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Pigmentocracy in the Americas: How is Educational Attainment Related to Skin Color?

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Executive Summary. This *Insights* report addresses the question of whether educational attainment, a key indicator of socioeconomic status, is related to skin color in Latin America and the Caribbean. Based on data from the 2010 AmericasBarometer, our analysis shows that persons with lighter skin color tend to have higher levels of schooling than those with dark skin color throughout the region, with few exceptions. Moreover, these differences are statistically significant in most cases and, as we show in a test of several multiracial countries, the negative relation between skin color and educational attainment occurs independently of class origin and other variables known to affect socioeconomic status. Thus, we find that skin color, a central measure of race, is an important source of social stratification throughout the Americas today.

Scholars of Latin America have recently increased their attention to issues of race and ethnicity. Challenging long held narratives that Latin American nations have avoided the racial and ethnic divisions that have plagued the rest of the world through race mixture (mestizaje), several of the region's nations have constitutionally declared themselves as multicultural. Most national censuses in Latin America, for example, now ask questions about whether respondents self-identify as indigenous or black/Afro-descendant. A handful of countries, such as Brazil and Colombia, have gone as far as instituting race-based affirmative action programs, while Bolivia has elected a president who asserts his indigenous (Aymara) identity. These changes have been largely in response to growing black and indigenous social movements throughout the region.

Social and economic inequalities by race and ethnicity are also beginning to be recognized. As early as 1944, Alejandro Lipschutz, a Chilean anthropologist, coined the idea of Latin America as a pigmentocracy where the region's social hierarchies are ethnic or color-based. However, that idea has been largely ignored until recently, when research has begun to document racial inequalities based on the new census data on racial identification (Flórez et al 2001, Telles 2004, 2007, Ñopo et al 2007).

New research on racial and ethnic inequality in Latin America often relies on new census or survey data, which determines one's ethnoracial classification according to self-identification. These data require that respondents identify themselves among a number of categories including white, *negro* (black), mulatto, mestizo or indigenous. These studies often show that Afro-descendant and indigenous people occupy the lowest rungs of the income, educational and occupational ladder in the multiracial countries of Latin America.

However, racial identification in Latin America—where the categories themselves are context dependent and have fuzzy boundaries—is often more ambiguous and fluid than in the United States. Respondents often identify themselves as belonging to categories that are different from the ones into

which others place them (Harris 1963; Telles and Lim 1998). For various reasons, persons that are perceived as black, mulatto, or indigenous may choose to identify themselves as mestizo, or even white (Wade 1997; Telles and Flores forthcoming).

Therefore, persons with the same color and physical appearance might choose to identify in distinct ethnoracial categories from each other. Moreover, ethnoracial identification also often hides considerable physical variation. For example, persons who identify as mestizo comprise population majorities in countries like Ecuador, Mexico and Peru, but that category may include a full spectrum of people ranging from fair-appearing persons with light hair to those who appear indigenous and have a dark brown skin tone (Telles and Flores forthcoming).

Self-identification may largely reflect classification by others but it may also be conditioned by people's experiences and how they want to be understood. Moreover, individuals of different skin colors but who

Figure 1. Skin Color Palette Used in the 2010 AmericasBarometer

identify in the same ethnoracial category might be treated differently because of their skin tone, leading to differences in their life chances. Thus ethnoracial identification may be inadequate for capturing racial differences in socioeconomic status (Telles and Lim 1998).

For this reason, we use actual skin color in this study. As an outward measure of race, we believe that skin color is relatively objective and better reflects classification by others. A study of five Latin American countries has shown that skin color is more closely correlated with occupation and education than is the ethnoracial self-identification used in the censuses, perhaps reflecting that social treatment in labor and educational markets is based more on how others perceive a person than how that person defines himself or herself (Telles, Flores and Urrea 2011).

The skin color palette provides a unique perspective on race in 23 countries of the Americas.

In this study, we ask: To what extent are years of schooling related to skin color? Skin color ratings have been used in several surveys about racial discrimination and racial attitudes in the United States, but we know of no research on the effect of skin color specifically in Latin America. We then ask whether color/racial inequalities, if they exist, are simply coterminous with class or whether they also act independently of class. Unfortunately, there is little empirical research in Latin America and the Caribbean that examines the effect of both race and class simultaneously, outside of Brazil (Telles 2008).

