Pathways to Skin Color Stratification: The Role of Inherited (Dis)Advantage and Skin Color Discrimination in Labor Markets

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Abstract: Research has uncovered associations between skin color and myriad outcomes. What drives these associations? We develop a theoretical framework that synthesizes the multiple pathways linking skin color with life chances. Skin color stratification should be conceptualized in historical, structural terms: as the result of unequal treatment and inherited (dis)advantage, that is, unequal resources transmitted by families with different skin tones. We assess the role of two pathways—discrimination and inherited (dis)advantage—for Blacks’ and Latinos’ employment, earnings, and occupational prestige. We use the National Longitudinal Study of Youth 1997, which includes a visual skin color measure; multiple indicators of family background; and a sibling subsample that allows us, using fixed-effects models, to recover the effect of skin color net of family background. First, we find that darker skin tone is associated with worse labor market outcomes. Indicators of family background account for 29 to 44 percent of skin color’s associations with employment, earnings, and occupational prestige. Second, using sibling fixed-effects models, we find that darker skin tone is associated with worse labor market outcomes, but these associations are not statistically significant. In sum, our findings suggest that we pay attention to the multiple pathways linking skin color with life chances.

Keywords: colorism; skin color; race; inequality; labor markets

A growing body of work explores the association between skin color and life chances. What drives observed associations with skin color? By many accounts, these associations are due primarily to contemporary skin tone discrimination: darker-skinned Blacks, Latinos, and others are treated relatively worse in schools and in the labor market, and their adverse treatment drives lower educational attainment, employment, earnings, and occupational prestige (Branigan et al. 2013; Hill 2000; Hunter 2002; Keith and Herring 1991; Kreisman and Rangel 2015; Monk 2014, 2015, 2019; Telles and Murguia 1990).

Other factors, in addition to contemporary skin tone discrimination, might drive associations between skin color and socioeconomic outcomes. Families with different skin tones possess and transmit different resources as a result of skin tone discrimination in past generations, resources inherited from White or European ancestors, or both. Stated differently, lighter-skinned Black and Latino families transmit a different set of resources by virtue of their ancestors’ position in both categorical (e.g., racial) and continuous (e.g., phenotypic) hierarchies. We refer to this pathway as “inherited (dis)advantage.”

The contributions of this article are twofold. On a theoretical front, we develop a framework that synthesizes the multiple pathways through which skin color is
linked to life chances. Our second contribution is empirical: we assess the role of inherited (dis)advantage and contemporary skin tone discrimination in explaining the labor market outcomes of Blacks and Latinos. Blacks and Latinos have long been at the center of the skin color stratification literature; they are also the largest non-White groups in the United States.

Our empirical analyses unfold in two stages. In the first stage, we model Blacks’ and Latinos’ labor market outcomes as a function of their skin tone, individual sociodemographic characteristics, and family background. We control for a wider set of family background indicators than prior work, including parents’ wealth, which reflects the effects of historically accumulated inequalities (Conley 2009; Oliver and Shapiro 2006). We also characterize the portion of the association between skin color and labor market outcomes that is accounted for by indicators of family background. In the second stage, we use sibling fixed-effects models to recover the statistical effect of skin color on employment, earnings, and occupational prestige, net of the advantages or disadvantages inherited by Blacks and Latinos from their families. Both analyses use the 2008-to-2013 waves of the National Longitudinal Study of Youth 1997 (NLSY97).

To anticipate the findings: dark-skinned Blacks and Latinos experience worse outcomes in employment, earnings, and occupational prestige, and indicators of family background account for 29 to 44 percent of skin color’s associations with employment, earnings, and occupational prestige. Across our sibling fixed-effects models, darker skin tone is associated with worse labor market outcomes, but these associations are not statistically significant.

In short, we find evidence that inherited (dis)advantage is one source of skin color stratification. Our results should not be interpreted as proof that associations between skin color and labor market outcomes are due primarily to inherited (dis)advantage and that contemporary discrimination based on skin tone plays a smaller role or no role. We do, however, recommend that scholars pay attention to the multiple pathways through which skin color and life chances are linked. We also underscore the importance of conceptualizing colorism, like racism, in structural and historical terms: as both the result of unequal treatment in the present day and an accretion over generations of inequalities. Finally, our work carries implications for public policy and inequality. The findings suggest that even if we succeeded in eradicating skin tone discrimination today, skin color stratification would persist through the inertia of inherited (dis)advantage.

The Historical Roots of Skin Color Stratification

“Colorism” is a form of stratification that is manifest even within racial categories: people who identify (or are identified) with the same racial or ethnic group often exhibit social and economic differences by phenotype. Although stratification by skin color has been repeatedly studied, conclusions differ based on the outcome under scrutiny, respondents’ race/ethnicity or gender, and the skin color measure used. For example, the darkest Black Americans attain, on average, six months less schooling than the lightest Black Americans (Monk 2014). The darkest Mexican American men (with indigenous phenotypes) attain, on average, 1.5 years less
schooling than the lightest Mexican American men (with European phenotypes) (Murguia and Telles 1996). In general, darker-skinned Blacks and Latinos also earn less than their lighter-skinned coethnics, with substantial variation by gender (Goldsmith, Hamilton, and Darity 2006, 2007; Hersch 2008; Hunter 2002; Keith and Herring 1991; Kreisman and Rangel 2015; Telles and Murguia 1990). In the criminal justice system, dark-skinned Blacks receive harsher sentences than light-skinned Blacks (Eberhardt et al. 2006; King and Johnson 2016; Viglione, Hannon, and DeFina 2011), but evidence is mixed regarding arrests (Branigan et al. 2017; Kizer 2017a; Monk 2019).

For Black Americans, colorism originated in slavery when White men impregnated enslaved women by force, conceiving mixed-race children, or “mulattoes.” Whites granted greater opportunities to light-skinned individuals based on their complexions or White ancestry (Hill 2000; Jablonski 2012; Keith and Herring 1991). “Mulattoes” translated these advantages into higher social and economic standing in the Black community and reproduced their status by marrying other light-skinned individuals. For example, census data from 1860 to 1880 reveal that households with two “mulatto” partners had “between 30 to 90 percent more wealth than households with at least one black spouse” (Bodenhorn 2006:259). Although the codification of the one-drop rule eventually threatened the status of light-skinned Blacks, Reece (2019) argues that their economic head start allowed light-skinned families to retain their position in the Black community and, ultimately, to avail themselves of opportunities following the Civil Rights Movement. Other studies show that the importance of White ancestry among Blacks declined in the post–Civil Rights era (Gullickson 2005). Nevertheless, there is continued evidence of skin color stratification among Blacks in the twenty-first century (Monk 2014).

For Latinos, colorism has origins in colonial stratification systems in the Americas that subordinated people of indigenous and African origin (Hunter 2007; Telles and Murguia 1990). Following independence, many Latin American states promoted nation-building narratives that hailed mixed-race people as prototypical citizens (Holt 2003; Telles and Garcia 2013; Wade 1993). Nevertheless, pigmentocracies, that is, skin tone hierarchies favoring light-skinned individuals, endured in the region (Telles and the Project on Ethnicity and Race in Latin America [PERLA] 2014). As the diverse people we now consider Latinos entered the United States—through migration and territorial annexation—they supplemented the autochthonous system of skin color stratification with their own understandings of the same (Roth 2012). In recent years, a debate has emerged regarding Latinos’ place in the U.S. racial hierarchy (Abascal 2015; Bonilla-Silva 2004; Frank, Akresh, and Lu 2010; Lee and Bean 2004). There is a consensus that Whites still occupy the top rung of the racial hierarchy and are likely to remain there and that the experiences of Latinos with different phenotypes will likely diverge (Frank et al. 2010; Hersch 2018; Painter, Holmes, and Bateman 2016).

