicílios (National Household Survey), 1976-2005.

The different income levels and racial compositions of these regions highlight the fact that the entire racial gap in income cannot be attributed to race alone. Even if the income ratio between Whites and Blacks in each region were one, if the racial compositions and the income levels of each region remained unchanged, there would still be, at the national level, a racial gap. It would be, however, much smaller. For 2005, for example, a simple static counter-factual simulation with regional averages and population shares of both groups shows that, if Blacks and Whites had, in all regions, the average income of the region, the national racial gap in income would drop from 2.1 to 1.2.

## 4 SOCIAL MOBILITY AND RACE-A CASE STUDY OF THE COHORT BORN DURING 1973-1977

In order to analyze the mobility process and the racial differentiation accompanying it, we have chosen to follow a particular cohort of Brazilians, namely, those who were born from 1973 to 1977. People belonging to this birth cohort were 28 -32 years of age in 2005. By that time, most of them had already finished their education, had a stable position in the labour market, had left their parental household to form their own, and had become parents themselves.

We describe their overall socioeconomic situation and then analyze some of their educational outcomes at specific points in time: in 1982, when they were 5-9 years old and some of them (those aged seven years and older) should have achieved literacy; in 1987, when they were 10-14 years old and most of them (those aged 11-14) should have completed elementary education; in 1992, when they were 15-19 years old and all of them should have
completed primary education; in 1996, when they were 19-23 years old and they should have finished secondary education and some of them should have been pursuing tertiary education. In order to complement this analysis, we repeat for their offspring who were 7-9 years old in 2005 the same analysis done for them in 1982.

Since there are no panel data sources in Brazil that allow this kind of exercise, we will follow a 'pseudo-cohort' built from cross-sectional data yielded by the series of National Household Sample Surveys (Pesquisa Nacional por Amostra de Domicílios, PNAD). The sample size of the PNAD is large, the cohort born during 1973-1977 is well represented in it and its general characteristics remain consistent throughout the many rounds of the survey.

We divide this section into three parts. In the first, we describe the data used in our analysis. Then we move to a description of the general socioeconomic characteristics of the 1973-1977 cohort. In the last section we present our analysis.

### 4.1 DATA

In this section and previous ones, we have used data from various rounds of the PNAD. Specifically, we have used variables on individual characteristics, such as age, sex and race; on spatial location, such as region and type of area (urban or rural); on education, such as attendance and attainment; and on income level.

Age and sex are individual characteristics that need no comment. The Brazilian racial classification was discussed in Section II. There was no information on the colour of those interviewed in the PNAD rounds before 1976. In that year, the colour question was introduced as part of an extra questionnaire applied to a sub-sample. From 1977 to 1981, the question was not asked. In 1982, it was asked as part of an extra questionnaire on education. In 1986, it was asked on an extra questionnaire concerning the demand for social policies. However, from 1987 onwards, it became a regular question in the Brazilian National Household Survey.

The PNAD has not covered the entire national territory in all rounds. In 1976, the rural areas of the North and the Midwest regions were not surveyed. The rural areas of the Midwest were surveyed from 1980s onwards. The rural areas of the North only started to be surveyed in 2004. For this reason we have excluded the rural areas of the North in all analyses of 2005 data. Regarding the type of area (urban or rural), it must be kept in mind that rural in the PNAD is not a well defined category. Rural areas are defined by municipalities for the purposes of real estate taxation on the basis of the last census taken before the survey round.

Another problem related to spatial variables is that two states were created in the period 1976-2005. First, the state of Mato Grosso was split, generating Mato Grosso do Sul. This is not an issue at all for a regional analysis because both states are part of the Midwest region. However, Tocantins was part of Goiás up until the end of the 1980s, and was registered only as a separate state in the survey from 1992 onwards. This generates a comparison problem, because Tocantins is part of the North while Goiás is a Midwestern state. However, this is a small problem because Tocantins is sparsely populated, and was even more so before its creation as a state. So we have not given any special treatment to this factor.

We did the standard partitioning of Brazil into five major regions: the North, the Northeast, the Midwest, the Southeast and the South. States of the North region are: Rondônia, Acre, Amazonas, Roraima, Amapá, Pará and Tocantins. The Northeast is: Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraiba, Pernambuco and Bahia. The Midwest is: Mato Grosso,

Mato Grosso do Sul, Goiás and Distrito Federal. The Southeast is: Minas Gerais, Espírito Santo, Rio de Janeiro and São Paulo. And the South is: Paraná, Santa Catarina and Rio Grande do Sul.

The educational path followed by students who enter the Brazilian educational system has remained the same during the period 1976-2005. Basically, seven-year-olds would enter primary school, ${ }^{13}$ which was composed of eight grades; after finishing primary school (ideally when they are 14 years old), they would move to the three grades of secondary education. After completion of secondary education (so that a total of 11 years of schooling had been completed), they could do the exams to enter higher education.

In the past, there was also some variation of the number of grades in each cycle. Still today, many schools do not offer a complete primary cycle, just its first four grades. In the past, these four grades were regarded as a full elementary cycle, whose completion involved receipt of a credential.

With regard to the educational characteristics of household members, children under five years of age were not surveyed prior to the 1992 round of the PNAD. The questions on education have been more or less the same in all PNAD rounds: after a question on literacy (namely, whether a person knows how to read and write a simple note), the interviewees are divided by school attendance: for those who attend, there is a question on their level and grade; for those who do not, the highest level and grade completed is noted (provided that a person has ever attended school).

Therefore, we have data on attendance, on level of attainment, and on literacy achievement. Using these data, we have constructed two variables, a person's and a parent's educational level, with the following levels of achievement/attainment: Illiterate; Literate; Elementary level (4-5 schooling years); Primary level (certificate/diploma for 8-9 schooling years); Secondary level (certificate/diploma for 11-12 schooling years); Tertiary level (college/university diploma for 15 or more schooling years); and Masters or Ph.D. level (not necessarily completed).

The first two categories represent no schooling attainment, and are distinguished by the literacy achievement. The classification is not based on schooling years (which are presented just for reference), but only on the completion of a cycle. Parental education is represented by the highest educational level attained by the head of the household; for about seven per cent of the cohort, we have used the father's level of education in 1996, since the cohort members had already left their parents' home.

The way that the PNAD collects information on income also has not changed significantly over the period of our analysis. The PNAD starts by collecting information on labour earnings: for the first occupation, the second occupation, and for all other occupations. But most workers have only one occupation. For people working in rural activities who receive in-kind earnings, their monetary value is estimated (self-declared). Non-labour income consists of income from retirement and other pensions (including alimony), remittances, rents, and other monetary income.

In order to obtain household per capita income, we sum all types of income derived by individual household members; then we sum total income across all household members, excluding from the summation the income of non-members, such as boarders, lodgers and domestic servants; finally, we divide total household income by household size, net of nonmembers. Hence, whenever we refer to income in this paper, we are referring to household income per capita.

### 4.2 SOCIOECONOMIC CHARACTERISTICS OF THE 1973-1977 COHORT

Let us start with the income distribution of the 1973-1977 cohort and the distribution of the Blacks within the cohort. For this purpose, we formalize a concentration index, which is calculated as being two times the area A in Figure 1, which lies between the perfect equality (diagonal) line and the concentration curve produced by a scatter plot of two cumulative relative frequency distributions: 1) the whole population ranked by total income per capita; and 2) the population of interest (a sub-group of the total population, such as Blacks, for which we want to measure the concentration index), which is also ranked by total income per capita. The areas above the diagonal are negative, and those below it are positive.

