The Economics of Identity and the Endogeneity of Race

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November 2002

(revised February 2003)

We thank Susan Averett, Siddharth Chandra, Robert Margo, Robert Whaples, as well as participants at the Public Choice Seminar at George Mason University and the 2003 ASSA meetings for many useful comments. Bodenhorn thanks the National Science Foundation (SES-0109165) and the Earhart Foundation for financial support.

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Abstract

Economic and social theorists have modeled race and ethnicity as a form of personal identity produced in response to the costliness of adopting and maintaining a specific identity. These models of racial and ethnic identity recognize that race and ethnicity is potentially endogenous because racial and ethnic identities are fluid. We look at the free African-American population in the mid-nineteenth century to investigate the costs and benefits of adopting alternative racial identities. This period is germane to the study of alternative constructions of racial identity because light-skinned African-Americans could, and often did, choose to differentiate themselves from dark-skinned African-Americans. We model the choice as an extensive-form game, where whites choose to accept or reject a separate mulatto identity and mixed race individuals then choose whether or not to adopt a mulatto identity. Adopting a mulatto identity generates pecuniary gains, but imposes psychic costs. We then quantify the complexion gap and find that mulattoes held significantly more wealth than blacks. Finally, we relate the complexion gap to community factors and find that the benefits to adopting a mulatto identity increased in the absolute size of the mulatto community, but decreased as the mulatto percentage of the African-American population increased at the neighborhood and city level. Thus mulattoes benefited from white preferences when they represented a modest share of the African-American population. Yet if most African-Americans in a city were light-skinned, in the eyes of whites they became black and received no special treatment.

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Identity! My God!
Who has any identity anymore anyway?
It isn't so perfectly simple.
-Ralph Ellison, *Invisible Man* (1952)

Economic and social theorists have modeled race and ethnicity as a form of personal identity produced in response to the costliness of adopting and maintaining a specific identity (Hechter, Friedman, and Appelbaum 1982; Stewart 1997; Mason 2001; Akerlof and Kranton 2000; Darity, Mason, and Stewart 2002). These models of racial and ethnic identity recognize that race and ethnicity is potentially endogenous because racial and ethnic identities are fluid (McElreath, Boyd, and Richerson, undated). Harris and Sim (2001) report recent evidence of this fluidity among contemporary mixed black-white youth. Although 75 percent of mixed black-white children self-identify as black, 17 percent self-identify as white. The remaining 8 percent refuse to select a single racial identity, and about 10 percent of mixed-race youth adopt one classification at school and a different one at home. Among modern mixed-race youth, racial self-identification is contextual.

Racial and ethnic self-identification have economic consequences because the choice of self-identity is likely to be entwined with the acceptance of and acculturation into dominant social norms. If race or ethnicity is endogenous in certain circumstances, a self-identity may be selected to distance oneself from a subordinate group in order to improve one's standing or acceptance into the dominant group. Mason (2001) finds that, among people of Mexican descent, acculturation is a dominant strategy, and light-complected people of Mexican descent

may acculturate more easily. Murguia and Telles (1996) report different educational opportunities for Mexicans of light and dark complexion and argue that these may result from conscious choices. Phenotypic differences, they argue, influence individual strategies. Light-skinned people of Mexican descent learn early that by assimilating or acculturating they can defuse negative stereotypes and attain more than their dark-complected counterparts. Later in life, light-skinned Mexicans are able to increase their incomes by adopting a non-Hispanic white identity (Mason 2001).

This study considers the choices and life chances of black and mixed black-white individuals residing in the urban U.S. South prior to the Civil War. The experience of mixed black-white individuals in this period is particularly germane to the study of the social and economic consequences of racial self-identification because the so-called one-drop rule was not yet firmly established. Most Upper South states legally adopted a one-fourth rule separating black from white.[1] But the line was not as sharply drawn because the dominant white culture accepted mixed-race people as a separate class. As Williamson (1984, p. 13) notes for Virginia, "there were some people who were significantly black, visibly black, and known to be black, but by the law of the land and the rulings of the courts had the privileges of whites." Lower South states generally adopted no formal definition of "whiteness," and were even more accepting of a separate mixed-race or mulatto class. "Known and visible mulattoes could by behavior and reputation be 'white'" (Williamson 1984, p. 19). Acculturation was an option for at least some mixed-race people living in the antebellum South.

We first model a mixed-race individual's choice of self-identity. Acculturation brought a degree of acceptance from the dominant white community, which opened the door to a wider set

of economic opportunities, but acculturation carried an implicit cost, namely that by adopting the norms of the dominant white culture (dress, language, mannerisms, religious affiliation, group membership, etc.), the individual alienated himself or herself from the black community. To the extent that the recognition of an individual's heritage generates utility, the rejection of black culture was costly.