**Pathways to Skin Color Stratification**

Skin color stratification has roots in histories of slavery and colonization, but how is it reproduced today? We present a theoretical model (Figure 1) that identifies
multiple, nonexclusive pathways through which skin tone could be linked to life chances. Our model conceptualizes skin color stratification in structural, historical terms, extending scholarship on racism to colorism (Bonilla-Silva 1997; Powell 2008; Reece 2019). A structural approach focuses on the institutions and processes that reproduce hierarchies over generations through cumulative causation (Powell 2008). The three pathways identified in Figure 1 are all manifestations of this system. The first pathway is contemporary skin tone discrimination. Scholars sometimes use “colorism” to mean skin color stratification (as we do) and sometimes to mean differential treatment based on skin color, that is, one pathway through which such stratification may emerge. A second pathway, which we call “inherited (dis)advantage,” highlights the unequal resources inherited by people with different skin tones as the result of racial and skin tone hierarchies faced by their ancestors. The third pathway relates to the endogeneity of perceived skin color; it builds on the insight that perceptions of another person’s skin color are themselves affected by that person’s social and economic standing. The inherited (dis)advantage and endogeneity pathways have received considerably less attention than the skin tone discrimination pathway. Nevertheless, inherited (dis)advantage and endogeneity directly implicate scholars’ ability to establish the causes of contemporary skin color stratification.

By developing a unified model of skin color stratification, we clarify the relationship between historical and contemporary colorism. On the one hand are rich historical accounts of skin color stratification and its colonial legacy. On the other hand are accounts of contemporary unequal treatment based on skin color. The result is an incomplete model of how colorism in the past shapes colorism in the
present. In our model, by contrast, the tendency to discriminate by phenotype may persist, but past unequal treatment is also theorized to affect the resources that people possess to begin with.

Contemporary Skin Tone Discrimination

The first explanation of skin color stratification is skin tone discrimination in the present day. People, even those who identify as members of the same racial or ethnic group, are likely treated differently by others based on their phenotype (Hunter 2007). In other words, just as people can experience discrimination based on their position in categorical (e.g., racial) hierarchies, they can experience discrimination based on their positions in continuous (e.g., phenotypic) hierarchies. In Figure 1, the lines labeled (A) illustrate how direct discrimination drives associations between skin color and outcomes. This pathway captures instances of interpersonal discrimination, in which individuals treat others less favorably based on their skin color. If darker-skinned people are treated relatively worse than their lighter-skinned counterparts in labor markets, educational institutions, or other domains, this will produce differential attainment by skin color.

Skin tone discrimination is theorized to stem from a preference for whiteness, according to which people who approximate the characteristics of Whites—for example, because of their skin color—gain higher status and preferential treatment (Goldsmith et al. 2007). Put differently, skin color, along with other physical characteristics, serves as a form of capital that bestows privileges upon lighter people who are seen as more beautiful and competent (Hunter 2002; Monk 2015; Monk, Esposito, and Lee 2021). These preferences are rooted in ideologies created by Whites to maintain their supremacy (Hannon, DeFina, and Bruch 2013; Hunter 2002). Both Whites and non-Whites in turn internalize and reproduce a preference for whiteness.

The contemporary discrimination account is useful for understanding outcomes produced by encounters with gatekeepers or otherwise powerful individuals including, for example, representatives of the criminal justice system. However, the discrimination account has been criticized for its near-exclusive focus on individual prejudices and behaviors. As Reece argues, “inequality is the result of more than the collective pathology of individuals” (2019:4). Skin color stratification must also be understood in historical terms, as an accumulation of inequalities.

Inherited (Dis)advantage

The second pathway to skin color stratification is inherited (dis)advantage. By this account, skin color stratification in the present also stems from disadvantages that flow from racial and skin tone hierarchies in the past. On average, lighter-skinned Blacks and Latinos might be born into more affluent families, and the resources their families pass on enable them to attain better outcomes. These resources include economic capital, as well as cultural and social capital (Bourdieu 1986; Lamont and Lareau 1988). We refer to this mechanism as “inherited (dis)advantage,” recognizing the role of the family in transmitting advantages and disadvantages, as documented by a large empirical literature (Blau and Duncan 1967; Jencks et al. 1979; Lareau
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Our view of inherited (dis)advantage is consistent with multigenerational effects and cumulative causation, which link resources in previous generations (including those preceding parents) to outcomes in the current generation (Mare 2011). Inherited (dis)advantage is illustrated by the arrows labeled (B) in Figure 1. The left-hand side of the figure shows unobserved ancestry leading to more advantaged light-skinned households in the present day.

Why would lighter-skinned Blacks and Latinos be born into families with more resources? The first possibility is related to skin tone hierarchies in the past. On average, lighter-skinned Blacks and Latinos likely have lighter-skinned Black and Latino ancestors, who were subjected to less skin tone discrimination (e.g., Hill 2000; Keith and Herring 1991; Telles and PERLA 2014). These ancestors accumulated greater social and material resources than their darker-skinned coethnic contemporaries. This is the mechanism that scholars most commonly invoke when they acknowledge the role of inherited (dis)advantage. Keith and Herring, for example, refer to “disadvantages derived from parents because of past discrimination against darker blacks” (1991:775).

Categorical, race-based hierarchies could also account for the association between a person’s skin color and the (dis)advantages they inherit from their family. Blacks and Latinos with lighter skin likely have more White or European ancestors in their family trees (Parra, Kittles, and Shriver 2004). White ancestors were exempt from race-based subordination—ranging from discrimination to slavery. As a result, these ancestors accumulated greater social and material resources. This account does not assume that all mixed-race children, including the children of forced sexual unions, inherited resources from their White parent. It is enough that some inherited resources from their White parent and that these resources were greater than those they would have inherited from two non-White parents.

In the following analyses, we are not able to disentangle the roles of color- and race-based hierarchies, but they are worth distinguishing analytically. One implicates differential opportunities and outcomes within racial categories, the other across them. More broadly, discrimination and inherited (dis)advantage could operate in tandem: inequalities based on how one’s ancestors were treated might be reinforced by how people are treated today. These pathways are also worth distinguishing because they carry different implications for intervention. If skin color stratification today is primarily the result of “historically accumulated racial privileges and disadvantages,” then “inequality would likely remain simply because class inequalities by race would persist across generations” (Telles, Flores, and Urrea-Giraldo 2015:53–54). Thus, eliminating skin tone discrimination in the present day might not erase inequalities by skin tone.

**Endogeneity of Perceived Skin Color**

Finally, the causal arrow may also run in reverse, from socioeconomic outcomes to skin color, as illustrated by the arrows labeled (C) in Figure 1. Scholars typically assume that associations with skin color are due to the effects of skin color on outcomes. However, outcomes might shape how we see and rate another person’s skin color. For example, according to the notion of “money whitening,” dark-
skinned individuals are seen and treated as whiter once they gain upward mobility (Freeman et al. 2011; Harris 1956; Ianni 1960).