We calculate the concentration index $C$ using unit-level data:

$$
\begin{equation*}
C=1-\sum_{i=1}^{N}\left(S_{i}+S_{i-1}\right) \cdot\left(P_{i}-P_{i-1}\right) \tag{1}
\end{equation*}
$$

Where: $N$ is the number of cases; $S$ is the accumulated proportion of the sub-group population up to the $i$ th individual; and $P$ is the accumulated proportion of the population up to the ith individual. Both population distributions are ranked by the same variable (total per capita income, in our case), and sample weights are determined. If $S$ were the accumulated proportion of total income accruing to recipients, [1] would produce the geometric formula of the Gini index (based on a Lorenz curve).

The concentration index ranges from -1 to 1 , both values representing extreme concentrations: the index would be -1 if the population of interest had just one member and he was the poorest individual; conversely, the index would equal 1 if the single member of the population of interest was the richest person. Values approaching zero from either side denote no income concentration of the population of interest.

Figure 1 shows three different patterns of concentration. The first shows a negative concentration, i.e., a concentration of the sub-group among the poorer deciles; the second a positive concentration, i.e., a concentration of the sub-group among the richer deciles; and the third shows a net concentration that favours neither the rich nor the poor (since the two ' A ' Areas are equal).

FIGURE 1
Population Concentration Curves and Indices


A disadvantage of the concentration index is that it does not account properly for the situation in which the sub-group is concentrated both at the bottom and at the top of the income distribution, as is shown in the third panel of Figure 1. But the real-world concentration curves with which we deal very rarely would cross the perfect equality line in this way.

To study the concentration of the cohort and of its Black members within the income distribution, we have calculated the concentration indices shown in Table 1. When very young, the 1973-1977 cohort was concentrated among the poor (see column 3, 'Entire Cohort'). As they grew older, the cohort became increasingly less concentrated at the bottom of the income distribution, and in 2005 they were slightly more concentrated among the richer segments of the population (with a concentration index of 0.042 ).

In contrast, the Black members of the cohort have always been more concentrated among the poor than the cohort as a whole (see column 4, 'Blacks of the cohort'). As the cohort aged and its overall concentration among the poor decreased, so did the concentration of its Black members. Thus, the Black members of the cohort were less concentrated among the poor than the whole Black population in 1996 and in 2005 (since the former's indices were less negative; compare columns 2 and 4).

If we substitute the cohort population for the whole Brazilian population, we can calculate the concentration of the Blacks within the cohort. This concentration is very close to the concentration of the entire Black group within the entire Brazilian population. Hence, despite any variations in the position of the entire cohort over time within the entire Brazilian population, the position of the Black cohort members relative to their own age cohort followed a similar pattern.

Hence, although individually the Black members of the cohort might have experienced some upward mobility relative to the whole population (which is comprised of many different cohorts), they experienced virtually no mobility within their own age cohort (as shown by the relative stability of their concentration indices in column 5).

TABLE 1
Concentration Indices for four Population Groups. Brazil, 1976-2005

| Year | All Blacks | Entire Cohort | Blacks of the cohort <br> relative to the entire <br> population | Blacks of the cohort <br> relative only to the <br> entire cohort |
| :--- | :---: | :---: | :---: | :---: |
| $\mathbf{1 9 7 6} \boldsymbol{*}$ | -0.1998 | -0.1774 | -0.3757 | -0.1957 |
| $\mathbf{1 9 8 2}$ | -0.2215 | -0.2013 | -0.3873 | -0.1882 |
| $\mathbf{1 9 8 7}$ | -0.2225 | -0.1523 | -0.3321 | -0.1840 |
| $\mathbf{1 9 9 6}$ | -0.2200 | -0.0364 | -0.2054 | -0.1790 |
| $\mathbf{2 0 0 5}$ | -0.1847 | 0.0420 | -0.1491 | -0.2019 |

* In 1976, data in columns 3-5 are for those born during 1973-1976.

Source: IBGE, Pesquisa Nacional por Amostra de Domicílios (National Household Survey), 1976-2005.

### 4.2.1 Educational Characteristics of the Cohort

Chart 8 presents, in its left panel, the relative frequency of cohort members who are not attending school. From 1982 until 1996, the likelihood that Blacks would be out of school was always higher than that of Whites. ${ }^{14}$ The difference in probability ranged from six to 11
percentage points. Only in 2005, when almost all cohort members were not attending school anymore, did the racial gap in school attendance disappear.

The distribution by educational levels of those who were attending school is represented in the right panel of Chart 8 (values do not add up to 100 per cent because the total includes those not attending). It is easy to see that Black children have always been disadvantaged. In 1982, the percentage for those out of school was higher (left panel) while the percentages for those in pre-school or primary school were lower than those for Whites. Blacks had a higher percentage for the 'other' category because it represented mostly adult literacy classes.

In 1987, almost everyone was attending primary school, but Blacks were still more likely to be out of school (left panel). We can also infer that Blacks' age-for-grade ratio was higher because their entrance into school was delayed. This is confirmed by the statistics for 1992, when the relative frequency of Whites attending secondary school was more than twice that of Blacks, with the latter remaining more concentrated at the primary level even though they were older.

CHART 8
School Attendance 1982-2005 for the Cohort Born 1973-1977. Brazil



[^1]The differential between Blacks and Whites reached its peak in 1996, when the relative frequency of Whites attending university or college courses was more than five times greater than that of Blacks. At the same time, the proportion of Blacks still in primary school (19-23 years old) was twice that of Whites. Finally, in 2005, more than half of Whites still attending school were in tertiary or post-graduate courses, compared to less than one third of Blacks.

Chart 9 highlights the fact that the gap between Whites and Blacks in terms of educational attainment (highest level completed) was even wider than for other educational indicators, such as attendance. For instance, in 1982 the proportion of White children who were already literate was twice that of Black children. And as the cohort grew older, the Blacks became more concentrated at the lower levels of educational attainment.

Thus, we find that in 1987, when the members of the cohort were 10-14 years old and all of them should have already been literate and all of those 11 years of age or older should have already completed the elementary level, 26 per cent of Black children were still illiterate (which was almost three times the percentage for White children). By 2005, which was the end of our period of analysis, the proportions of Blacks and Whites with completed primary education were more or less the same. But the relative frequencies of Blacks below that level were larger, and their frequencies above it were smaller. The proportion of Whites with a college/university degree was almost four times higher than that for Blacks.

CHART 9
Highest Educational Level Completed 1982-2005 for the Cohort Born 1973-1977, Brazil


[^2]The data just presented on education confirm, for the particular cohort that we are following, the findings that have already been revealed by previous studies: the educational system in Brazil performs poorly, generally speaking, but it performs even worse for Black children and youth. The latter are more likely to be out of school, and when they remain in school, they lag significantly behind Whites.