We then empirically estimate differences in wealth between blacks and mulattoes and find that mixed-race householders, both male and female, accumulated more wealth than black householders. Regression decompositions suggest that a substantial portion of the wealth gap was due to racial identification. Finally, we relate that part of the wealth gap attributable to race to community factors. Consistent with our model, we find that mixed-race people were more likely to realize an advantage when the mixed-race community was large, both absolutely and relative to the total population, but that the advantage declined as the size of the mixed-race community increased relative to blacks. Thus, mixed-race people benefited when they could form a distinct intermediate racial class, standing between the dominant white and subordinate black communities.

The Economic and Social Consequences of Complexion

Social scientists have long concerned themselves with the social and economic consequences of the social construct of complexion in a community with mixed-race people (Reuter 1918). Recent work recognizes, however, that racial identity is endogenous (Stewart 1997; Akerloff and Kranton 2000; Mason 2001; Darity, Mason and Stewart 2002). An individual faces some leeway in the racial or ethnic identity he or she adopts subject to social and

[1] That is, anyone with at least one black grandparent was considered black.

legal conventions. For instance, an individual of African-American heritage may self-identify as mixed-race, but not as white.

What is the incentive for mixed-race individuals to create a separate collective identity and then claim membership in it? Social scientists have developed a number of answers. Harris (1993) and McAdams (1995) develop status-based theories. McAdams (1995, p. 1031) contends that individuals seek two things: the esteem of others and social status. Group membership is an important source of esteem and status and individuals will make personal sacrifices to raise the status of their own group and diminish that of others. Thus mulattoes in early America raised their own position by physically, socially, and culturally separating themselves from blacks. In Charleston, mixed-race African-Americans operated a social and literary club, the Brown Fellowship Society, which excluded dark-complected blacks. Similarly, Harris (1993, p. 1736) contends that the true benefit of "whiteness" is the right of exclusion; membership is close ly guarded. Whiteness inhered certain privileges, some of which mulattoes enjoyed that blacks did not. In some parts of the antebellum South, for example, mulattoes retained the right to vote, to own certain kinds of property (including slaves), obtain an education, and pursue high-status occupations, most of which were unavailable to dark-complected blacks. Consistent with Harris's theory, mulattoes cultivated relationships with whites, achieved some measure of "whiteness," and actively excluded blacks from the enjoyment of similar privileges. Indeed, Johnson (1996, p.117) concludes that within Savannah's African-American community, "color was a greater obstacle to social interaction among people of African origin than either culture or language."

Hechter (1988, p. 270) contends that the formation of separate racial and ethnic identities can be valuable when agents will trade only within a racially or ethnically homogeneous network because laws, norms, customs and traditions outside the network are unknown, poorly developed, or unsuited to trading patterns within the network. Greif (1994) has shown that ethnic networks that adopt a common set of institutional rules reduce coordination and enforcement costs. Thus, in the antebellum South, whites may have been more receptive to the inclusion of mulattoes into their social and economic circles because they assumed that having a white parent promoted a respect for the institutional conventions observed in the white community. Horton (1993, p. 122) argues that most early American whites "believed that the infusion of 'white blood' increased their ability and civility." A study of modern populations reports that mixed-race people who grow up in predominantly white environments report low identification with other blacks (Hall 1995).

For African-Americans, the economic advantages of mixed-race heritage and light skin date back to slavery. Reuter (1918) and Frazier (1957), among others, argue that a light-skinned advantage appeared early in the slavery era when masters selected some fair complected blacks to work as house servants and field foremen, and provided others with craft training. Fair complexion increased a slave's life chances, by significantly reducing his or her toil and drudgery, by improving his or her access to food and shelter, by exposure to the culture, manner and language of the dominant class, and by increasing his or her chances of manumission. By the mid-nineteenth century, the mulatto advantage was institutionalized throughout the South.

Although Jim Crow eliminated any legally recognized complexion differences (Davis 1991; Penha-Lopes 1996), social and economic differences persisted within the African

American community. Sociological studies beginning in the 1960s found that mixed-race people earned higher incomes, accumulated more wealth, received better educations, worked at better jobs, and even improved their marriage chances. Freeman et al. (1966) found that more educated women had lighter complected husbands, more educated men had lighter complected wives, and that lighter complected individuals of either sex tended to be more educated. In the mid-1960s, skin color connoted class in the African-American community, because dark-skinned men worked at predominantly blue-collar jobs. The intra-group preference for light-skinned, even white, marriage partners dates back to the mid-nineteenth century. Bogger (1997, p. 136) bluntly states that by giving them a white father, black women in antebellum Virginia provided their children a substantial social advantage within the African-American community. In the modern context, the desire to marry light is labeled the 'bleaching syndrome' and it remains a powerful impulse (Hall 1995). To Freeman et al. (1966, p. 374) this intra-group preference toward light complexions implies that "the skin color of the middle-income Negro represents an important objective status in a contextual sense; that is, it operates as do other family status indicators to limit and outline the course of their lives both within the Negro community and the larger American society."