Money whitening emphasizes how socioeconomic status shapes perceptions of skin color; however, subtle racial cues, like names, attire, or accent, could also play a role. Garcia and Abascal (2016) experimentally demonstrate that observers rate the same face darker when it is associated with a distinctively Latino name. Their is a conservative test of the reverse causality hypothesis. First, Garcia and Abascal rely on a visual color palette that is, according to Flores and Telles (2012), less sensitive to money whitening than are verbal scales (we return to this issue). Second, their results are based on a single, subtle signal: a name. In the real world, people take in more information about those with whom they interact, including how they talk, dress, and carry themselves. Survey interviewers receive exceptional access to interviewees’ personal information by the time they record their skin color, typically at the end of an interview (for exceptions, see Telles and PERLA [2014] and Villarreal [2010]). All this information is likely to magnify the observed inequality by skin color if disadvantaged or racialized people are seen as darker. As the arrows labeled (C) in Figure 1 show, people with low earnings could be perceived as having darker skin based on their socioeconomic status. Endogeneity makes it even more difficult to interpret skin color stratification as prima facie evidence of skin tone discrimination (arrows (A) in Figure 1).

Assessing Pathways to Skin Color Stratification

We focus on the two primary pathways to skin color stratification—contemporary skin color discrimination and inherited (dis)advantage—and review the methods and evidence used to study them in this section. Addressing the third pathway—reverse causality—is challenging in the absence of experimental data, and it is beyond the empirical scope of this study.

A common approach in the study of contemporary skin tone discrimination relies on multiple regression models. Scholars compare the outcomes of people with different skin tones, controlling for their sociodemographic characteristics, including (when available) measures of their parents’ education and/or occupation. Indicators of parents’ socioeconomic status serve “as present-day proxies for the transmission of advantages and disadvantages from the past” (Keith and Herring 1991:775). To capture parents’ socioeconomic status, scholars commonly use parental education and/or occupation (Bailey, Fialho, and Penner 2016; Branigan et al. 2013; Flores and Telles 2012; Goldsmith et al. 2006, 2007; Gullickson 2005; Keith and Herring 1991; Hill 2000; Hunter 2002; Monk 2014; Murguia and Telles 1996). Only a few studies control for other indicators of family background, like parental income (Frank et al. 2010; Hersch 2008, 2018; Painter et al. 2016) or housing conditions (Goldsmith et al. 2006; Hill 2000).

We are not aware of any U.S.-based study of colorism that has been able to control for an important family background characteristic: parental wealth. To our knowledge, only Telles, Flores, and Urrea-Giraldo (2015) control for parental wealth, although these were supplementary analyses for a subset of Latin American countries (personal communication with Edward Telles, November 10, 2019). Wealth
provides individuals with greater advantages than income, has the potential to last
generations, and is a more pronounced indicator of historical racial inequalities
(Conley 2009; Oliver and Shapiro 2006). Furthermore, wealth is more correlated
across generations than other indicators of family background, such as income,
education, and occupation (Mare 2011).

Having controlled for individual human capital and available indicators of
parental background, scholars attribute the residual association with skin tone to
discrimination. Most scholars acknowledge the role for social origins and past dis-
crimination in shaping present-day outcomes (Bailey et al. 2016; Flores and Telles
2012; Reece 2019; Telles et al. 2015). However, some interpret a significant statistical
effect of skin tone as undermining evidence for inherited (dis)advantage altogether.
For example, in their classic study, Keith and Herring (1991) concluded that dis-
crimination against darker-skinned Blacks was a more “powerful determinant” of
skin color stratification than “parental socioeconomic status” (1991:775).

However, interpreting the residual association between skin color and labor
market outcomes as evidence of differential treatment by skin color is challenging.
Even when we control for indicators of family background, unobserved differences
across families might be correlated with both skin color and labor market outcomes,
confounding their relationship. (These unobserved characteristics are illustrated by
the dashed line in Figure 1.)

Dealing with Unobserved Heterogeneity

Scholars can use two strategies to account for unobserved background character-
istics: experiments and sibling fixed-effects analyses. Experiments are the gold
standard for establishing discrimination because random assignment ensures that
any difference observed is the outcome of unequal treatment (or random chance)
(Pager and Shepherd 2008). However, using experiments to study skin tone discrim-
ination in labor markets has proved challenging because of difficulties in signaling
and manipulating skin color, for example, on resumes. In-person audits face other
challenges related to the feasibility of matching testers who differ only in terms
of skin tone. Indeed, only a handful of experiments have examined skin tone dis-
crimination in labor markets around the world (Dias 2020; Saeed, Maqsood, and
Rafique 2019). In the United States, to our knowledge, there is only one laboratory
experiment in which undergraduates evaluated the resume of a Black applicant for
a marketing position (Harrison and Thomas 2009). External validity represents a
limitation of laboratory-based studies, especially those based on student samples.

Sibling fixed-effects models are another strategy for addressing unobserved
background characteristics, in this case, using observational data; this is the strategy
we use in this article. Sibling fixed-effects models provide for a rigorous test of the
causal link between individual characteristics and life chances by netting out the
effects of shared genes, household and neighborhood environment, and inheritance.
Scholars of stratification and intergenerational mobility have long analyzed sibling
data to gain insight into the effect of “global family background” on life chances
(Conley and Glauber 2007:134).
Sibling samples with skin color measures are rare. Nevertheless, some sibling analyses of skin color stratification exist. The first sibling studies of colorism originated in Brazil, where scholars examined differences between siblings who identified with different color/racial categories (Francis-Tan 2016; Marteleto and Dondero 2016; Rangel 2015; Telles 2004). For example, the first study on this topic by Telles (2004) found that White siblings had better educational outcomes than their non-White siblings based on 1991 census data. In the United States, a handful of studies examine the association between outcomes and skin color differences across siblings. In terms of income and earnings, Kizer (2017b) finds that, among Blacks, Latinos, and Asian Americans, darker-skinned siblings have lower household incomes than lighter-skinned siblings. Findings are mixed with respect to educational attainment. Ryabov (2016) finds that darker-skinned Asian Americans and Latinos are less likely to complete high school and transition to college than lighter-skinned siblings. However, Kizer (2017b) finds skin color to be a significant predictor of college completion among Asian American women but not among Blacks and Latinos. Finally, looking beyond socioeconomic outcomes, Kizer (2017a) finds that darker-skinned Black, Latino, and Asian American men are more likely to experience arrest than their lighter-skinned siblings, and Laidley et al. (2019) find that dark skin is associated with hypertension among Black and Latino siblings.

Sources of Sibling Skin Color Data

To our knowledge only two U.S. sibling data sets have a measure of skin color: the National Longitudinal Study of Adolescent to Adult Health (Add Health) and NLSY97. Both data sets use interviewer-rated skin tone, which is appropriate for the study of discrimination because discrimination hinges on how people are perceived by others (Roth 2016; Telles and Lim 1998). All previous U.S.-based sibling studies of skin color stratification rely on Add Health, which we do not use. Add Health interviewers rated respondents’ skin tones at the end of interviews using a five-point scale anchored to the following verbal categories: “black,” “dark brown,” “medium brown,” “light brown,” and “white.” They did not receive visual aids to guide their ratings. We rely instead on NLSY97, which uses a 10-point visual palette to capture skin color. Like Add Health interviewers, NLSY97 interviewers rated respondents’ skin tones at the end of interviews.