In the 2010 round of the AmericasBarometer, the Latin American Public Opinion Project (LAPOP) at Vanderbilt University incorporated a new measure of skin color.[1] This measure was developed and sponsored by Princeton University's Project on Ethnicity and Race in Latin America (PERLA) (the PERLA website may be found at perla.princeton.edu). To measure skin color, interviewers rated the facial skin color of each respondent according to colors on a skin color palette, which was not shown to the respondent. The palette, found in Figure 1, included eleven skin tones, with "1" being the lightest and "11" being the darkest.[2] The colors of the palette came from internet photographs and the palette was extensively pre-tested in several countries in the region for ease of use by interviewers and to see if it covered the range of colors found in the field. The resulting variable, **COLORR**, is available for 39,238 respondents in 23 of the 26 countries of the AmericasBarometer (excluding Haiti, the United States, and Canada), providing a unique perspective on race across the Americas.[3]

In Figure 2, we show the relation between skin color and schooling for 23 countries in the 2010 AmericasBarometer.[4] Our dependent variable is educational attainment, which is based on the grade level completed by the respondent.

Figure 2 graphically represents the relation between educational attainment and skin color in four regions, where the lightest persons are near 1 and the darkest near 11. We present data points only where there are at least 30 persons from the survey. Categories with fewer than 30 respondents are combined with contiguous groups (for example, 1's are combined with 2's in many countries, in which case the combined category is reported as a 2). Thus the lines never span the entire color spectrum. As a rule of thumb, self-identified whites are

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[2] Interviewers were also asked to code their *own* skin color at the end of the interview using the same color palette; these data are not reported on in this *Insights* report, but are available in the 2010 AmericasBarometer survey data.

[3] Across the countries where this variable was included, only 62 respondents, or 0.16% of the sample, could not be classified.

**Figure 2. Relation between Skin Color and Educational Attainment
in Latin America and the Caribbean**
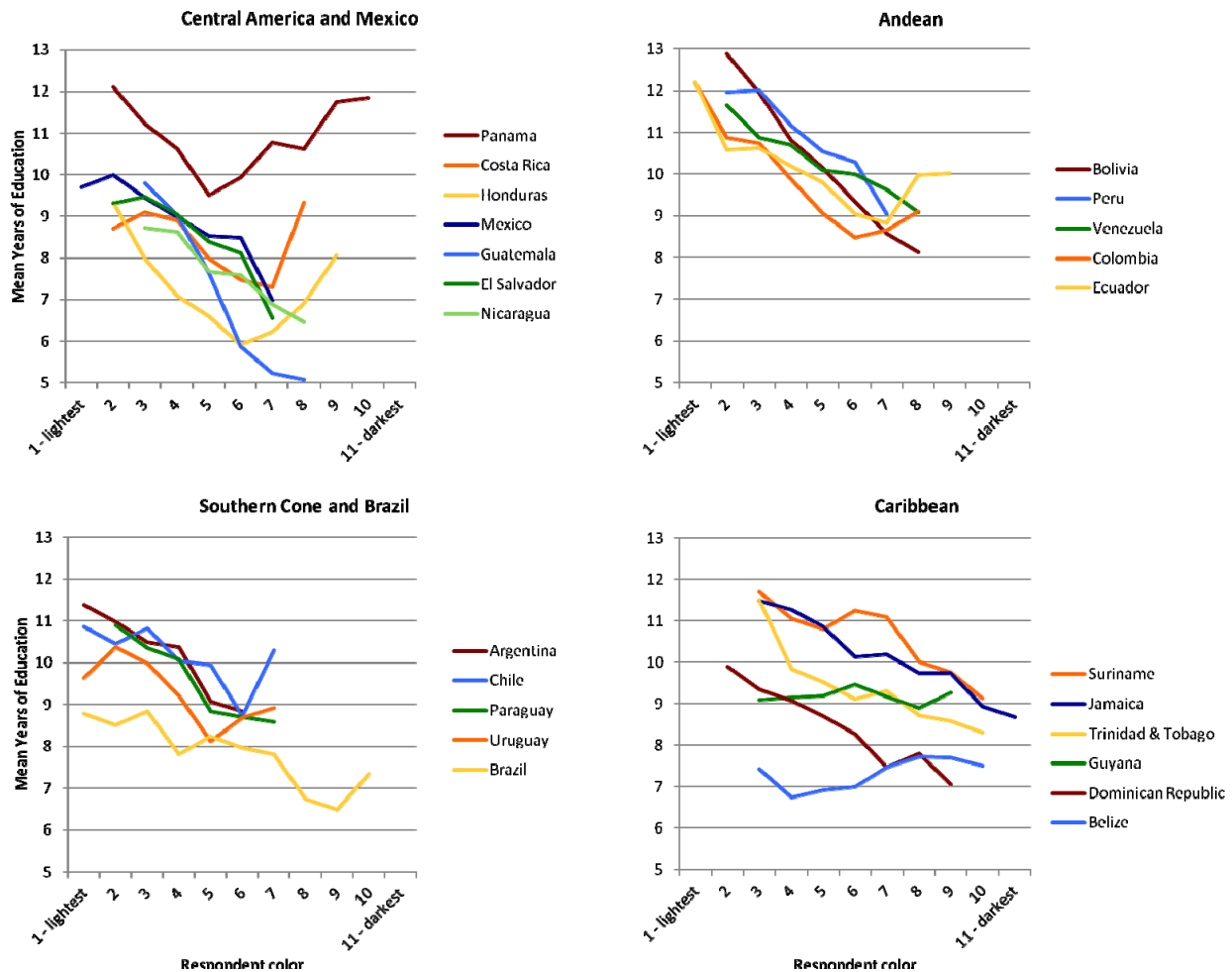
concentrated in the 1-4 skin color categories, mestizos are 3-5, indigenous peoples and mulattos in 4-6, mulattos and blacks in 6 and higher (Telles, Flores and Urrea 2011), but as these values show, there is much overlap by skin color among persons identifying in distinct ethnoracial categories.