The statistical discrimination literature pioneered by Phelps (1972) and Arrow (1973) provides a context for light-skinned advantages. If the manner in which ability is measured provides a noisy signal that differs in some way between whites and blacks, then the gradation of mixed-race individuals' skin color of may be manifested in gradations of economic opportunity. As observed by Schelling (1978), "People may furthermore rely, even in making economic choices, on information that is color-discriminating; believing that darker-skinned people are on

the average poorer than lighter-skinned, one may consciously or unconsciously rely on color as an index of poverty or, believing that others rely on color as an index, adopt their signals and indices accordingly."

African-Americans internalize the preference for light skin because it is consistent with the preferences of the dominant culture. Unlike the experience of members of the dominant group, however, internalization of the fair complexion ideal among African-Americans generates intra-group conflict because complexion is verifiable by sight whereas assimilation is verifiable only by action.[2] Color, then, and not action or qualifications may be the primary criterion used by the dominant culture to assess the potential for assimilation of African-Americans, and it may influence the distribution of rewards. Such attitudes and actions by the dominant group are divisive within the subordinate group because attitudes in the dominant culture generate advantages for one segment of the African-American community based solely on skin tone.

Indeed, the divisive nature of complexion within the African-American community is much commented on, by psychologists, philosophers, sociologists, even by novelists, poets and playwrights. Langston Hughes, noted writer of the Harlem Renaissance, regularly wrote about jealousies surrounding skin tone. Graham (1999) discusses the continued preference for light complexion among wealthy African Americans. In 2002 Dwight Birch, a dark-skinned black, filed an EEOC complaint under Title VII of the 1964 Civil Rights Act. He claims that a light-skinned African-American manager of a Jonesboro, Georgia restaurant discriminated against him based on his skin color.

Thus, (light) black on (dark) black discrimination, while rooted in history, is not a mere historical curiosity. In discussing the phenomenon, Penha-Lopes (1996, p. 817) relates an old

African-American adage: "Black is evil, yallah is low-down, look here, honey, ain't you glad you brown." Zack (1993, p. 39) is more explicit if less folksy. She argues that any person who would be considered black by other blacks assumes a white or partly white racial designation from members of the white community, that person is "not to be trusted." So while there may be an economic advantage in adopting a part-white identity, there is a potentially large social cost in doing so. The dominant white culture may reward assimilation, but blacks often punish it. We accept that there was a comparable tradeoff in the late antebellum period, and investigate its implications. In the next section we model an individual's choice to adopt a black or mulatto self-identity using game-theoretic techniques. Later sections estimate the economic extent of the mulatto advantage in late antebellum America.

A Game in Extensive Form

The issue of identity is tightly linked with discrimination because the recognition of an individual's identity is required for discrimination to occur. This is more basic than discrimination, and allows the decisions of one group to limit the availability of opportunities to another group. As Arrow (1972) remarks, "Why certain kinds of groups perceive themselves as having common interests and not others is a question on which economics does not seem likely to throw much light. But *given* group identification, it is not so unreasonable that members of the group will work together to promote group interests, even though it would pay any individual to depart from them." [Emphasis in the original.]

[2] Moreover, the extent to which there is repeated interaction, which may depend on community size, will affect the ease with which a person assimilates.

The effects of identity become more complex once we recognize that there is some degree to which individuals can construct their identity. In particular, if there are pecuniary gains to taking on a particular identity, but psychic costs to doing so, then there may be some group members who choose to forgo the gains and maintain their original identity. In essence, then, the question of identity reduces to one of group attachment or membership.

Two basic forces are referenced in models of identity. First, members of a more powerful group may receive a sense of identity by defining themselves in reference to the less-powerful group or groups. This could either be for psychic or pecuniary benefit. Second, members of the less-powerful group internalize their identity, causing them to incur a psychic cost that may hinder their choice of improving their economic status. The models available in the literature focus on these forces in differing degrees. Because adopting their mechanics in full would add little to our discussion, we summarize their results and present a simple model of interaction that captures the key features we wish to study.

Evolutionary models can study a population's long-run identity equilibria when individuals are allowed to choose their membership. McElreath, Boyd, and Richerson (undated) assume that social norms exist but individuals interact with groups other than their own as well as those who share their norms. Although the norms enhance a member's interaction within the group, they simultaneously make interacting with outsiders less desirable. Thus the outward markers that indicate an individual's type persist and are favored by natural selection when successful individuals' behaviors are imitated. The theoretical results not only reinforce the idea that an emphasis on skin color may be adopted as a marker of membership but indicate as well that other traits may evolve to enhance the identification of those with similar norms. In

particular, additional markers, such as speech or dress, may be adopted which exclude those who have chosen to pass by virtue of their lighter skin color.