The NLSY97 measure improves on Add Health’s measure in several ways. First, measures that rely on visual palettes—as opposed to verbal scales—might be less sensitive to money whitening, that is, reverse causality from socioeconomic outcomes to perceived skin color (Flores and Telles 2012). Second, some of the verbal anchors on Add Health’s scale (e.g., “black” and “white”) correspond to racial categories, rather than commonly observed skin tones. As a result, Add Health skin tone ratings likely reflect interviewers’ social understandings of racial classification (who is, e.g., “Black” or “White”), not just skin color.

Third, NLSY97’s 10-point scale can reveal more variation than Add Health’s five-point scale, which is especially important for sibling analyses. On this issue, Bucca (2019) writes, “one fundamental challenge when studying the effect of skin color on
socioeconomic outcomes [is] the limited heterogeneity that remains after accounting for race" (P. 12). In fact, he finds through a variance decomposition analysis of Add Health that just 20 percent of skin tone variation is found within racial categories; even less (less than 11 percent) is found within families. By contrast, more than three in five Black and Latino siblings in NLSY97 have a different skin tone than one or more of their siblings, a finding to which we return in the section on Descriptive Statistics. These advantages notwithstanding, all measures of skin color have limitations (see Dixon and Telles [2017] for a review). For example, both visual and verbal scales are sensitive to endogeneity and interviewer effects, and they exhibit moderate levels of inter-rater reliability (Campbell et al. 2020; Garcia and Abascal 2016; Hannon and DeFina 2020).

Data and Methods

Data

This study contributes to the empirical study of skin color stratification by using a rich set of family indicators; a fine-grained, visual skin color measure; and sibling fixed-effects models to examine the role of both inherited (dis)advantage and contemporary color-based discrimination for labor market outcomes. We use data from NLSY97, a nationally representative cohort study of youth born between 1980 and 1984. It consists of a cross-sectional sample of respondents plus a supplemental oversample of Blacks and Latinos.

Our analyses rely on two analytic samples: (1) a pooled sample of self-identified Black and Latino respondents who participated in at least one of the waves when skin color was recorded (2008, 2009, or 2010)\(^5\) and (2) a subsample of Black and Latino respondents with siblings who identified with the same race/ethnicity. The pooled sample (1) consists of 2,155 Black and 1,718 Latino respondents (3,873 total). The sibling subsample (2) comprises those 819 Black respondents and 745 Latino respondents (1,564 total) with at least one full or half same-race/ethnicity sibling in NLSY97.\(^6\) Because of the sampling design of NLSY97, all sibling respondents were living in the same household during the initial round. These respondents were distributed across 717 unique households. Of these households, 84.14 percent contain two sibling respondents. The maximum number of sibling respondents per household is five; this describes just two households (less than one percent).

Analytic Strategy

The following analyses unfold in two stages. In the first stage, we characterize the portion of the association between skin color and labor market outcomes that is accounted for by indicators of family background. We use ordinary least squares (OLS) regressions to model labor market outcomes first as a function of respondent skin tone and individual characteristics, then as a function of respondent skin tone, individual characteristics, and family background characteristics. These models are estimated for the pooled sample of 3,873 Black and Latino respondents. Standard errors account for clustering at the household level.\(^7\)
Our goal is to gauge the magnitude reduction in skin color’s statistical effect once we control for family background characteristics. If an outcome were uncorrelated with other correlates of skin tone, conditional on all other covariates in the model, then the statistical effect of skin tone would be an unbiased estimate of its true causal effect. This assumption is unverifiable and implausible. However, it is worth stressing that, when compared with prior work, we account for a larger set of family background indicators, including parental wealth.

In the second stage, we use sibling fixed-effects regressions to model the labor market outcomes of siblings as a function of differences in their skin tones, individual characteristics that vary between siblings, and a family fixed effect (intercept) that captures all family characteristics that are common across siblings. The standard errors for the fixed-effects regressions are also adjusted for clustering at the household level. These models are estimated for the subsample of 1,564 Black and Latino respondents with one or more siblings in NLSY97.

To interpret the statistical effect of skin tone as evidence of its causal effect, we must assume that unobserved factors that simultaneously affect both skin tone and our outcomes are invariant across siblings. Put differently, we must assume that the way in which families distribute resources between their children is uncorrelated with each child’s skin tone. There is scant evidence on this in the United States, an issue to which we return in the Conclusion.

**Key Independent Variable and Dependent Variables**

*Key independent variable.* Interviewers rated respondents’ skin tone using a 10-point visual palette where 1 represents the lightest color and 10 represents the darkest. Skin tone was initially recorded in round 12 (2008). In rounds 13 (2009) and 14 (2010), interviewers rated the skin tone of respondents whose skin tones were not recorded previously. Interviewers rated skin tone at the end of in-person interviews. As a guide, interviewers relied on a memorized “color card” that illustrates the skin tones associated with each number. The questionnaire design and color card provided conflicting information regarding whether albino respondents were to be coded as 0 or 1 (personal communication with National Longitudinal Survey User Services, August 22, 2019). We therefore recoded cases \( n = 15 \) that were assigned a color of 0 as 1.

*Dependent variables.* We examine three labor market outcomes: employment status, earnings, and occupational prestige. To mitigate noise associated with one-off measurements, we examine three-year averages for these variables based on rounds 14 through 16, which were collected in 2010 (the last year in which skin color was recorded), 2011, and 2013. Supplementary analyses confirm that results are similar using only 2010 values for employment, earnings, and occupational prestige.

Interviewers contacted respondents every week to obtain their employment status. Following earlier analyses of employment in the National Longitudinal Surveys of Youth (NLSY) (e.g., Western and Beckett 1999), employment status is represented by the proportion of weeks observed in a year when a respondent
worked 20 hours or more. Twenty hours correspond to part-time employment; the results are substantively similar using 10- or 30-hour cutoffs.

Earnings are represented by the natural logarithm of total employment income in the past year. This includes income received from “wages, salary, commissions, or tips from all jobs before deductions.” We focus on employment income because this source of income is more plausibly affected by skin tone discrimination in the labor market than are other sources of income, such as investment or family income.

Our final dependent variable is occupational prestige. We assigned status scores to civilian and military occupations. Scores are drawn from the International Socio-Economic Index of Occupational Status (ISEI-08). ISEI-08 is one of the most recent occupational scales, and, in contrast to earlier scales, it takes into account data from both men and women. Status scores in the data range from 10 for dishwashers to 89 for physicians and surgeons.

Control Variables: OLS Regression Models

Individual characteristics. All OLS models control for respondent age, marital status, and cohabitation status in 2010, as well as gender, nativity (U.S.-born citizen or other), and race/ethnicity (Latino or Black). Respondents who identified as “Hispanic or Latino” of any race are classified as Latino. In addition, analyses based on the pooled sample control for the presence of full or half siblings in NLSY97. We do not control for respondents’ educational attainment because education likely mediates the effect of family background on labor market outcomes. As a result, it is possible that we are overestimating the statistical effect of skin tone and underestimating the statistical effect of family background.