These stylized facts are not novelties. They have been known and been supported by solid empirical evidence since the end of the 1970s. Black activists have pointed to such trends in denouncing racial inequalities in Brazil and in calling for programmes of affirmative action for the last 30 years. The distinctiveness of our results is that they track a single, young cohort and show that racial differences have been reproducing themselves regardless of improvements in the average level of educational attainment over time.

However, most Brazilians-notably those who are opposed to the adoption of affirmative action policies-still think that the differentials presented here are not really due to racism and discrimination, but are products of factors such as regional disparities, low levels of income of Black parents or inefficiencies in the educational system. They are not entirely wrong in this respect, but they are mistaken in believing that race is not a powerful factor of stratification.

No matter how many variables are included in a modelling exercise, race almost invariably emerges as a major factor. At the same time, while understanding that race is an important factor underlying social stratification in Brazil, one must recognize that there are other notable determinants of observed racial gaps.

### 4.3 MODELLING THE EDUCATIONAL OUTCOMES OF THE 1973-1977 COHORT

In this section, we want to investigate whether, controlling for other factors that might be presenting themselves as racial factors even though they are not, racial discrimination will still have major explanatory power for understanding variations in educational attainmentswhich will later likely translate into variations in income and other determinants of socioeconomic position. In order to address this issue, we have fitted probit models for the probability of educational outcomes that the 1973-1977 cohort could have been expected to achieve during our years of analysis.

In 1982, we expect that those 7-9 years old should have achieved literacy. So, for our model, we use a dependent variable that is dichotomous (i.e., literate or illiterate) to characterize our cohort. Five years later, in 1987, we expect the cohort to have completed half of the cycle of primary education (i.e., fourth grade)—except for those born in 1977, who would have been expected to still be attending the fourth grade. So, in 1987 our dependent dichotomous variable is completed elementary education (or not), and the model was run just for those 11-14 years of age.

We meet our cohort again in 1992, when we expect all of them to have completed primary education: this time our dichotomous dependent variable is based on completion of primary education, not elementary education. Finally, four years later, in 1996, ideally all of our cohort should have completed their secondary education, and therefore the completion of this level is chosen as the dependent variable for the probit model.

We have added two extra models to this basic set. Since we are also interested in the attendance of our cohort at the level of higher education in 1996, we have added a model in which the dependent variable is attendance in tertiary courses (including post-graduate courses). But this model was run only for those cohort members who had attained secondary education.

And in order to address (albeit in a 'censored' way) the issue of the transmission of cumulative disadvantages over the life cycle, we have repeated the literacy model for the offspring of the 1973-1977 cohort who were 7-9 years of age in 2005.

In all six models the set of independent variables is the same. The results of the models are shown in Table 2. The variable of years of age within the cohort has a positive effect on the probability of all educational outcomes, as one would expect - the age coefficients only tell us, for instance, that an eight-year-old cohort member had a higher probability of achieving literacy in 1982 than a comparable seven-year-old.

The only model for which age has a negative coefficient is the one for attendance at the level of higher education for those who had attained secondary completion. This just means that people who take longer to finish secondary education have a lower likelihood of admission into tertiary education. Being male has a negative effect on the probability of achieving literacy or attaining any educational level. It also has a small negative effect on the probability of reaching the level of higher education-but the coefficient is not significant.

The set of dummies for region (with the Northeast as the base) and area (urban as base) reveals very interesting patterns. In the first two models, as one would expect, the probabilities are lowest for the base region, the Northeast, but they progressively increase as one examines the North, the Midwest, the Southeast, and the South, respectively. However, the third model tells us that in terms of the attainment of primary education, the North and the Midwest do not differ significantly from the Northeast, while in the Southeast and the South the probabilities of attainment are higher. But there are no sharp regional differences in terms of attainment of secondary education for our cohort.

The only region with a significant coefficient for our fourth model (for secondary education) is the North, where the probability is lower. But for the offspring of our cohort that we examine for 2005, regional differences come into play again, affecting the probability of being literate. However, this time, residing in the Midwest has a more positive effect than living in the Southeast. Living in a rural area of any of the regions reduces, in all of our models, the probability of an educational attainment.

Table 2 shows that once secondary education is attained, the regional and area variables have no significant effect on the probability of attendance at the level of higher education.

The set of dummies that control for the effect of the educational level of the household head is significant in all models (including the attendance model) and, as expected, the higher the educational level of the household head, the higher the probability of an educational outcome of the cohort. The only exception, which is partial, is the first model: household heads with an attainment of secondary education exert almost the same effect (though slightly higher) on the probability of their offspring achieving literacy as household heads with higher education.

The race variable-i.e., being Black-always has a negative effect on the modelled probability and it is significant in all models. In the achievement and attainment models for the 1973-1977 cohort, it has more or less the same magnitude, and this is also true for the attendance model. However, the effect of race, although still significant, is less pronounced for the probability of the cohort's offspring achieving literacy in 2005.

Household income per capita has a significant effect on the probabilities in all models. Although the magnitude of this effect seems small when compared to the coefficients of other variables in Table 2, note that all other variables are dummies, except age. None of them vary as much as income. Therefore, it would be inappropriate to infer the importance of income from the magnitude of its coefficient. It is also important to highlight that the income variable creates some endogeneity, particularly in the two 1996 models, because decisions to leave home and form a household that are related to the attainment of secondary or higher education might also affect the level of household income. In other words, there could be reverse causation of educational attainment on income per capita.