Darity, Mason, and Stewart (2002) also employ an evolutionary model to explore individuals' choices in adopting racist or tolerant attitudes towards those that are not members of their group. Their assumption that one group operates from a position of power drives the prediction that it will use identifying traits to exclude the disadvantaged group from power. Their model also illustrates a mechanism for the adoption of traits rather then the exploitation of existing traits and social status.

Akerlof and Kranton (2000) address the economic consequences of identity. Their model generates steady states in the population's mix of identities by considering equilibria in groups of individuals choosing identity and action. Akerlof and Kranton point out the need to explain 'the self-destructive behavior of the underclass central to sociological study, but contrary to standard economic thinking."

Similarly, Austen-Smith and Fryer (2002) model these forces in the context of education. They state that the "central underlying idea of 'acting white' is that individuals face a tension between signaling their type to the outside labor market and signaling their type to a peer group: signals that induce high wages can be signals that induce peer rejection." What potentially induces peer rejection in their model is effort in school, which is interpreted by blacks as 'acting white.' Effort is known to enhance opportunities, but these enhanced future opportunities must be weighed against the loss of group attachment that occurs when good students are ostracized by their peers. Austen-Smith and Freyer assume a continuous change among the population in terms of schooling ability, but find that there will be those who exert little effort as well as those

who select higher levels of effort consistent with ability. This weighing of opportunity and

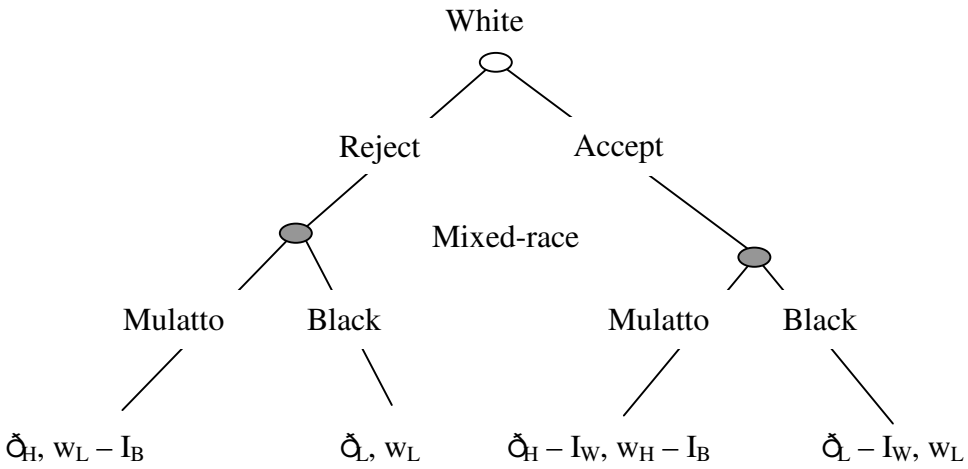

Figure 1. An extensive form game in which White moves first, choosing to 'Accept' or 'Reject'. Mixed-race moves second, choosing 'Mulatto' or 'Black'. Payoffs to White are given first. The payoffs are related as follows: $ð_H > ð_L > 0$, $w_H > w_L > 0$, $I_W > 0$, and $I_B > 0$.

ostracism is one of the principle issues to be explained when considering the economics of identity. As in Austen-Smith and Freyer, it is central to our model.

Austen-Smith and Fryer do not assume that firms use discriminatory hiring practices. Rather, it is simply the loss of membership in or attachment to a community that motivates an individual to forgo the pecuniary benefits of investing in skills and the search for employment using those skills. Such an assumption may be justified when modeling modern job markets, because some employers may prefer to hire an individual that is a member of a minority group, ceteris paribus, to satisfy affirmative action demands. A similar motivation is less likely to have been operative in the 1860's, when the identity of whites also was at stake to the extent that recognizing a mulatto's whiteness diluted the value of whiteness in the white community.

The differing social costs in our data would have similar effects in these more detailed evolutionary and game theoretic models: increasing the loss of identity suffered by either group

would decrease mulattoes' ability to increase their wealth. We thus lose little in using the parsimonious structure of formalizing one group's advantage as its ability to move first in an extensive form game.

In Figure 1, the position of power occupied by the majority is reflected in its position in the game. The choice that the white individual faces is to either deny or recognize a mixed-race individual's whiteness, presumably by employing them in a manner different from the manner in which a black individual would be employed. There is a direct advantage as well as an indirect disadvantage to doing so. First, the lower social status of the mixed-race individual allows the employer to pay them for duties that otherwise would require hiring a white employee at a higher wage. Yet by choosing to recognize the mixed-race individual's non-black heritage, the employer is also decreasing the extent to which he can feel superior to the members of a lower class in society. By moving first, those in the majority can anticipate the effect their choice will have on the lower class. Moreover, if mulattoes represent a large percentage of the black population, then it may not be in the interests of the white population to elevate their status.