Most of the lines reveal a downward trend from the lightest persons having the highest mean educational attainment to the darkest persons having the lowest. This trend is especially clear and steep in the Andean region, where the mean usually decreases from about 12 years for the lightest persons to about 9 years for the darkest persons; the fall is steepest in Bolivia, where it goes from 13 to 8 years of schooling.

The negative relation between color and schooling is also apparent throughout the color spectrum in four of the seven countries (Mexico, Guatemala, El Salvador and Nicaragua) in the Mexico/Central American region. At the extreme, schooling decreases from a mean of about 10 years for the lightest Guatemalans to about 5 years for the darkest.

However, Panama is a clear exception where the mean dips for persons with skin colors of 4 and then trends upward from there to the point that the darkest Panamanians have equivalent levels of schooling as the lightest. This may reflect the especially low status of a sizeable indigenous and mestizo population in that country, while Afro-descendants, primarily those of West Indian background, seem to have a relatively high status in that country, similar

to those at the light end of the color spectrum. There are somewhat similar trends in Honduras and Costa Rica, though the upward trends begin at a darker color point.

The negative trend is also apparent in the Southern Cone and Brazil, though it tends to be less steep than in the Andean and Mexico/Central America regions. Also, the darkest ends tend to rise slightly in Brazil, Uruguay and Chile, though they never reach the levels of the