Family background characteristics. The second set of OLS models control for family background characteristics, which were recorded in the first round of the NLSY97 (1997). These characteristics are of two types: characteristics shared across parents in respondents’ households (hereafter “household characteristics”) and characteristics of individual parents (hereafter “parent characteristics”).

Household characteristics include household income, government aid receipt, household net worth, parents’ homeownership, and residence with both biological parents. Household income represents gross household income in 1997. Household net worth represents the difference between total assets and total debts. In the regressions, the coefficients for parents’ income and net worth reflect the statistical effect of a $10,000 difference. Parents’ homeownership takes a value of 1 if the responding parent or their spouse/partner owns the house or apartment where the respondent lives. Government aid receipt takes a value of 1 if the responding parent received government aid (e.g., food stamps) between the age of 18 (or the birth of the oldest respondent) and the time of the survey. A binary variable represents whether a respondent was living with both biological parents in 1997. Controlling for parents’ marital status, instead of whether the respondent was living with both biological parents, yields substantively similar results.

Parent characteristics include nativity, mother’s education, and father’s education. Parents’ nativity takes a value of 1 if at least one of the respondent’s parents (biological or residential) was born outside the United States. Mother’s education
and father’s education are captured by two variables, each. For father’s education, for example, the first variable reflects the highest grade completed by a respondent’s father. This variable takes a value of 0 if the respondent does not have educational information for either a biological or residential father. In this case, a second variable (“Father’s education missing”) takes a value of 1. This strategy, which treats the absence of a parent’s information as meaningful, is modeled after other analyses of the NLSY (e.g., Bloome and Western 2011).

Control Variables: Sibling Fixed-Effects Regressions

The sibling fixed-effects regressions control for the following individual characteristics: skin tone, gender, age, cohabitation, and marital status. They do not control for respondent race/ethnicity (Latino or Black), nativity, or the presence of full or half siblings in the NLSY97 because these variables are invariant across siblings; that is, siblings take the same values on these variables. Nor do the sibling fixed-effects regressions control for family background characteristics. Predictably, household characteristics are invariant across siblings, and parent characteristics show extremely limited variation across siblings.

Missing Data and Multiple Imputation

To conserve statistical power and mitigate bias, we multiply imputed missing values of independent and dependent variables. Dependent variables were used in the imputation model, and imputed values of these variables were retained. We implemented multiple imputation by chained equations using the “mice” package in R. Predictive mean matching ensures that imputed values are plausible, that is, observed in nonmissing data. Following recommendations by White, Royston, and Wood (2011), we generated 50 imputed data sets, then used Rubin’s rules to pool parameter estimates. Results are substantively similar for the subset of respondents with complete data (Tables A2 and A3 in the online supplement).

Values were imputed at the respondent level, not the household level, meaning that some siblings may take different imputed values for household variables, like parents’ income. Disregarding dependencies in the data, in essence treating all variables as “just another variable,” is a common approach that works well in linear models (von Hippel 2007; White et al. 2011). The alternative—to enforce dependencies after imputation—can introduce biases stemming from the transformation of imputed variables.

Results

Descriptive Statistics

Figure 2 reports the distribution of skin tones for Black and Latino respondents in NLSY97. The picture for both Black and Latino respondents, but especially for Blacks, is one of substantial variation: nontrivial numbers of Black respondents are observed at every point in the 10-point scale. Variation is also considerable within
our subsample of Black and Latino siblings. In this subsample, 63.78 percent of all respondents have at least one full or half sibling in NLSY97 whose skin tone differs from theirs. Among these respondents, the average difference between their skin tone and their sibling’s is 0.93 points on a 10-point scale. A 0.93-point difference in skin tone would probably be noticeable to many people, including Whites (Garcia and Abascal 2016; Hannon et al. 2021; Roth 2012; Wilder 2010). Table A1 in the online supplement reports additional descriptive statistics for Black and Latino respondents.

### The Role of Family Background

Here, we examine the associations between skin tone and labor market outcomes in order to characterize the portion of these associations accounted for by family background. We first consider the association with employment. Model P1 (Table 1) reports the results of a linear regression predicting the proportion of weeks a respondent was employed as a function of their skin color and demographic characteristics, including the respondent’s race/ethnicity (Black or Latino) and whether the respondent has at least one full or half sibling in NLSY97. Skin color is significantly, negatively associated with employment ($p < 0.10$). On average, respondents who are one point darker on a 10-point scale were employed between one-half and one week less over the course of one year.

What portion of this association is accounted for by the advantages transmitted by the families of lighter-skinned respondents? Model P2 (Table 1) adjusts for important indicators of family background: household income, government aid receipt, household net worth, parents’ homeownership, residence with both...
Table 1: Labor market outcomes by skin tone, covariates: Blacks and Latinos with full or half siblings in NLSY97