Using this model, we can address the following questions: (1) Why would a mixed-race individual choose to play Black even when the white population might accept them and thus provide opportunities to increase income and accumulate more wealth? (2) Why would the white majority choose not to hire a mixed-race individual in place of a white individual when doing so would provide an economic benefit to them?

The answer to the first question is that the black individuals may face too high a psychic cost due to their loss of attachment to a larger community of African-Americans: the increase in wage ($w_H - w_L$) would not compensate for the loss in identity (I_B) resulting from diminished

acceptance within the black community, even when whites choose Accept. This cost may be diminished, however, when more mixed-race individuals choose to play Mulatto.

The second question is potentially more interesting. In a sense here, the mixed-race individual would like to play Mulatto rather than Black, but this outcome is not subgame perfect if the white population has chosen not to favor individuals publicly adopting a mixed-race identity (Reject). Whites will choose Reject when the loss to white identity (I_W) exceeds the potential increase in owners' profits ($\pi_H - \pi_L$). This may be a result of the black population being largely mixed-race and not affording the (white) business owners sufficient identity advantage relative to a black underclass. Given rejection, the wage (w_L) that mulattoes are able to earn is no better than the wage earned by blacks, and the mulatto additionally incurs a loss of identity (I_B).

To summarize, the sub-game perfect equilibrium is 'Accept, Black' if $\pi_H - \pi_L > I_W$ and $I_B > w_H - w_L$, 'Reject, Black' if $I_W > \pi_H - \pi_L$, or 'Accept, Mulatto' if $\pi_H - \pi_L > I_W$ and $w_H - w_L > I_B$. Thus we see that two conditions are necessary for mixed-race individuals to increase their wealth relative to blacks. A large community of other mixed-race individuals decreases a mulatto's own potential loss of identity or community attachment, and their smaller proportion of the entire non-white community decreases the identity loss imposed on the whites that hire them. If too large a proportion of the African-American population is mixed-race, then whites anticipate that too many mixed-race individuals would choose to pass if they are accepted, and thus the whites don't provide sufficient incentive for mixed-race individuals to identify as mulatto.

Data

This study uses a large regionally representative sample of all African Americans residing in the urban South in 1860, which includes Baltimore and Frederick, Maryland; Baton Rouge and New Orleans, Louisiana; Charleston, South Carolina; Louisville, Kentucky; Mobile, Alabama; Nashville, Tennessee; and Petersburg and Richmond, Virginia. The data, drawn from the original manuscripts of the 1860 population census, include information on several demographic and economic variables for 9,107 African-American families, including 3,521 families with a mixed-race head of household.

The 1860 population census manuscripts are a valuable source for investigating the economics of identity because census marshals reported detailed racial classifications, including white, black, mulatto, Indian, and Asian. The census does not tell us whether African-Americans self-identified as black or mulatto or whether marshals classified individuals based on appearances, but southern whites developed complex racial hierarchies based on racial heritage. Louisiana's antebellum social custom of recognizing at least a dozen different racial designations mirrored South Africa's apartheid definitions.[3] In the Upper South, racial categorizations seemingly depended more on skin tone than heritage. Komlos (1992) and Bodenhorn (2002) report that county clerks assigned African-Americans more than a dozen complexion designations on free black freedom papers.[4] Additionally, while it is commonly believed that 'money whitens,' making racial classification potentially endogenous, Bodenhorn (2002) finds little evidence that wealthier African-Americans were more likely to be classified as mulattoes. These facts give us good reason not only to take the marshal's classification to be exogenous, but

[3] Designations in antebellum Louisiana included gradations labeled, black, mulatto (half), quadroon (quarter), octoroon (eighth), sambo, griffe, and mestizo, among others.

also that common practice was to make these classifications carefully. We thus imply that the classification is also exogenous to the individual's decision of whether or not to 'pass.'

In addition to the racial identifiers, census marshals collected information on each household. The manuscripts clearly delineate between households, making it possible to determine each household's structure, including whether the head of the household was married, and the number of children and other dependents residing in the household. Census marshals then recorded the race, age, place of birth, occupation, the value of real and personal estate owned, and basic literacy for each member of the household. Non-family members can be distinguished from family because last names were not reported for family members, but were to other dependents, including distant kin or servants residing in the household.