TABLE 2
Models 1-6 on Educational Outcomes: Results

|  | Literate (1982) | $\begin{aligned} & \text { Elementary } \\ & (1987) \end{aligned}$ | Primary (1992) | Secondary <br> (1996) | Attend <br> Higher <br> (1996) | Offspring <br> Literate (2005) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Observations | 36020 | 26295 | 27910 | 28574 | 6341 | 7205 |
| Pseudo-R ${ }^{2}$ | 0.3012 | 0.2772 | 0.2304 | 0.2241 | 0.1459 | 0.2124 |
| Age | $\begin{aligned} & 0.599207^{* * *} \\ & {[0.011069]} \end{aligned}$ | $\begin{aligned} & 0.414030 * \\ & {[0.009518]} \end{aligned}$ | $\begin{aligned} & \hline 0.237765^{* * \prime} \\ & {[0.007174]} \end{aligned}$ | $\begin{aligned} & 0.102932 \\ & {[0.007311]} \end{aligned}$ | $\begin{aligned} & -0.056791^{* * *} \\ & {[0.014343]} \end{aligned}$ | $\begin{aligned} & 0.441223^{* * *} \\ & {[0.027279]} \end{aligned}$ |
| Sex - male | $\begin{aligned} & -0.150287^{* * *} \\ & {[0.017238]} \\ & \hline \end{aligned}$ | $\begin{aligned} & -0.286691^{* *} \\ & {[0.020232]} \\ & \hline \end{aligned}$ | $\begin{gathered} -0.325976{ }^{* * *} \\ {[0.019899]} \\ \hline \end{gathered}$ | $\begin{aligned} & -0.343716^{* * *} \\ & {[0.020826]} \\ & \hline \end{aligned}$ | $\begin{gathered} -0.029198^{\text {ns }} \\ {[0.041044]} \\ \hline \end{gathered}$ | $\begin{aligned} & -0.221605^{* * *} \\ & {[0.042330]} \\ & \hline \end{aligned}$ |
| Region - North | $\begin{aligned} & 0.1681788^{* * *} \\ & {[0.031549]} \end{aligned}$ | $\begin{aligned} & 0.087806^{* *} \\ & {[0.034797]} \end{aligned}$ | $\begin{gathered} -0.066364^{\text {ns }} \\ {[0.043066]} \end{gathered}$ | $\begin{aligned} & -0.079212^{*} \\ & {[0.042518]} \end{aligned}$ | $\begin{gathered} -0.043054^{\text {ns }} \\ {[0.087113]} \end{gathered}$ | $\begin{aligned} & 0.131218{ }^{* *} \\ & {[0.064213]} \end{aligned}$ |
| Region Midwest | $\begin{aligned} & 0.491447^{* * *} \\ & {[0.026870]} \end{aligned}$ | $\begin{aligned} & \hline 0.343027^{* *} \\ & {[0.032868]} \end{aligned}$ | $\begin{gathered} -0.023804^{\text {ns }} \\ {[0.033474]} \end{gathered}$ | $\begin{aligned} & \hline 0.033975^{\mathrm{ns}} \\ & {[0.033721]} \end{aligned}$ | $\begin{aligned} & 0.093172^{\text {ns }} \\ & {[0.067316]} \end{aligned}$ | $\begin{aligned} & 0.531038^{* * *} \\ & {[0.063711]} \end{aligned}$ |
| Region Southeast | $\begin{aligned} & 0.764296 * * \\ & {[0.022496]} \end{aligned}$ | $\begin{aligned} & 0.525810^{* * *} \\ & {[0.026378]} \end{aligned}$ | $\begin{aligned} & 0.088138^{* * *} \\ & {[0.026054]} \end{aligned}$ | $\begin{aligned} & \hline 0.044582^{\text {ns }} \\ & {[0.027191]} \end{aligned}$ | $\begin{gathered} -0.000464^{\text {ns }} \\ {[0.054167]} \end{gathered}$ | $\begin{aligned} & 0.523487^{* * *} \\ & {[0.056362]} \end{aligned}$ |
| Region South | $\begin{aligned} & 0.967863^{* * *} \\ & {[0.028505]} \end{aligned}$ | $\begin{aligned} & 0.817934 * * \\ & {[0.033308]} \end{aligned}$ | $\begin{aligned} & 0.201194 * * * \\ & {[0.032155]} \end{aligned}$ | $\begin{aligned} & 0.033475^{\mathrm{ns}} \\ & {[0.033302]} \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.086322^{\text {ns }} \\ & {[0.064148]} \end{aligned}$ | $\begin{aligned} & 0.769751^{* *} \\ & {[0.084448]} \\ & \hline \end{aligned}$ |
| Area - rural | $\begin{aligned} & \hline-0.466627^{* * *} \\ & {[0.021077]} \\ & \hline \end{aligned}$ | $\begin{aligned} & -0.413536{ }^{* * *} \\ & {[0.025536]} \end{aligned}$ | $\begin{aligned} & -0.418371^{* * *} \\ & {[0.030687]} \end{aligned}$ | $\begin{aligned} & -0.465363^{* * *} \\ & {[0.035816]} \end{aligned}$ | $\begin{gathered} -0.076250^{\text {ns }} \\ {[0.100900]} \end{gathered}$ | $\begin{aligned} & -0.297400^{* * t} \\ & {[0.051620]} \end{aligned}$ |
| Education Elementary | $\begin{aligned} & 0.474618{ }^{* * *} \\ & {[0.020680]} \end{aligned}$ | $\begin{aligned} & 0.539493^{* * *} \\ & {[0.024525]} \end{aligned}$ | $\begin{aligned} & 0.4133655^{* *} \\ & {[0.023849]} \end{aligned}$ | $\begin{aligned} & 0.480982^{* * *} \\ & {[0.025122]} \end{aligned}$ | $\begin{aligned} & \hline 0.214847^{* * *} \\ & {[0.059303]} \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.439384^{* * *} \\ & {[0.050193]} \end{aligned}$ |
| Education Primary | $\begin{aligned} & 0.812913^{* * *} \\ & {[0.044180]} \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 0.680758^{* * *} \\ & {[0.047148]} \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 0.619677^{* *} \\ & {[0.036693]} \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 0.737051^{* *} \\ & {[0.037862]} \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.516269 \\ & {[0.071964]} \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.654835^{* * *} \\ & {[0.071609]} \\ & \hline \end{aligned}$ |
| Education Secondary | $\begin{aligned} & 1.091507^{* * *} \\ & {[0.054478]} \end{aligned}$ | $\begin{aligned} & 0.953178^{* * *} \\ & {[0.054528]} \end{aligned}$ | $\begin{aligned} & \hline 0.825528^{* * *} \\ & {[0.039414]} \end{aligned}$ | $\begin{aligned} & 1.079168^{* * *} \\ & {[0.036706]} \end{aligned}$ | $\begin{aligned} & 0.727933^{* * t} \\ & {[0.063043]} \end{aligned}$ | $\begin{aligned} & 0.892839^{* * *} \\ & {[0.087001]} \end{aligned}$ |
| Education Higher | $\begin{aligned} & 1.051758{ }^{* * *} \\ & {[0.088844]} \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 1.059238^{* * *} \\ & {[0.108570]} \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 1.057546{ }^{* * *} \\ & {[0.062990]} \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 1.334297^{* * *} \\ & {[0.058649]} \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 1.128419^{* * *} \\ & {[0.076315]} \\ & \hline \end{aligned}$ | $\begin{aligned} & 1.049421^{* *} \\ & {[0.257113]} \end{aligned}$ |
| Race - Black | $\begin{aligned} & -0.314126{ }^{* *} \\ & {[0.018553]} \end{aligned}$ | $\begin{aligned} & -0.364669^{* * *} \\ & {[0.021841]} \end{aligned}$ | $\begin{aligned} & -0.358422^{* * *} \\ & {[0.021640]} \end{aligned}$ | $\begin{aligned} & -0.308404^{* * *} \\ & {[0.022543]} \end{aligned}$ | $\begin{aligned} & -0.340206^{* * *} \\ & {[0.049905]} \end{aligned}$ | $\begin{aligned} & -0.078919^{*} \\ & {[0.047001]} \end{aligned}$ |
| Household p.c. income | $\begin{aligned} & 0.000014^{* * *} \\ & {[0.000001]} \end{aligned}$ | $\begin{aligned} & 0.000070^{* * *} \\ & {[0.000011]} \end{aligned}$ | $\begin{aligned} & 0.000001^{* * *} \\ & {[0.000000]} \end{aligned}$ | $\begin{aligned} & 0.000880^{* * *} \\ & {[0.000054]} \end{aligned}$ | $\begin{aligned} & 0.000450 \\ & {[0.000060]} \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.0011488^{* * *} \\ & {[0.000297]} \end{aligned}$ |
| Constant | $\begin{aligned} & -5.493583^{* * *} \\ & {[0.094638]} \end{aligned}$ | $\begin{aligned} & -5.780510 * * \\ & {[0.126296]} \end{aligned}$ | $\begin{aligned} & -4.919308^{* * *} \\ & {[0.125717]} \end{aligned}$ | $\begin{aligned} & -3.196769^{* * *} \\ & {[0.157140]} \end{aligned}$ | $\begin{aligned} & 0.053177^{\text {ns }} \\ & {[0.310637]} \end{aligned}$ | $\begin{aligned} & -3.200927^{* * *} \\ & {[0.223371]} \end{aligned}$ |

Notes: Standard errors between brackets. Coefficients significant at: *** $1 \%$; ** $5 \%$; * 10\%; ns non-significant at $10 \%$.