<table>
<thead>
<tr>
<th>Individual characteristics</th>
<th>Employment (Model P1)</th>
<th>Employment (Model P2)</th>
<th>Yearly earnings (log) (Model E1)</th>
<th>Yearly earnings (log) (Model E2)</th>
<th>Occupational prestige (Model O1)</th>
<th>Occupational prestige (Model O2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin tone</td>
<td>-0.007*</td>
<td>-0.005</td>
<td>-0.064*</td>
<td>-0.046</td>
<td>-0.246*</td>
<td>-0.136</td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.033)</td>
<td>(0.032)</td>
<td>(0.127)</td>
<td>(0.121)</td>
</tr>
<tr>
<td>Latino (vs. Black)</td>
<td>0.038†</td>
<td>0.034*</td>
<td>0.336†</td>
<td>0.321†</td>
<td>1.230*</td>
<td>1.493†</td>
</tr>
<tr>
<td></td>
<td>(0.018)</td>
<td>(0.018)</td>
<td>(0.154)</td>
<td>(0.159)</td>
<td>(0.643)</td>
<td>(0.623)</td>
</tr>
<tr>
<td>Female</td>
<td>-0.038†</td>
<td>-0.032†</td>
<td>-0.403†</td>
<td>-0.362†</td>
<td>3.073†</td>
<td>3.247†</td>
</tr>
<tr>
<td></td>
<td>(0.012)</td>
<td>(0.012)</td>
<td>(0.108)</td>
<td>(0.106)</td>
<td>(0.448)</td>
<td>(0.434)</td>
</tr>
<tr>
<td>Age</td>
<td>0.008*</td>
<td>0.008*</td>
<td>0.037</td>
<td>0.035</td>
<td>0.446†</td>
<td>0.429†</td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.037)</td>
<td>(0.037)</td>
<td>(0.154)</td>
<td>(0.151)</td>
</tr>
<tr>
<td>Cohabiting</td>
<td>0.045†</td>
<td>0.054†</td>
<td>0.194</td>
<td>0.277†</td>
<td>-0.853</td>
<td>-0.322</td>
</tr>
<tr>
<td></td>
<td>(0.016)</td>
<td>(0.016)</td>
<td>(0.140)</td>
<td>(0.137)</td>
<td>(0.578)</td>
<td>(0.559)</td>
</tr>
<tr>
<td>Married</td>
<td>0.031†</td>
<td>0.024</td>
<td>0.588†</td>
<td>0.539†</td>
<td>1.682†</td>
<td>1.522†</td>
</tr>
<tr>
<td></td>
<td>(0.015)</td>
<td>(0.015)</td>
<td>(0.123)</td>
<td>(0.121)</td>
<td>(0.544)</td>
<td>(0.519)</td>
</tr>
<tr>
<td>U.S.-born citizen</td>
<td>-0.048†</td>
<td>-0.069†</td>
<td>-0.320†</td>
<td>-0.393*</td>
<td>-1.748†</td>
<td>-1.431</td>
</tr>
<tr>
<td></td>
<td>(0.016)</td>
<td>(0.028)</td>
<td>(0.136)</td>
<td>(0.214)</td>
<td>(0.649)</td>
<td>(1.060)</td>
</tr>
<tr>
<td>Full sibling(s) in NLSY97</td>
<td>-0.026*</td>
<td>-0.020</td>
<td>-0.212*</td>
<td>-0.136</td>
<td>-1.178†</td>
<td>-0.510</td>
</tr>
<tr>
<td></td>
<td>(0.013)</td>
<td>(0.013)</td>
<td>(0.115)</td>
<td>(0.113)</td>
<td>(0.465)</td>
<td>(0.452)</td>
</tr>
<tr>
<td>Half sibling(s) in NLSY97</td>
<td>-0.125†</td>
<td>-0.087†</td>
<td>-0.519</td>
<td>-0.224</td>
<td>-2.705†</td>
<td>-1.361</td>
</tr>
<tr>
<td></td>
<td>(0.036)</td>
<td>(0.037)</td>
<td>(0.332)</td>
<td>(0.331)</td>
<td>(1.244)</td>
<td>(1.138)</td>
</tr>
<tr>
<td>Family background (1997)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household income [$10K]</td>
<td>0.002</td>
<td>0.064†</td>
<td>0.383†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
<td>(0.029)</td>
<td>(0.133)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Received government aid</td>
<td>-0.024</td>
<td>-0.111</td>
<td>-1.085*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.015)</td>
<td>(0.128)</td>
<td>(0.572)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household net worth [$10K]</td>
<td>0.000</td>
<td>0.002</td>
<td>0.058</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.008)</td>
<td>(0.046)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents own home</td>
<td>0.079†</td>
<td>0.505†</td>
<td>1.212†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.016)</td>
<td>(0.130)</td>
<td>(0.545)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resided with both biological parents</td>
<td>0.041†</td>
<td>0.259†</td>
<td>1.346†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.015)</td>
<td>(0.129)</td>
<td>(0.546)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immigrant parent(s)</td>
<td>0.001</td>
<td>0.215</td>
<td>2.379†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.026)</td>
<td>(0.198)</td>
<td>(0.966)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother’s education</td>
<td>0.006†</td>
<td>0.050†</td>
<td>0.520†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.003)</td>
<td>(0.023)</td>
<td>(0.100)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother’s education missing</td>
<td>0.026</td>
<td>0.330</td>
<td>3.666†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.039)</td>
<td>(0.343)</td>
<td>(1.362)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father’s education</td>
<td>0.005*</td>
<td>0.059†</td>
<td>0.382†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.003)</td>
<td>(0.022)</td>
<td>(0.098)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother’s education missing</td>
<td>0.024</td>
<td>0.394</td>
<td>3.692†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.033)</td>
<td>(0.290)</td>
<td>(1.176)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.500†</td>
<td>0.343†</td>
<td>8.134†</td>
<td>6.436†</td>
<td>27.248†</td>
<td>14.091†</td>
</tr>
<tr>
<td></td>
<td>(0.121)</td>
<td>(0.126)</td>
<td>(1.044)</td>
<td>(1.089)</td>
<td>(4.398)</td>
<td>(4.597)</td>
</tr>
</tbody>
</table>

N = 3,873 3,873 3,873 3,873 3,873 3,873
R-squared = 0.026 0.064 0.028 0.062 0.045 0.138

Notes: Standard errors adjusted for clustering at the household level. * p < 0.10; † p < 0.05 (two-sided).
biological parents, parents’ nativity, and parents’ education (henceforth, we refer to these variables as “seven indicators of family background”). Several indicators are associated with employment in predictable ways: net of other factors, employment is significantly, positively associated with parents’ homeownership ($p < 0.001$), residing with both biological parents ($p < 0.01$), mother’s education ($p < 0.05$), and father’s education ($p < 0.10$).

Moreover, holding these differences constant, skin tone is no longer significantly associated with the proportion of weeks employed. And, although the point estimate of the coefficient remains negative, it is smaller in magnitude. Specifically, the seven indicators of family background account for 29.54 percent of the association between skin tone and employment. To assess whether the reduction in the size of the coefficient is significant, we follow the procedure proposed by Yan, Aseltine, and Harel (2013) for comparing coefficients that are common to nested models based on clustered data. Specifically, for each imputed data set, we calculate a $t$ statistic for the change in the size of the skin tone coefficient between models P1 and P2 when these models are estimated using generalized estimating equations (GEEs). The mean $t$ statistic across imputed data sets is $-3.33$, which corresponds to a significant reduction in the size of the skin tone coefficient ($p < 0.001$).

Next, we consider the association between skin tone and earnings. Model E1 (Table 1) reports the results of a linear regression predicting respondents’ earnings (logged) as a function of their skin color and basic demographic characteristics. Skin color is significantly, negatively associated with earnings ($p < 0.10$). On average, respondents who are one point darker on a 10-point scale earned 6.24 percent less in one year.

Model E2 (Table 1) additionally adjusts for seven indicators of family background. Net of other factors, earnings are significantly, positively associated with household income ($p < 0.05$), parents’ homeownership ($p < 0.001$), residing with both biological parents ($p < 0.05$), mother’s education ($p < 0.05$), and father’s education ($p < 0.01$).

Holding the seven indicators of family background constant, moreover, skin tone is not significantly associated with earnings, and the point estimate of the coefficient is smaller in magnitude. Together, the seven indicators of family background account for 28.74 percent of the association between skin tone and earnings (on the log scale). To assess whether this reduction is significant, we follow the procedure described earlier. The mean $t$ statistic across imputed data sets is $-2.94$, which corresponds to a significant reduction in the size of the skin tone coefficient ($p < 0.01$).

Finally, we consider the association between skin tone and occupational prestige. Model O1 (Table 1) reports the results of a linear regression predicting occupational prestige as a function of respondent skin color and basic demographic characteristics. Skin color is significantly, negatively associated with occupational prestige ($p < 0.10$). On average, respondents who are one point darker on a 10-point scale are employed in civilian or military occupations that are 0.25 points lower on a 100-point scale.

Model O2 (Table 1) additionally adjusts for seven indicators of family background. Many of these indicators are significantly associated with occupational
prestige. Occupational prestige is significantly, positively associated with household income ($p < 0.01$), parents’ homeownership ($p < 0.05$), residing with both biological parents ($p < 0.01$), immigrant parent(s) ($p < 0.05$), mother’s education ($p < 0.001$), and father’s education ($p < 0.001$). Occupational prestige is also negatively associated with government aid receipt ($p < 0.10$).

Holding family background constant, the point estimate on the skin tone coefficient continues to be negative, but it is not significant. Additionally, the magnitude of the coefficient has dropped by 44.49 percent. The reduction in the size of the skin tone is significant ($t = −2.52, p < 0.05$).

