

Discrimination Goes to School? Racial Differences in Performance Assessments by Teachers*

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PRELIMINARY

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Abstract

Recent literature suggests that observed racial differentials in labor market outcomes are result of lower investment in the accumulation of skills or of *pre-market factors* by individuals of African decent. If parents and children update investment decisions after extracting from school reports signals regarding scholastic abilities, differential errors in *perceived* aptitude could either generate or reinforce racial gaps in the accumulation of human capital. Evidence drawn from a unique data set from Brazilian elementary, middle and high-schools suggest that teacher's assesments (when compared with blindly scored tests of proficiency) suffers from cardinal and ordinal biases associated with a child's race.

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1 Introduction

A number of studies detect significant association between individual characteristics used to infer African ancestry and various measures of socioeconomic success. This historically-rooted stratification remains stark in a variety of contexts, even under sharp differences in patterns of economic development, institutional arrangements regarding racial segregation, and observed rates of miscegenation.¹ Consensus emerging from recent literature also indicates that those differences are, to a greater extent, the result of underinvestment in the accumulation of skills or of *pre-market factors* by individuals of African descent, particularly in the case of labor markets.² Still according with this literature, differences in skills between blacks and whites emerge during infancy, affecting both cognitive and non-cognitive aspects of child development and become more prominent as children attend elementary schools.³ The early appearance and the dynamics of such gaps suggest that, in order to uncover the determinants of differences in obstacles to acquire productive skills, we need to better understand the interactions between parental investment decisions and the school environment's inner workings.

In the present article we tackle these issues by considering an specific aspect of the interaction between students and teachers. Namely, we investigate teachers' grading practices. In other words, we focus attention on identifying racial differences on the measurement of performance within classrooms. Data on teachers' grading of elementary, middle and high-school students based on non-blind evaluation methods are compared with results from standardized tests (covering the exact same official curriculum) taken by the same children, within the same classrooms, and scored without human interference. Data from the largest public school system in Brazil (covering the entire state of São Paulo) are used. Portions of the teachers' assessments not explained by blind scores are shown associated with child characteristics. In particular, there is robust and consistent underscoring and under-ranking of blacks relative to whites both on Mathematics and on Reading/Grammar

¹See Alexander et al. (2001).

²See Carneiro et al. (2005), Heckman (1998), Neal and Johnson (1996), and O'Neil (1990).

³Carneiro et al. (2004), Levitt and Fryer (2004) and Botelho et al. (2009).

evaluations. These patterns are interpreted as arguably reflecting differential treatment received by blacks and whites within integrated classrooms. If this is indeed the case, racial stereotypes (within the classroom) seem to be (at least partially) responsible for some forms of discriminations against blacks *before* they reach the labor market.

If one considers that parents and children themselves update investment and effort decisions after extracting from school transcriptions signals regarding scholastic abilities, those intra-classroom differentials may very well feed back into the parental/individual decision process. In other words, if children's perceived ability increases the returns or reduces the costs of investments,⁴ or if teacher's assessment influences some key non-cognitive aspect of a child's life (such as self-esteem, confidence and motivation), this mechanism could very well reinforce racial gaps in the accumulation of human capital.⁵

Any observer would quickly point-out that schools, neighborhoods', and marriage markets' levels of racial segregation in Brazil are not comparable to other contexts. We emphasize, however, that the relevance of the Brazilian experience to international policy makers resides on the fact that trends in background diversity within classrooms (due to government policies that lead to substantial increases in school enrollment rates) mirrors the ones generated by the absorption of Hispanics into the US public schools' system,⁶ or by large immigration flows (North-Africans in France, Turkish in Germany, among others). Our results also shed light on the experience of developing countries where stagnation in the quality of education seem to be associated to the democratization of access to schools (e.g.: South Africa, Kenya, India) which may reflect teacher behavior within increasingly ethnicity/background-diverse classrooms.

Besides the literature cited above, the discussions presented here draw on insights from (and aim at contributing to) different branches of the literature in education. This includes the

⁴As in the traditional Beckerian framework. See Becker (1991), Chapter 6.

⁵Lam et al. (2006) examines the impact of the quality of performance measurement on high-school dropout behavior in South Africa. Our analysis is similar in spirit to theirs, but, given the unique characteristics of our data, we end up employing a very different econometric strategy.

⁶The same is true for studies regarding racial desegregation of schools.

measurement of grading standards and the estimation of its impact over learning (Becker and Rosen, 1992; Betts, 1995; Betts and Grogger, 2003; and Figlio and Lucas, 2004), the discussion of black-white test score gaps in Jencks and Phillips (1998); and the discussion on grade inflation, signaling, and on the informative content of grades (Chan, Hao and Suen, 2007; Millman et al, 1983; and Ostrovsky and Schwarz, 2005).

The remainder of the article is organized as follows. Section 2 discusses in general lines the conceptual frameworks that guide the empirical strategy and informs the analyses of results. Section 3 presents the institutional background and previews the data. Section 4 overviews the econometric identification strategy and presents the results. Section 5 concludes.