It is widely known that it is difficult to gauge the effects of individual variables, particularly categorical dichotomous ones, by just examining the classical output of a probit regression model. What is usually done in such cases is to calculate the probabilities predicted by the model at the averages of the variables for the two options for a particular dummy and subtract one from the other. The result is then presented as the probability variation entailed by the discrete change of the dummy variable (from zero to one). However, this is unsatisfactory because the parameters are all inter-related. Namely, at points other than the average of all other variables, the discrete change of the categorical variable can have a stronger or a weaker effect on the dependent variable.

Since we want to better understand the implications of the fitted models, and particularly the interplay between race and income in each region, we have constructed some probability distributions in order to use the models to predict the overall probability of the outcome at many points-not just at the average of all variables. To do that, we have fixed some characteristics. For example, sex was set to male while area was set to urban. Age was set to that of the younger cohort members in a given year: seven in 1982; 11 in 1987; 15 in 1992; 19 in 1996; and seven for the cohort's offspring in 2005. For the attendance model, we set the age to 21 years old (the midpoint of the interval 19-23 years old).

We have predicted the probability distributions for three educational levels of the head of the household: for the base level (less than elementary education), primary education and secondary education. This was done for each of the five regions and for both racial categories. And for each educational level, for each region and for each racial group, we have predicted the probabilities at the average of each hundredth of the regional per capita income distribution.

The results of this exercise are represented in Charts 10 to 15 (one for each model). Each of these Charts is a matrix with 15 sub-charts: the five regions are represented in the rows and the three parental educational levels are represented in the columns. In each sub-chart, the left vertical axis represents the probability predicted by the model; the horizontal axis represents the income distribution (poor to the left, rich to the right); and the right vertical axis represents the difference (absolute) between the predicted probabilities for Whites and Blacks. The thicker solid curve represents predicted probabilities for Blacks and the thinner curve predicted probabilities for Whites. The thin dashed line is the White-Black difference.

Starting with Chart 10, one can see that the probability of achieving literacy in 1982 increases as one moves down, namely, south (from the first to the fifth row), and as parental education increases (from the first to the third column). All sub-charts show a tangible racial gap throughout the distribution up to the richer hundredths. However, at the top one per cent of the distribution, the racial gap becomes very small or entirely disappears.

The shapes of the gap (difference) curve vary considerably in Chart 10. Its average level tends to be higher in the regions with higher predicted levels of literacy and for the offspring of the more educated. The smallest average gap is found in the Northeast among fathers with less than elementary education, where the probabilities of being literate are low. But the racial gap is not the same throughout the income distribution. In the regions and for the parental educational levels for which the predicted probabilities of literacy achievement are smaller, the gap increases with income, although it starts from lower levels. Conversely, where the probabilities are greater, the gap decreases with income.

In Chart 11 we can see the same patterns as those found in Chart 10, this time for the attainment of elementary education in 1987 . However, the gap curves are slightly altered. For the regions and parental educational levels that yield higher probabilities of attaining elementary education, the gap remains stable among the poor and then starts to decrease as income increases. However, the gap starts to decrease at a richer point. Compare, for instance, the distribution for 'South - Primary' in Charts 10 and 11 to see the difference between the racial gaps. In some cases, such as 'Midwest - Secondary', and 'Southeast - Primary', there is an increase in the gap before it starts to fall for the richer segments.

When we turn to Chart 12, which shows the predicted probabilities for the attainment of primary education in 1992, we notice that the patterns of the racial gap change considerably. Now for all regions and all parental educational levels, the racial gap increases with income and with the probability of attainment itself. The gap still diminishes sharply among the top hundredths of the income distribution, but for some cases, this happens only among the richest one per cent.

In Chart 13, where we see the predicted probabilities of cohort members' attainment of secondary education in 1996, we observe again the pattern seen in Chart 12, though attenuated. Although the racial gap still increases with income, this increase is not as sharp as that seen in Chart 12. The reason might be that in the three previous models, the predicted probability considers a minimum age by which the outcome should reasonably be expected, e.g., literacy at seven years, elementary at 11 and primary at 15.

But in this model, we are examining the probability of attainment of secondary school at age 19, one year later. We did so in order not to lose part of the cohort that had already left their parental household in 1995. By observing them in 1996, we can use the information on their father's education ${ }^{15}$ to replace that of the head of the household. Nevertheless, the pattern is the same: the gap increases with income.

## CHART 10

Predicted Probabilities, Literacy Model, 1982














[^3]CHART 11
Predicted Probabilities, Elementary Model, 1987










[^4]CHART 12
Predicted Probabilities, Primary Model, 1992





[^5]CHART 13
Predicted Probabilities, Secondary Model, 1996
















[^6]CHART 14
Predicted Probabilities, Higher Education Model, 1996


[^7]CHART 15
Predicted Probabilities, Literacy Model, 2005


[^8]The attendance model for higher education represented in Chart 14 repeats the racial gap pattern of the two previous Charts. The difference curve between the predicted probabilities for Whites and Blacks increases sharply with income. The richer the Black youth with a secondary-education attainment, the greater is the distance between his probability and the probability of a White youth attending higher education. But this time, except for the cohort members whose parents had secondary education and resided in the Midwest, Southeast or South, the racial gap increases even at the top hundredth of the distribution.

In summary, our results for the 1973-1977 cohort can be highlighted as follows. First, parental education and household income are more important factors determining variations in the modelled probabilities than race, although the effect of race is still significant. Second, when parental education is higher, the racial difference tends to be higher as well. The third result, and the more interesting, is that for the most difficult achievements/attainments, the racial gap increases as income becomes higher.

Conversely, if the outcome is easily achieved, the gap decreases with income. For instance, on the one hand, in 1982 achieving literacy was very difficult indeed for seven-yearold boys residing in the Northeast and living in households whose head had less than elementary education. In this case, the racial gap grows with income. On the other hand, achieving literacy was relatively easy for seven-year-old boys residing in the South and living in households whose head had secondary education. For this situation, the racial gap decreases as income increases.

Let us now turn to the offspring of the 1973-1977 cohort, who were 7-9 years old in 2005 (having been born during 1996-1999). The sixth model has been fit to their probability of achieving literacy, and its predictions are shown in Chart 15. The results are surprisingly different from those found in Chart 10-the same model for the same outcome for their parents in 1982. Although there are still regional differences, their importance is smaller than in the past. The effect of the educational level of the household head has diminished considerably, particularly from the primary level to the secondary level, and in the Midwest, Southeast and the South. There is less variation of the probability by income as well.

However, the most interesting result of Chart 15 is the vanishing of the racial gap at certain levels of educational attainment/achievement. In Charts 10-14, the higher the level of the probability of achieving literacy, the broader was the racial gap. But in Chart 15, the probability of achieving literacy is very high while the racial gap is negligible. The predicted gap, which is already small, decreases as income increases. This result is consistent with those from previous models-considering that literacy is easy for the offspring of the 1973-1977 cohort to achieve.