lightest population, as they do in some Central American countries. Moreover, because of the small number of respondents in these categories in the Southern Cone and Brazil, the values may not be statistically different from those of the adjacent categories.
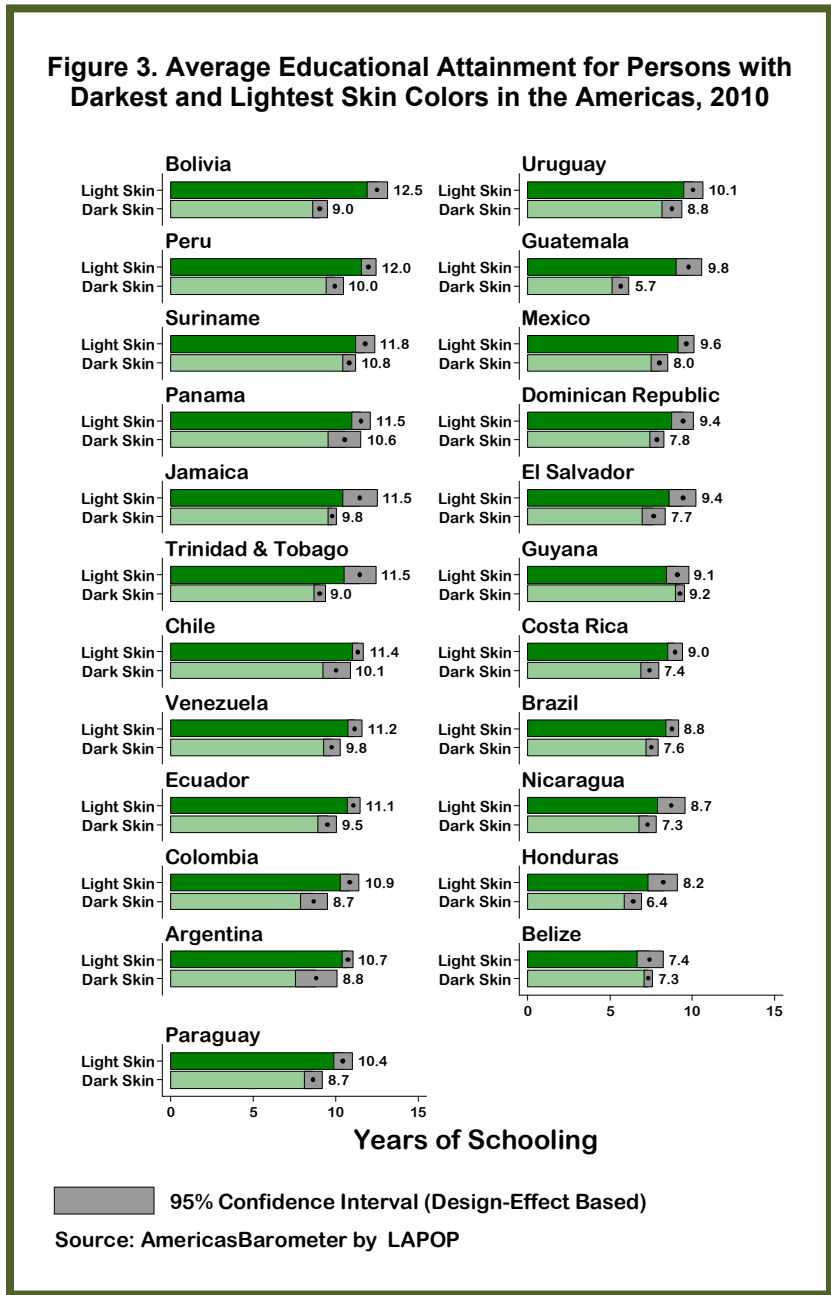
Finally, countries in the Caribbean show the widest variation in the relation between color and education. Perhaps the clearest evidence of a pigmentocracy in the Caribbean is for the Dominican Republic, the one Spanish speaking country in the region. In contrast, the trend for Guyana is fairly flat while Belize trends in the opposite direction to all other countries, though only slightly.

Figure 3 shows the mean levels of schooling for the residents with the lightest skin (1-3) compared to those with darkest skin (6+) in all 23 countries, ordered by the size of the average difference between the two. Figure 3 also presents confidence intervals around these means, given that there is a margin of error for these population samples, as there is in all survey samples of large populations.

Figure 3 reveals that we can be 95% confident that in the national population, persons with light skin have more years of schooling than their dark skin counterparts in almost every country. The exceptions are Panama, Suriname, Belize and Guyana, where there are no statistically significant differences in educational attainment between their lightest and darkest citizens. The findings in Figure 3 largely reflect those in Figure 2,

though the former shows when differences are statistically significant between persons on the two ends of the color continuum.