**Heterogeneity by Race**

Are these results different across Black and Latino respondents? To examine this, first, we reestimate models P1 and P2 separately for Black and Latino respondents (Table A5 in the online supplement). Controlling for individual characteristics but not family background characteristics, skin tone is negatively associated with employment among Blacks, but the association does not reach significance. Among Latinos, skin tone is significantly, negatively associated with employment ($p < 0.05$). Controlling for both individual and family background characteristics, skin tone remains a significant predictor of employment among Latinos ($p < 0.10$), but its statistical effect has fallen in terms of both size (by 19.16 percent) and significance.

Next, we reestimate models E1 and E2 predicting earnings separately for Black and Latino respondents (Table A6 in the online supplement). Controlling for individual characteristics but not family background characteristics, skin tone is negatively associated with earnings among Blacks, but the association does not reach significance. Among Latinos, skin tone is significantly, negatively associated with employment ($p < 0.10$). Controlling for both individual and family background characteristics, the statistical effect of skin tone is reduced by 26.21 percent and is no longer statistically significant.

Finally, we reestimate models O1 and O2 predicting occupational prestige separately for Black and Latino respondents (Table A7 in the online supplement). Controlling for individual characteristics but not family background characteristics, skin tone is significantly, negatively associated with occupational prestige among Blacks ($p < 0.10$). Controlling for both individual and family background characteristics, the statistical effect of skin tone is reduced by 43.93 percent, and it is no longer statistically significant. Among Latinos, skin tone is negatively associated with occupational prestige, but the association does not reach significance, controlling for individual characteristics alone or in combination with family background characteristics.

In sum, modeling labor market outcomes separately for Black and Latino respondents tells a broadly similar story: where skin tone is significantly associated with outcomes, controlling for family background reduces the association in both magnitude and significance.
Table 2: Labor market outcomes by skin tone, covariates, sibling fixed effects: Blacks and Latinos with full or half siblings in NLSY97

<table>
<thead>
<tr>
<th></th>
<th>Employment Model P3</th>
<th>Yearly earnings (log) Model E3</th>
<th>Occupational prestige Model O3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin tone</td>
<td>−0.006 (0.009)</td>
<td>−0.065 (0.077)</td>
<td>−0.074 (0.275)</td>
</tr>
<tr>
<td>Female</td>
<td>−0.048* (0.024)</td>
<td>−0.450† (0.201)</td>
<td>2.144† (0.812)</td>
</tr>
<tr>
<td>Age</td>
<td>0.014* (0.008)</td>
<td>0.119* (0.065)</td>
<td>0.306 (0.262)</td>
</tr>
<tr>
<td>Cohabiting</td>
<td>0.083† (0.033)</td>
<td>0.374 (0.305)</td>
<td>1.777* (1.027)</td>
</tr>
<tr>
<td>Married</td>
<td>0.000 (0.032)</td>
<td>0.350 (0.256)</td>
<td>0.660 (0.989)</td>
</tr>
<tr>
<td>Sibling fixed effects</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>N</td>
<td>1,564</td>
<td>1,564</td>
<td>1,564</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.021</td>
<td>0.016</td>
<td>0.018</td>
</tr>
</tbody>
</table>

Notes: Standard errors adjusted for clustering at the household level. *p < 0.10; †p < 0.05 (two-sided).

Results of Sibling Fixed-Effects Models

The findings of the previous analyses suggest that basic indicators of family background account for a significant portion of the associations between skin tone and employment, earnings, and occupational prestige. However, the remaining associations with employment, earnings, and occupational prestige may be due to other, unobserved family background characteristics rather than interpersonal contemporary discrimination. To explore this, we model the labor market outcomes of siblings as a function of differences in their skin tones, other sibling differences, and a fixed effect (intercept) that captures all family background characteristics that are common across siblings. These analyses are based on the subsample of Black and Latino respondents (N = 1, 564) with coethnic full or half siblings who were also respondents in NLSY97.

First, we consider the association between skin tone and employment. Model P3 (Table 2) predicts the proportion of weeks sibling respondents were employed as a function of their skin color, sibling-varying characteristics (gender, age, cohabitation, and marital status), and household fixed effects. Coefficients should be interpreted as the difference in the proportion of weeks respondents were employed corresponding to a unit difference between each predictor. If skin color is a significant, negative predictor of employment in this model, it implies that skin color is causally related to employment, presumably through interpersonal discrimination. In model P3 (Table 2), skin tone is negatively associated with proportion of weeks employed, but the association is not significant (p = 0.50).

Next, we consider the association between skin color and earnings. In model E3 (Table 2), skin tone is negatively associated with earnings, but as before, the
association is not significant ($p = 0.40$). Finally, in model O3 (Table 2), skin tone is negatively associated with occupational prestige, but as before, the association is not significant ($p = 0.79$).

**Heterogeneity by Race**

To examine heterogeneity by race/ethnicity, first, we reestimate models P3, E3, and O3 predicting employment, earnings, and occupational prestige separately for Black and Latino respondents (Table A9 in the online supplement). With respect to employment (model P3), earnings (model E3), and occupational prestige (model O3), results are similar across Black and Latino respondents: skin color does not significantly predict labor market outcomes, net of sibling-varying characteristics and household fixed effects.²³

**Summary of Findings**

Skin color and labor market outcomes are linked through inherited (dis)advantage, not only contemporary discrimination. Indicators of family background account for 29 to 44 percent of the associations between skin tone and employment, earnings, and occupational prestige. In a pooled sample of Black and Latino respondents, skin tone is negatively associated with employment, earnings, and occupational prestige, adjusting for basic sociodemographic characteristics. On average, respondents who are one point darker on a 10-point scale work about one week less per year, earn 6.24 percent less, and are in occupations that are less prestigious by 0.25 points (on a 100-point scale). Across our sibling fixed-effects models, darker skin tone is associated with worse labor market outcomes, although these associations do not achieve significance. The lack of significance in the sibling fixed-effects models may reflect insufficient statistical power to detect skin color associations of modest magnitudes like those observed. It is also possible that unmeasured family characteristics,²⁴ such as birth order, interact with skin color and affect the way parents treat their children. If that is the case, sibling fixed-effects models might underestimate the role of family background.

**Conclusion**

Studies have repeatedly uncovered an association between skin tone and myriad outcomes, including labor market outcomes. This article addressed a further question: through what pathways are skin color and labor market outcomes linked? We presented a theoretical framework (Figure 1) that synthesizes three, critical pathways: inherited (dis)advantages passed down through families, present-day discrimination based on skin tone, and reverse causality from outcomes to perceived skin tone. Then, we explored the pathways of inherited (dis)advantage and discrimination using 2008-to-2013 rounds of NLSY97 to examine employment, earnings, and occupational prestige among Blacks and Latinos. NLSY97 provides a visual measure of skin tone and an extensive set of family background indicators, allowing us to build on prior empirical work.
In the first stage, we sought evidence of skin tone differences and inherited (dis)advantage in labor markets. Darker skin color is associated with worse labor market outcomes for Black and Latino respondents, adjusting for basic sociodemographic characteristics. Indicators of family background account for between 29 and 44 percent of skin color’s associations with employment, earnings, and occupational prestige. Some or all of the residual associations with skin tone could stem from unobserved confounders related to family background.