Therefore, it would be premature to state that the racial gap is disappearing for the younger cohorts of Brazilians. Although the gap does not now show up at the beginning of the educational trajectory, as it did in the past, our data on offspring are temporally censored because we cannot foresee the next stage (after achieving literacy).

As the lower levels of educational attainments have become universalized, the reproduction of the racial gap might have been shifted up to higher levels of education. Perhaps the attainment of a higher education degree will play the same role for the new generation as a credential for secondary education did for their parents. Despite these provisos, it is nonetheless auspicious to verify the quasi-eradication of the racial gap at least at the level of basic literacy, the first major educational achievement in every person's life.

## 5 CURRENT EXPLANATORY THEORIES OF THE RACIAL GAP IN BRAZIL

Although many theories have been advanced to explain the racial gap in Brazil, which was described in the previous sections, ${ }^{16}$ most Brazilian academics today adhere to some version of the theory of cumulative disadvantages, which stemmed from the Ph.D. dissertation of Hasenbalg (2005). Although this dissertation was written in the mid-1970s in the United States, it was first published in Portuguese in 1979, and was recently re-published because of the widespread recognition of its central relevance to current debates.

Hasenbalg's work gave birth to a series of studies on racial inequalities and social mobility that drew extensively on sound empirical evidence, mainly obtained from various rounds of the Brazilian national household survey. Hasenbalg did some of these studies on his own (Hasenbalg 1983, 1988, 1999, 2006) or with his colleague Nelson do Valle Silva (Hasenbalg and Valle Silva 1988,1999 ). Valle Silva also played a leading role in the new generation of studies (see, for instance, Valle Silva 1988,2000 ) and produced many that have become mandatory references for anyone interested in this subject.

The theoretical framework used by Hasenbalg and Valle Silva is the classical sociological approach to social mobility. Social origins are deemed to have an impact on educational attainments, which, in turn, will influence the position of the individual in the labour market, which will largely determine the status of that individual in his adult life. Concomitantly, social origins also exert some direct influence (i.e., instead of indirectly through educational attainments) on the positioning of adult individuals in the labour market through social networks, values and beliefs.

This framework has not always been implemented with the same methodology and statistical tools. In some studies, researchers have used path analysis ${ }^{17}$ while in others they have stratified adult individuals based on occupation, current education and income; and have contrasted their status with that of their fathers, again using occupation and relying on the mobility table analysis commonly used by sociologists. ${ }^{18}$ Despite variations in the methodological approach, every new study has appeared to confirm the original findings of Hasenbalg (2005), which laid the basis for his theory of cumulative racial disadvantages over a person's life cycle.

However, as far as we know, there has never been an attempt, such as the one we have presented in the previous section, to analyse what happens throughout the life cycle. Previous studies always relied on cross-sectional data at just one point in time, with standard retrospective questions asked about the father's occupation and education when the subject of the analysis was a teenager.

The theory of cumulative disadvantages states that race is an additional factor that is superimposed on class (social origins). Black children have a higher likelihood of being born poor. So, in the first stage of their life cycle, they are more prone to suffer poverty than White children. In the next stage, their chances of attending school are lower than those of White children; and when they are able to attend, they will be more likely to attend a school that is worse than that attended by White children. In addition, when Black children are in school, they are likely to suffer from the prejudice of their teachers and fellow students, and even from their own internalized prejudice, which reduces their self-esteem.

When they advance to the third stage of their life cycle, their lower educational attainments will lead them to obtain mainly low-pay, insecure and informal-sector jobs. When a new cohort of Blacks enters the labour market, the differences between their educational profile and that of Whites of the same birth cohort is so pronounced that there is not much need for additional discrimination in the labour market itself. Thus, the offspring of this Black cohort are also more likely to be born into poverty, and the cycle of cumulative disadvantages will restart for this new generation.

Since Hasenbalg's first formulation of this theory in 2005, many specific studies on education and on labour markets have confirmed its findings. Most of the initial studies on education were qualitative, and concentrated on the racist imagery and ideas embedded in teaching materials (Hasenbalg and Valle Silva, 1990). There was clearly an absence of a positive content regarding Blacks, who were always represented as slaves or as savages, while White Europeans were presented as conquerors, adventurers, and bearers and disseminators of civilization and culture. This was regarded as an important factor that reduced the self-esteem of Black children and impaired their educational attainments, with adverse long-term consequences.

Quantitative studies developed complementary hypotheses on why Black children performed worse in school than White children. Rosemberg $(1987,1990)$ suggested that additional factors such as spatial segregation, selection of students by schools, and truncated educational trajectories should be taken into account in explaining racial disparities in education. The lack of reliable data had prevented further in-depth studies of these issues for a long time, but recently this situation has been improving.

The availability of new data sources has allowed researchers to delve more deeply into investigating the synergies of race and class in the educational system (Soares et al., 2005), but there is still much more research that needs to be done in this area. Although the structural determinants of the differentiation between Black and White children during the educational process remain to be identified, it is no longer possible to deny the existence of differentiation since it is easily revealed in educational indicators even when other possible determinants are controlled for-as we just shown again for the cohort born during1973-1977.

Black Brazilians enter the labour market with a disadvantaged educational profile. Studies that have focused on the determinants of labour income have shown that-as has been the case almost everywhere else-variations in education are the main structural drivers of variations in earnings. But even when education and many other factors (such as region, area, sex, occupation, experience and branch of economic activity) are controlled for, there is always a non-negligible and significant explanatory power exerted by the race parameter.

Reviewing these studies, Hasenbalg (2006) has demonstrated that no matter the variations in the methodological approach, race still explains around 10 to 30 per cent of the variation in labour income. Recent studies, such as Soares (2000), Beltrão et al. (2003), Campante, Crespo and Leite (2004), and Osorio (2006) arrive at findings similar to those of Hasenbalg.

As Soares (2000) has stated, discrimination in the labour market is not sufficient to explain overall inequalities among racial groups, because it is in the process of educational attainment that the fate of Black Brazilians is effectively determined. Additionally, the few studies done in Brazil of occupational mobility (from initial entry into the labour market to a consolidated position within it) (Pastore, 1979; Pastore and Valle Silva, 2000) have shown that a person's
entrance into the labour market is generally in a position that will be very similar to the one that he will occupy for the rest of his productive life.

Although the theory of cumulative disadvantages is still a credible account of the reproduction of racial inequalities in Brazil, recent studies on the interplay of class, race and mobility have made additional contributions to it. The hegemonic interpretation nowadays is that the effect of race on the socioeconomic conditions of individuals is independent of their class origins.

But this interpretation has been challenged. Some recent studies, albeit heterogeneous theoretically and methodologically, have concluded that race is not an independent factor of stratification, but that it interacts with social origins (Ribeiro, 2006; Osorio, 2003b); and that, moreover, it is in the occupational classes of skilled professionals and supervisors that wider racial gaps are found (Santos, 2005). In other words, the Blacks who are well positioned in society are those who face the greatest obstacles to maintain their positions and the greatest difficulties in passing their advantages onto their offspring.

By having followed a specific cohort throughout their life cycle instead of examining adults and inferring what happened to them in the past on the basis of their attainments and retrospective questions about the status of their parents, we hope to have shown-as have some of the major studies just mentioned-that the effects of racial discrimination are not independent of social origins.