Although the data are not as rich as that used in modern studies of racial differences in wealth accumulation (see Blau and Graham 1990; Altonji, Doraszelski and Segal 2000), they are rich enough to investigate differences in economic outcomes between blacks and mulattoes. While we cannot control for current and permanent income, we can proxy for both with controls for occupation and literacy, two important determinants of current and permanent income. The most significant shortcoming of the census manuscripts is that some marshals were more diligent in collecting wealth information than others. It was not uncommon for marshals to return a blank (nonresponse) when reporting real and personal estate in the manuscripts. Historians have long discussed the meaning of these nonresponses, and the debate is far from resolved. Some contend that marshals left the cell blank rather than recording zeros. Others contend that marshals censored modest or hard-to-value property holdings, so that nonresponses likely represent small but nonzero wealth. Conley and Galenson (1998) and Bodenhorn (2002) review

[4] In Virginia, for example, court clerks chose several designations including very black, black, brown, mulatto,

the debate and conclude that it is reasonable to attribute to each nonresponse a small, but nonzero value. Such attributions assume that each marshal had an idiosyncratic censoring value, below which he simply failed to estimate and report a value for personally. In the summary statistics reported in Table 1, we report values for personal estate by attributing to each nonresponse a value equal to one-half the lowest value returned by each marshal. Using a different sample, Bodenhorn (2002) finds that results drawn from the 1860 census are robust to different imputations. In their study of modern racial wealth gaps, Altonji, Doraszelski, and Segal (2000, p. 46) adopt a comparable procedure and report that their results are not sensitive to exact attribution. On the other hand, we assume that nonresponses for real estate do, indeed, represent zero holdings. Because even modest real estate ownership would represent a substantial proportion of an African American family's wealth, it seems unlikely that marshals would have failed to report such holdings.

Empirical Methods

We follow the literature in estimating the economic extent of the mulatto advantage through regression decomposition techniques pioneered by Blinder (1973) and Oaxaca (1973). This technique recognizes that the mulatto effect on the functional form of the regression may be more complex than a simple shift in the constant term. Let j index households and divide the sample by race into blacks and mulattoes. Further, let W_{jb} denote the dollar value of wealth held by a black household and X_{jb} a vector of economic and demographic characteristics for that black household. W_{jm} and X_{jm} represent the corresponding variables for mulatto households.

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light or bright mulatto, yellow, tawny, olive, nutmeg, reddish-brown, and nearly white.

Our basic empirical specification posits that wealth is either linear or log-linear in the economic and demographic variables and is given by:

$$W_{jb} = \alpha_{0b} + X_{jb}\beta_b + e_{jb}$$

$$W_{jm} = \alpha_{0m} + X_{jm}\beta_m + e_{jm}$$

where α_{0b} is the regression intercept for blacks, β_b is the vector of slope parameters for blacks, and e_{jb} is the error term. α_{0m}, β_m, and e_{jm} are the corresponding parameters and error term for mulattoes. Separate regressions are estimated for male-headed and female-headed households, so the parameters are allowed to differ across race and sex.

The regressions are then used to decompose differences in wealth between blacks and mulattoes into two parts. The predicted values of the mean wealth for blacks and mulattoes are:

$$\bar{W}_b = \alpha_{0b} + \bar{X}_b \beta_b$$

$$\bar{W}_m = \alpha_{0m} + \bar{X}_m \beta_m$$

where the $\bar{X}$'s represent the mean values of the black and mulatto household variables.

Using these two equations it is easy to show that:

$$\bar{W}_m - \bar{W}_b = \{(\bar{X}_m - \bar{X}_b)\beta_m\} + \{(\alpha_{0m} - \alpha_{0b}) + \bar{X}_b(\beta_m - \beta_b)\}$$

The first bracketed term is that part of the total estimated racial wealth gap ($\bar{W}_m - \bar{W}_b$) explained by racial differences in the means of the household variables ($\bar{X}_m - \bar{X}_b$) based on coefficient estimates from the mulatto sample. The first term, thus, estimates the contribution of economic and demographic differences to the wealth gap, assuming that the relationship between the economic and demographic variables and wealth are fairly represented for both races by the mulatto regression coefficients. This is commonly called the "explained" component of the wealth gap because it is that part of the wealth gap explained by differences in characteristics

between the two groups. The second bracketed term is typically labeled the "unexplained" part of the regression decomposition. This wealth gap arises due to differences in the functional relationship between mean characteristics and wealth, captured by differences in the regression parameters, between the two groups. The unexplained component is often interpreted as the economic consequences of discrimination or racial preferences.

The wealth gap may also be decomposed using regression coefficients from the black wealth equation. Such a wealth decomposition is given by:

$$| _m - | _b = \{ (\bar{\div}_m - \bar{\div}_b) \hat{\alpha}_b \} + \{ (\hat{\alpha}_{0m} - \hat{\alpha}_{0b}) + \bar{\div}_m (\hat{\alpha}_n - \hat{\alpha}_b) \}$$

The first bracketed term is the part of the wealth gap explained by differences in economic and demographic characteristics based on the functional relationship between wealth and characteristics for blacks. The second term is the unexplained portion.