Interestingly, the largest national differences are in Guatemala and Bolivia, the two countries with the largest proportion of indigenous peoples and with only tiny Afro-descendant populations. This seems to reflect the especially

Figure 3. Average Educational Attainment for Persons with Darkest and Lightest Skin Colors in the Americas, 2010

95% Confidence Interval (Design-Effect Based)

Source: AmericasBarometer by LAPOP

low socioeconomic status of indigenous people in the region, even when compared to Afro-

descendants. Trinidad and Tobago, Colombia and Peru also have sizeable differences in educational inequality.
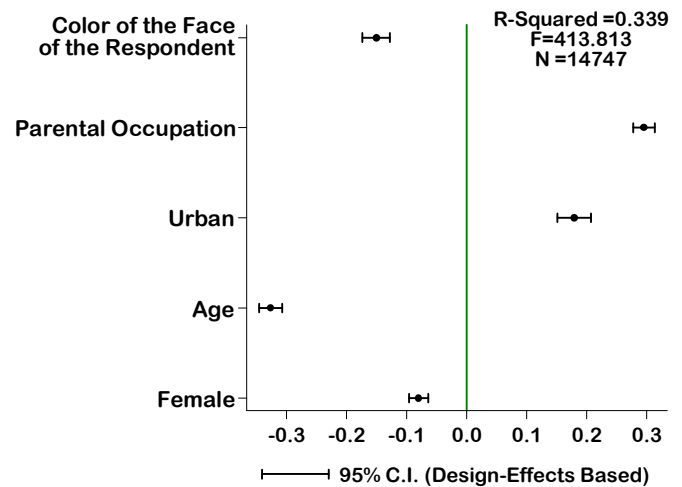
In most other countries, actual mean differences, although high in some cases, often have large margins of error. For example, since Argentina has few persons with dark skin and Jamaica has few persons with light skin, the margin of sampling error around the means for those categories is large. Surprisingly, racial educational inequality in Brazil, the country with the most developed scholarly tradition of studying race, is relatively low, and the margins of error are relatively small.

We now turn to the important question of whether the relation between color and education that we have found is simply a reflection of class and other inequalities or whether race has an independent relation with education. The dominant scholarly tradition on socioeconomic inequalities and social mobility in Latin America often ignores issues of race, arguing that racial differences are merely an epiphenomenon of class or that class origins are more important than race or color (González Casanova 1965; Portes and Hoffman 2003; Atria 2004; Filgueira 2001). According to Gonzalez Casanova's (1965) influential sociological text, class is the most important cleavage; ethnicity, especially indigenous ethnicity, is important but transitory; and race is mostly insignificant.

Since other factors besides color may affect years of schooling, we run a regression analysis predicting years of education by skin color, as well as class origin, age, sex, urban/rural residence and country of residence. We run the regression model only for the eight countries (Bolivia, Brazil, Colombia, Dominican Republic, Ecuador, Guatemala, Mexico and Peru) in which the class origin data are available.

We are particularly interested in the effect of class origins since the traditional scholarly approach in Latin America expects that class origins are able to explain racial/color inequalities. To model class origins we follow the standard approach of using a status ranked set of parental occupational groups. These are

Figure 4. Effects of Skin Color and Other Factors on Educational Attainment in Select Latin American Countries

R-Squared =0.339
F=413.813
N =14747

├─┤ 95% C.I. (Design-Effects Based)

Source: AmericasBarometer by LAPOP

based on the occupations of the heads of household when the respondents were 14 years old (see Telles, Flores and Urrea 2011 for more information on methods). The results of the OLS regression analysis are shown in the first column of the Appendix and are summarized graphically in Figure 4. In order to compare the relative sizes of the effects, the figure presents standardized coefficients.

For reasons of space, we do not show the country controls in Figure 4. As the confidence interval bars reveal in the graph, all of the variables in our model are statistically significant and thus they are all independently associated with educational attainment. While darker skin color, older age and being female are associated with lower educational attainment, having parents in occupations of higher status and living in an urban area are associated with having more schooling. In particular, the color effect is about half the size of the class origins effect and about twice as large as the effect of sex, based on the standardized regression coefficients. (The unstandardized regression coefficient, which we do not show, reveals a decrease of about one-third (0.34) of a year, on average, for each darker shade along our 11-point skin color continuum.)