However, the evidence presented here suggests, interestingly, that among groups for which an educational outcome has become commonplace, the effect of racial discrimination is almost non-existent. The effects of racial discrimination are also weaker among groups for which that outcome is very uncommon. Interestingly, such effects are more intense among the groups for which the outcome is on the verge of becoming common.

It is among such strata that racial discrimination becomes functional in protecting Whites from the competition of Blacks. For instance, among the upper-middle classes (those with a higher income and whose parents have a higher level of education), where the completion of tertiary education has become an important credential, we find more pronounced effects of discrimination. In contrast, when the achievement of literacy has become very common for almost all strata, we find larger impacts of racial discrimination among the ultra-poor, for whom this level of achievement has just started to become common.

## 6 CONCLUSIONS

The main aim of this Working Paper has been to show that there are important socioeconomic differences among racial groups in Brazil and that not only are they important per se but also they are important to understanding inequality in a broader sense. Nevertheless, there are other important dimensions of inequality in Brazil that interact with race to amplify the racial gaps observed at the national level.

So only part of the observed racial gaps can be attributed directly to race, i.e., regarded as the aggregate result of countless everyday situations in which Blacks are discriminated against, with long-term consequences for their socioeconomic well-being. For the greater part of the racial gap, explanations should be sought in regional differences and in such socioeconomic differences among households as the levels of parental education and household income.

Before proceeding to its empirical results, the Working Paper sought to explain the racial composition of the Brazilian population, the origins of the major racial groups and how they have become identified and classified. We pointed out that there are political issues regarding the use of the racial classification that cannot be avoided. The production of social indicators and various statistical analyses of racial differences have had notable consequences for Black activism and for the adoption of affirmative action policies by the government.

In Brazil the Brown population, the people with mixed racial descent, are targeted by affirmative action policies together with the Black population. Black activists claim to speak for both groups, which are merged analytically to form the Black population.

After this introduction, the Working Paper sought to characterize the national socioeconomic differences between the White and Black populations. We showed that for the whole period covered by rounds of the national household survey that included race information, the Black population has been concentrated among the poorer segments of the household per capita income distribution. The level of such concentration was stable during the period 1976-2005, albeit it showed a slightly decreasing trend from 1997 onwards.

Although the concentration curves for Blacks have similar shapes, there have been subtle changes that indicate an increase in their ability to penetrate the richer segments of the income distribution. But the most relevant fact regarding income concentration is that no matter what poverty line is chosen, when the population is disaggregated by race, poverty is always found to be higher for Blacks.

Another simple indicator that can be used to measure the distance of Blacks from Whites is the ratio between their average incomes. As has been the case with the concentration index, this ratio has been decreasing since 1997. However, the proportion of total inequality that can be attributed to inequality between racial groups does not start to clearly fall in 1997, but only after 2001.

All of these trends, when combined for analysis, suggest that the fall in overall income inequality, which happened after 1997, could not be the single source of the reduction of the racial income gap. If the fall in inequality had not been accompanied by a lessening concentration of the Black population among the poorer deciles, the ratios of income would have decreased while the concentration of Blacks would have remained at the same level, or even have increased.

This means that if the ranking of our two population sub-groups, Blacks and Whites, in the income distribution had not changed, we could have had drastic reductions in income inequality without having changes in the concentration coefficient of the Black population. For example, if you have two distributions of six people, three who are Black (B) and three who are White (W), and they are ranked from the poorest to the richest person as follows, [BBBWWW] and [BBBWWW], it does not matter whether the Gini index of the first distribution is 0.1 and that of the second 0.7 , the degree of concentration of the Black population will remain the same.

But the racial gap does not manifest itself only in the income dimension. We have shown that there is a racial gap in education too. The average level of educational attainment of the entire Brazilian population has increased sharply over the last three decades. The percentage of the adult population with a secondary-education degree, for instance, increased from six per cent in 1976 to 22 per cent in 2005. As this percentage rose, the proportional racial gap decreased.

This signifies that the overall improvement of the educational system did have an equalizing effect on the racial gap, for if the percentages of Whites and Blacks had risen at the same rate, the proportional gap would have remained constant. This equalization was not sufficient, however, to lower the absolute distance between levels of educational attainment: in 2005 the absolute gap between the two groups was seven percentage points, which was a bit higher than in 1976.

Nevertheless, we have seen that in relative terms, attaining secondary education has tended to benefit Whites more than Blacks. For a great proportion of the Brazilian population that grew up in the 1950s and 1960s, attainment of secondary education was almost a guarantee of an advantageous placement in society, including higher income levels. Despite this trend from 1976 to 2005, the Whites with secondary education were still more concentrated than their Black counterparts among the richer segments of the income distribution. In other words, the income pay-off to Whites for these levels of educational attainment was higher than for Blacks.

We have found that the fact that Black Brazilians have less income and less education than Whites cannot be understood without taking regional disparities into account. The racial composition of the population varies considerably by region. Moving from the North to the South of Brazil, the population gets whiter, richer and more educated. While 80 per cent of the population in the South was White in 2005, only about 24 per cent of the population in the North was White. Therefore, by composition, when national-level indicators are disaggregated by race, part of the regional differences show up as differences between Blacks and Whites that are not due directly to contemporary discrimination.

The simple stylized facts presented in the third section of this Working Paper allowed us to reach our two initial important conclusions. First, the concentration indices show that albeit Black Brazilians might experience individual mobility, the Black group as a whole remains immobile. That is, individual mobility is basically intra-group mobility across generations (i.e., intra-Black and intra-White).

The second conclusion is that part of the differential that can be observed between racial groups at the national level is due to factors that are not directly related to contemporary discrimination. For instance, it is not reasonable to argue that the North or the Northeast of the country is less developed because of current racial discrimination, although the distinct racial composition of the population in these regions can be attributed to past discrimination.

Nevertheless, we have already noted that the income pay-off to education is higher for Whites than for Blacks, and have noted that Blacks, as a group, are relatively immobile. Thus, we cannot rule out contemporary racial discrimination as being one of the major causes of the current racial gap.

Following the cohort born during 1973-1977, we confirmed our first conclusion: the Black members of the cohort, as was the case for the Black population as a whole, might have experienced mobility as individuals but not as a group. Their socioeconomic standing was, in adulthood, better than that of the whole Black population. But this was an effect of the cohort affiliation: relative to their whole age cohort, their level of concentration among the poorer segments of the income distribution was equivalent to that of the whole Black population within the entire Brazilian population.

Our modelling of the educational outcomes expected at different points of the educational trajectories of the 1973-1977 cohort confirms that although the whole racial gap cannot be attributed to racial discrimination, it cannot be discounted as an important determinant of inequality. In all models, even when region of residence, type of area, parental education and income level of the household were accounted for, there has always been a non-negligible and significant effect of the race parameter.

Of course, it could always be disputed whether the race variable really represents racial discrimination: it could be capturing other non-racial factors for which we are not accounting. However, we are controlling in our analysis for the major sources of differentiation, such as region, income and education, which could be presenting themselves as racial (even if their direct impact cannot be characterized as such). Thus, we assume that the race parameter represents current discrimination. Being more conservative, we could state that the race parameter is giving us, in effect, the current ceiling for the level of discrimination, not necessarily the actual level.