Therefore, in the second stage, we used sibling fixed-effects regressions to model labor market outcomes for Black and Latino siblings, accounting for family background. Darker-skinned siblings attain worse labor market outcomes than their lighter-skinned siblings, but these associations are not statistically significant. To put these results in context, we know that darker-skinned Blacks and Latinos report more discrimination than their lighter-skinned coethnics (Monk 2015; Pew Research Center 2021; Santana 2018). And, in high-stakes situations, such as in encounters with the criminal justice system, differential treatment based on skin tone could have life-changing consequences (Eberhardt et al. 2006; King and Johnson 2016; Kizer 2017a; Monk 2019; Viglione et al. 2011).

That skin tone is nonsignificant in the sibling fixed-effects models does not suggest that lighter- and darker-skinned Blacks and Latinos attain similar labor market outcomes. Nor should our findings be interpreted as evidence that contemporary skin tone discrimination plays no role or a smaller role than inherited (dis)advantage in producing skin color stratification. Our results do not speak to the relative size of the effects played by family background versus skin tone discrimination in labor market outcomes. More broadly, absence of evidence is not evidence of absence, especially in the case of modest effect sizes like those observed.

Our study has some limitations. Sibling fixed-effects models assume that siblings with different skin colors obtain similar resources from their parents. The few studies to look at this issue in the United States do not reveal a consistent pattern of preferential treatment by skin tone within families (Drake and Cayton 1945; Landor et al. 2013; Taylor, Desjardin, and Robles 2016; Tharps 2016). Furthermore, cohort studies, such as the NLSY97, tell us how a particular cohort (in our case, those born from 1980 to 1984) is doing at a particular time. In supplementary analyses predicting labor market outcomes in 2019, instead of between 2010 and 2013, we did not find that the results changed as respondents aged. Additional research is needed on these topics.

Short of experimental evidence, however, sibling fixed-effects models represent our next best hope for uncovering evidence of contemporary color-based discrimination, unbiased by confounders. This is important for theoretical and practical reasons. Our findings direct attention to inherited (dis)advantage as one pathway through which skin color is linked to socioeconomic outcomes. Skin color is one manifestation of the (dis)advantages that Blacks and Latinos inherit from their families, whether these (dis)advantages are due to color- or race-based hierarchies faced by their ancestors. Household income, net worth, and parents’ educational attainment are common proxies of family background, but they are more directly correlated with material, as opposed to symbolic, resources. Theoretically, the
advantages we inherit from our family also comprise social, cultural, and symbolic forms of capital that help us secure benefits in the workplace and other institutions.

Our findings underscore the importance of conceptualizing colorism in structural and historical terms. This means thinking of skin color stratification as the result not simply of present-day discrimination but also of cumulative, multigenerational inequalities. This explanation looks to the past and to a deeper, more intransigent understanding of how inequalities are reproduced. There is immense value in eradicating present-day discrimination and ensuring equal access to rights and opportunities. But, by drawing attention to the structural and historical roots of skin color stratification, our findings make clear that were skin tone discrimination to disappear today, we would still see lighter- and darker-skinned Blacks and Latinos achieving different outcomes through the inertia of inherited (dis)advantage.

Indeed, conceptualizing skin color in structural and historical terms carries implications for policy design. Traditionally, when people think of skin tone discrimination, they think about individual attitudes and behaviors that favor individuals with lighter skin. Designing interventions based on this understanding of colorism might lead us to focus on changing individuals and organizations through, for example, awareness campaigns and anti-bias training. However, conceptualizing colorism in structural terms requires that we think of other policy interventions. Improving the socioeconomic outcomes of dark-skinned Blacks and Latinos will require policies that promote the social and economic well-being of families so that they can pass on more resources to their children.

We look forward to studies that attempt to disentangle the pathways through which skin color is linked to well-documented as well as novel outcomes—including educational achievement, dating, marriage, residential segregation, and criminal justice contact. Future work would also do well to investigate how skin color stratification varies by gender and for other ethnic and racial groups who were beyond the immediate scope of this research. Moving forward, research and policy should give requisite weight to a structural, historical understanding of phenotypic stratification. Our findings suggest that skin color stratification is deeply rooted in inequalities that have been reproduced through centuries of unequal treatment.

Notes

1 Our term is a simplification inspired by Hill’s (2002) term: “ancestrally accumulated disadvantage.”

2 Recent European ancestry might be more common among Latinos from countries that encouraged European immigration in the 1800s and 1900s to whiten their populations (Hernández 2013).

3 See also Hill (2000:1444).

4 By contrast, self-rated skin color can be conceptualized as a manifestation of internalized social status that is better suited to the study of subjective outcomes (Monk 2015). Measures of skin tone taken with a spectrophotometer, usually from the underarm, may not be socially meaningful, in part because we perceive facial skin tone (Campbell et al. 2020).
We refer to survey rounds based on the first year in which data were collected (e.g., we refer to round 14, fielded in 2010 and 2011, as the 2010 round).

This excludes seven respondents who did not identify with the same race/ethnicity as any of their siblings. This also excludes 18 respondents who reported another respondent as their sibling but for whom the other respondent did not mutually report a sibling relationship.

Results based on nonadjusted standard errors are substantively similar.

Interviewer race is associated with ratings of respondent skin tone. Controlling for interviewer race, however, does not substantively change the results of our analyses.

Starting in 2011, NLSY97 moved to biannual surveys; that is, the survey following the 2011 round was fielded starting in 2013.

To conserve observations, we assigned dollar amounts to midpoint values based on the binned earnings variable (T6055600), rather than the exact earnings variable (T6055500).


Occupation was recorded for respondents with a valid employer. For respondents who were not interviewed in a certain round, we do not know who did not have a valid employer, that is, which respondents would have legitimately skipped the occupation item. We therefore impute occupation for all respondents in the analytic sample (N = 3,873) with missing values for this variable. For models based on complete cases, see Tables A2 and A3 in the online supplement.

Reported by the responding parent, if the respondent was not independent, or by the respondent, if the respondent was independent and the responding parent did not report assets and debt.

The highest reported grade for respondents with both a biological and a residential father.

Retaining these values conserves statistical power and does not produce substantially more biased or less efficient estimates if a sufficient number of data sets is generated (Young and Johnson 2010).

For respondents with more than one sibling in NLSY97, this figure corresponds to the difference between their skin tone and the average skin tone of their siblings.

In supplementary analyses, we treat skin color as a five-point categorical variable, rather than as a continuous variable, to explore whether the statistical effect of skin color is nonlinear. The results are consistent with a linear association between skin color and employment and earnings.

GEEs can be used to estimate the parameters of a generalized linear model based on clustered data because estimates are not sensitive to the specification of the error structure.

Earnings might be confounded with employment. In Table A4 of the online supplement, we reestimate models E1 and E2 controlling for the proportion of weeks a respondent worked 20 hours or more. Results are substantively similar.
Because earnings might be confounded with employment, in Table A8 of the online supplement, we reestimate model E3 controlling for the proportion of weeks a respondent worked 20 hours or more. Results are substantively similar.

Results from the sibling fixed-effects regressions are similar for the subset of respondents with at least one full sibling in NLSY97. This is valuable because a family fixed effect is an imperfect proxy for shared family endowment, especially for siblings with different biological parents.

In supplementary sibling fixed-effects analyses, we did not find evidence that the effect of skin color was moderated by sibling gender.

References


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