Finally, the second OLS regression model reported in the Appendix includes interactions between skin color and an indicator variable for each country, using Brazil as the country of reference. Importantly, that model reveals that *skin color has a statistically significant effect on educational attainment in all eight countries*, even after controlling for factors such as social class, gender, and urban/rural residence. The relation between color and education in Mexico, Colombia, Ecuador, Peru, and the Dominican Republic is similar to that in Brazil, while dark skin color penalizes Guatemalans and Bolivians even more than nationals of the other countries. Guatemala and Bolivia are therefore particularly pigmentocratic, confirming the descriptive findings shown in Figures 1 and 2. This is consistent with findings from related research that indigenous persons are the poorest ethnoracial group in several Latin American countries (Telles, Flores and Urrea 2011).

> *Dark skin color penalizes Guatemalans and Bolivians even more than nationals of the other countries.*

Conclusion

In sum, we show that the bulk of countries in Latin America and the Caribbean may be safely characterized as pigmentocracies. The most educated persons tend to have the lightest skin color while those with the least education tend to have the darkest. In another study, we have shown that color is a better predictor of education and income than ethnoracial identification for a handful of countries (Telles, Flores and Urrea 2011) and here we have shown that color predicts educational attainment in the large majority of countries in Latin America and the Caribbean. Moreover, inequalities by skin color do not appear to be mere results of historical processes; rather, they occur independently of parental occupation,

suggesting that racial differences are also being reproduced within the current generation.

These findings on the importance of race run against much of the traditional thinking about social stratification south of the U.S. border. Race has been surprisingly ignored by many leading social scientists in the region, in favor of primarily class-based explanations. However, because of their theoretical prisms or because of the unavailability of race data, analysts have rarely empirically tested whether race--especially skin color--is related to socioeconomic status in the region.

Not that class is unimportant. Race and class operate together to shape stratification in the Americas, though the effect of race has been underestimated in previous research. In addition, it is important to note that class origins themselves are also the result of accumulated racial privileges and disadvantages acquired in the past, including through formal institutions such as *casta* systems, slavery and other forced labor systems that indigenous people, blacks and mulattos were regularly subjected to, as well as through informal racial discrimination.

Finally, the extent to which race is correlated with education varies substantially in the region. The most notable pigmentocracies are Guatemala and Bolivia, the two countries with the proportionately largest indigenous populations. This is even in comparison to Brazil, where most research on race has concentrated, and to several other racially diverse countries. This finding largely reflects the especially low status of the indigenous population. On the other hand, we find a U-shaped relation between color and education in Panama and the complete lack of a pigmentocracy in Belize and Guyana.

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Appendix: Ordinary Least Squares Models Predicting Years of Schooling in Select Latin American Countries, 2010

	Model 1		Model 2	
	Standardized Coefficient	Standard Error	Standardized Coefficient	Standard Error
Skin color	-0.151*	0.012	-0.116*	0.017
Parental occupation	0.295*	0.009	0.293*	0.009
Female	-0.080*	0.008	-0.082*	0.008
Age	-0.326*	0.010	-0.325*	0.010
Urban	0.179*	0.014	0.176*	0.014
Mexico	0.042*	0.008	0.049*	0.016
Guatemala	0.018*	0.008	0.102*	0.020
Colombia	0.076*	0.009	0.075*	0.017
Ecuador	0.135*	0.009	0.150*	0.025
Bolivia	0.145*	0.010	0.210*	0.024
Peru	0.122*	0.007	0.117*	0.017
Dominican Republic	0.056*	0.009	0.073*	0.019
Interaction: Mexico X skin color			-0.006	0.016
Interaction: Guatemala X skin color			-0.095*	0.021
Interaction: Colombia X skin color			0.001	0.018
Interaction: Ecuador X skin color			-0.016	0.026
Interaction: Bolivia X skin color			-0.073*	0.027
Interaction: Peru X skin color			0.006	0.017
Interaction: Dominican Republic X skin color			-0.021	0.018
Constant	*-0.289**	*0.020*	*-0.288**	*0.021*
R-Squared	*0.339*		*0.341*	
Number of Observations	*14,747*		*14,747*	

Note: Coefficients are standardized, and are statistically significant at * $p < .05$, two-tailed. Brazil is the country of reference.