When we examined the probability distributions predicted by our models, we derived our final relevant conclusions. First we confirmed that region, parental education and household income are, altogether, more important sources of the variation in the probability of reaching the modelled educational outcomes than current racial discrimination-although the effect of the latter remains significant and non-negligible.

This result might seem unimportant or obvious, for nothing in the world has a single cause, but the establishment of the preponderance of social origins over current racial discrimination in the reproduction of persistent socioeconomic inequalities between racial groups fills in an important gap in our knowledge, simply because such an exercise has never been undertaken before, at least for Brazil.

Since previous studies did not provide a clear empirical answer to this question of relative weight, the debate was not being conducted on the basis of reliable evidence. Depending on one's interests or one's identification with a party in the debate, one could freely defend the position that social origins explained everything or that racial discrimination was the overriding cause of inequalities among racial groups.

A new aspect revealed by our modelling exercises is that the effect of discrimination varies considerably when the modelled probability is predicted for each racial group at different values of the variables under consideration. When the outcome that is being modelled is difficult to attain, the racial gap is greater and it increases as household income and parental education increase. Conversely, when the outcome is more easily achievable, the racial gap is smaller and decreases as the levels of household income and parental education rise.

Theoretically, the main implication of these findings is that racial discrimination affects Black Brazilians most when they start to compete with Whites for highly valued but inadequately supplied social assets and resources. A few recent studies have revealed such a tendency although it has largely been ignored in Brazilian social research.

The case of attendance at a higher-education institution is a clear example. In general, the probability of such attendance increases in the most developed regions of the country (the Southeast and South) and increases with parental education and household income. However, the higher the level of education to be attained, the higher is the racial gap, namely,
the distance between the probability of educational attainment of Whites and Blacks. In contrast, when we examine the achievement of literacy by the offspring of the cohort that we have tracked, the racial gap is much less significant because literacy has become a relatively easy achievement for both Blacks and Whites (except for the ultra-poor).

The policy implications of our analysis are relatively straightforward. If there is evidence of the direct effects of racial discrimination, affirmative actions are called for as a remedy. However, if eradicating the racial gaps observed at the national level is an objective that Brazilian society wants to pursue, it must recognize that there are non-racial factors that should be tackled as well. A clear example is that of regional differences. If all racial discrimination were abolished by decree today, there would still be a racial gap at the national level due to varying regional development and differing racial composition of regions.

Interestingly, the framework of affirmative action policies adopted recently in Brazil can be deemed as intervening where it is most appropriate. Among a constellation of small programmes and actions whose efficacy could be questioned, one can find initiatives, such as affirmative action for admission to public universities, which undoubtedly intervene in a realm where there is solid evidence of previous or contemporary racial discrimination.

But since the racial gap is not produced entirely by racial discrimination, other policies, such as conditional cash transfers and educational credits (such as for students who attend private universities), have had a positive effect on reducing it. For instance, conditional cash transfers have been regarded as a factor responsible for about one fifth of the fall of the Gini index of inequality in Brazil. And the overall reduction of inequality has fostered a reduction of the racial gap in income because Blacks have been more concentrated among the poorer segments of the population that receive cash transfers.

In summary, it is not possible to conclude that the socioeconomic inequalities between racial groups that are observed at the national level in Brazil are caused entirely by racial discrimination. Such discrimination is indeed an important factor but it is one factor among others, such as regional disparities, educational differentiation and income inequality, that lead to inequality among racial groups. In some contexts, racial discrimination has a strong effect; in others, its impacts are less pronounced.

If Brazilian society is really committed to becoming a racial democracy-namely, a place in which people with differing racial affiliations have equal opportunities-it is important to move our analysis and discussion beyond both the denial of discrimination as an important factor as well as the assertion that current discrimination is the overriding cause of racial inequality.

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## NOTES

1. On the recent fall of income inequality in Brazil, see Barros et al. (2007),
2. See, for instance, Turra and Venturi (1995).
3. From the Tupi language caá-boc.
4. The 1970 census did not have a question on colour. The incorporation of colour as a regular question on household surveys started in 1987. Nowadays, all important household surveys ask the colour of the respondents (Osorio, 2003).
5. Those who offer this critique mean by 'objective' some sort of scientific criterion provided by biology or genetics, and tend to ignore the relevance of race as a social construct.
6. The 1976 National Household Survey collected 136 colour/racial categories as freely chosen answers to the question "What is \{NAME's\} colour?". Although this is frequently pointed out by critics of the racial classification as evidence of its purported inadequacy, the fact is that 93 per cent of the population chose one out of six categories: 57 per cent chose spontaneously one of the four categories then officially used, White (44 per cent), Black (five per cent), Yellow (one per cent) and Brown (seven per cent); another 36 per cent chose either Tanned ( 33 per cent) or Light-Tanned (three per cent). Those who classified themselves as Tanned, when constrained to choose among the official categories, classified themselves as Brown ( 64 per cent), White ( 25 per cent) and Black (nine per cent). In 1995, a poll on racism conducted by DataFolha, a non-governmental research institute, found strikingly similar results. In 1998, the monthly Labour Force survey also generated very similar results, with six colour categories accounting for more than 90 per cent of the spontaneous answers. But in 1998, 70 per cent of the respondents freely chose one of the official categories. For a detailed account of these results, as well as comparisons between the racial composition of the population obtained from self-classification and that from interviewer's classification, see Osorio (2003a).
7. See sub-section IV. 1 on Data below for more information on the race variable and on the territorial coverage of the survey.
8. Schwarcz (1987), who studied the racial question through newspaper accounts of the 19th century, presents a relevant example of a 'Preto' who had been severely spanked by 'Negros'. The writer makes a clear distinction in the wording throughout the text, never using the terms as synonyms.
9. We will present and discuss this index later.
10. The data presented in this section are not standardized to account for the different coverage of the territory by the surveys in 1976, 2004 and 2005. We assure the reader that this lack of full standardization does not imply problems in our interpretation. See the sub-section IV. 1 on Data below for more information on the territorial coverage of the surveys.
11. It is known that the 1989 inequality peak was artificially produced in the survey by wage indexation during the time of hyper-inflation.
12. See the sub-section on Data below for more information on the territorial coverage of the survey.
13. In 2005, an extra grade was added to the primary cycle, and the entrance age was lowered to six years old.
14. It is important to note that in 1982 school was not mandatory for children younger than seven years of age so this factor explains partially why 42 per cent of the cohort was out of school. But there were other factors at work, such a delayed entrance into school.
15. This information is available only in some rounds of the survey.
16. See Osorio (2004) for a thorough review of previous theories.
17. Following the lead of Blau and Duncan (1978).
18. See Hout (1983).

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[^1]:    Source: IBGE, Pesquisa Nacional por Amostra de Domicílios (National Household Survey), 1982-2005.

[^2]:    Source: IBGE, Pesquisa Nacional por Amostra de Domicílios (National Household Survey), 1982-2005.

[^3]:    Source: Table 2.

[^4]:    Source: Table 2.

[^5]:    Source: Table 2.

[^6]:    Source: Table 2.

[^7]:    Source: Table 2.

[^8]:    Source: Table 2.