Although the base model assumes a linear relationship between wealth and characteristics, the distribution of wealth is such that a small number of people had accumulated very large amounts of wealth. One method to reduce the impact of outliers on the estimates is to use the natural logarithm of income. A second method, and one increasingly used in wealth studies, is to estimate linear or log-linear median regressions. In the presence of large outliers, median regression may be preferred because parameter estimates are more robust to outliers than OLS estimates. Median regression may also be preferred because we are more interested in the median rather than the mean individual. A third reason for preferring median regression is that median regression yields better results when missing values are assigned arbitrary values. One additional advantage of median regression is that the parameter estimates have the same interpretation as OLS estimates.

Empirical Results

Before turning to the wealth decompositions, we briefly discuss the results of the alternative regression specifications. The dependent variable is either the level or the natural logarithm of wealth in current 1860 dollars. The control variables include the head of household's age and its square, a variant of Duncan's socioeconomic occupational index, two dummy variables capturing whether the individual had migrated across state lines since birth or had immigrated to the United States, a dummy variable equal to one if the household head was illiterate, the total number of residents in the household, and the number of males over 20 years of age residing in the household.[5]

The four regression specifications (OLS and median regression on levels and logs) reported in Table 2 generate reasonable coefficient estimates. Wealth typically rises at a declining rate with age. Individuals engaged in higher status occupations, such as professionals, proprietors, and crafts-persons, accumulated more wealth than those engaged as operatives, laborers, and low-skill service occupations. Literate male household heads had accumulated significantly more than illiterate ones, but the connection between literacy and wealth was weaker and less significant for women. Larger households accumulated more wealth than smaller ones. The addition of one member in a male-headed household increased household wealth by between $20 and $26. The addition of a male 20 years or older, holding household size constant, had a negligible effect on household wealth.

[5] The Duncan SEI index is described in Reiss, et al (1961, Appendix B). Socioeconomic status was defined as a combination of average income and average educational levels for each of about 500 occupations appearing in the 1950 census. Many of the classifications for professionals, proprietors, craftsmen, operatives and laborers in 1950 were comparable to classifications and definitions appearing in the 1860 census, so Duncan's index seems an appropriate metric.

Instead of the specifics of the regression coefficients, the focus here is on the wealth decompositions resulting from the estimates, which are reported in Table 3. The unadjusted racial wealth gap for male-headed households is substantial. Mixed-race, male-headed households held more than three and one-half times the wealth of a household with a black male head. The unconditional gap is $612 and the predicted gap is $620 ($836-$516). Using parameter estimates from the mulatto equation ($\hat{\alpha}_{0m}, \hat{\alpha}_m$) to determine the importance of the racial difference in characteristics, we find that differences in economic and demographic characteristics explain 71% of the black-mulatto wealth gap. Using parameter estimates from the black equation for male-headed households, we can explain about 49 percent of the racial wealth difference. The OLS estimates indicate that even if blacks had overcome their relative economic, demographic, and residential disadvantages a substantial portion – between 30 and 50 percent – of the wealth gap would have persisted. According to this estimate, about one-third to nearly one-half of the observed differences in wealth were attributable to race per se.

Decompositions for male-headed households are also reported based on alternative regression specifications. Decompositions based on OLS regressions using the natural logarithm of wealth as the dependent variable yield comparable results. If we use the coefficient estimates from the mulatto equation, differences in economic and demographic characteristics explain 59 percent of the racial wealth gap. Thus, as much as 40 percent of the racial wealth gap was attributable to racial heritage or complexion. Decompositions from the black equation estimates indicate the differences in means explain about 67 percent of the racial wealth gap. Decompositions based on median regressions (both the level and the log of wealth) yield similar

results; namely, that differences in means explain between one-half and two-thirds of the racial wealth gap in male-headed households.

The decompositions for female-headed households are generally comparable to those for men. Using ordinary least squares estimates on the level of wealth for both blacks and mulattoes, we can explain about 66 percent of the complexion-based wealth gap. Coefficient estimates from the logarithmic specifications explain a little more than 50 percent of the racial wealth gap for female-headed households.

Blau and Graham (1990) posit three potential sources of racial wealth gaps: racial differences in intergenerational and *inter vivos* transfers; racial differences in rates of return on assets; and racial differences in current and permanent income. The data at hand shed no light on the second, but they indirectly addresses the first and third. Differences in the racial occupational structure and literacy capture an important component of *inter vivos* transfers, namely, intergenerational human capital transfers in the form of general (literacy) and specific (occupational) training and investment. Training and literacy also represent important factors in determining an individual's current and permanent income. For African-American men, general and specific training, some undoubtedly provided by parents, together accounted for as much as 37% of the overall wealth gap. For women, they accounted for as much as 19%. Thus, equalization of racial differences in education and training would have closed a significant portion of the observed mixed-race wealth advantage.

Empirical Evidence on Community Effects

In developing our model of racial self-identity, we posited that community attachment yields utility. People of all races and ethnicities are comfortable associating with others like themselves. Thus, mixed-race African-Americans in antebellum America's cities established exclusive, often exclusionary, groups and societies. But in adopting, cultivating, and displaying a mixed-race identity, mulattoes ran the risk of losing their ties with the black community even while they were seldom welcomed into the white community with open arms. Yinger (1986) discusses a number of variables likely to influence the salience of racial group membership, including the size of the racial group both absolutely and relative to the dominant race, residential concentration, language differences, intraracial cultural commonalities, education, and discrimination, among others. In particular, individuals are more likely to affiliate with a racial group the larger it is and the more residentially concentrated it is.

To estimate the extent and value of forming a distinct mixed-race identity in early America we relate the "unexplained" portion of the wealth gap for each individual to the absolute and relative size of the mulatto community in each city and its residential concentration. Using the notation adopted above, we estimate the following regression:

$$\{(\alpha_{0m} - \alpha_{0b}) + X_{jm}(\beta_m - \beta_b)\} = \gamma_0 + Y_{jm}\gamma_m + \varepsilon_{jm}$$

where the dependent variable is the "unexplained" portion of the we alth gap as defined earlier and is calculated using parameter estimates from the OLS regressions for men and women (Table 2, Panel A) for each mulatto-headed household. The explanatory variables are contained in the vector Y. They include the absolute size of the mulatto community (measured in households headed by mulattoes) at both the city and census ward level, the absolute size of the total African-American community (mulatto plus black households) at both the ward and city

level, the relative size of the mulatto community relative to the total African-American community at the city and ward level, and the relative size of the African-American community to the total (African-American plus whites) community at the ward and city level. Table 4 reports the OLS coefficient estimates. Because this procedure implies that observations are independent across wards but not necessarily independent within wards, the regressions were estimated to control for this. The procedure affects the estimated standard errors, as well as the covariance matrix of the estimators, but it does not affect the coefficient estimates themselves.[6]

Because initial trials suggested that the community effects were nonlinear, we use the natural logarithms of the independent variables. As Yinger's (1986) discussion implies, the unexplained portion of the mulatto wealth gap is increasing in the absolute size of the mulatto community at both the ward and city level, with the city effect being about twice as large as the ward effect. Thus, light-complected African-Americans realized a larger wealth advantage the larger the mulatto community, holding all else constant. This is consistent with the belief in the literature that adopting a part-white identity may lead to excommunication from the black community. Mixed-race individuals risk such excommunication only when they have the opportunity to associate with a reasonably large mixed-race community. Thus, the estimates suggest that the wealth gap was larger the larger the size of the local mulatto community. This appears sensible given the potential costs of alienating blacks when adopting a mixed-race identity. Group attachment is valuable and the larger the group, the greater the value of attachment.

Interestingly, the mulatto wealth advantage is diminishing in the absolute size of the African-American community at both the ward and city level. We interpret this to imply that

[6] The regressions were estimated using the 'cluster' command in STATA (version 7), where the identifying

whites were willing to advantage light-complected, mixed-race individuals only so long as the size of the overall African-American community was modest. This may have resulted from any of a number of causes. One such cause may have been that as the overall African-American community increased in size, whites grew less willing to confer a privilege on any person of black heritage in order to limit in-migration incentives or avoid elevating a large number of individuals to a preferred status. Another potential cause may have been that the existence of a large black community may have diminished the mulatto advantage because the mulattoes' distinctiveness was simply overwhelmed in a mass of 'blackness.' A third possibility may have been economic, in that, the social advantage of employing the 'exotic' mulatto as a domestic servant or other public duties may have been more than offset by the ability to hire a black at a substantially lower wage. A better understanding of the basis of this effect awaits additional research.

Although the unexplained wealth gap increases in the size of the mulatto community, it is smaller: (1) the larger the percentage of African-American households headed by mulattoes at the ward level; (2) the larger the percentage of African-American households headed by mulattoes at the city level; and (3) the larger the percentage of African-American households (black and mulatto) relative to total households (African-American plus whites) at the city level. While the benefits to adopting a mixed-race identity may have been greater the larger the mixed-race community in a ward or city, the advantage declined as mulattoes came to dominate the neighborhood or the community. Whites showed preferences to mulattoes only to the extent that mulattoes were noticeably different, or stood apart from, the larger African-American population. Similarly, as a neighborhood became increasingly African-American the mulatto

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variable was a unique WARD variable where each ward in the sample took on a unique value.

advantage declined. For mulattoes to capture an advantage, they needed a sufficiently large local population of whites to show them preferences that blacks would not. Thus, the formation of and attachment to a mulatto community demanded that there were a sufficient number of mulattoes residing in the ward and the city. But mulattoes captured whatever preferences whites showed them only when they represented a modest share of the overall African-American population. If most African-Americans were light-skinned, in the eyes of whites they became black and received no special preferences.

Concluding Comments

The antebellum South's experience of mixed-race people may inform modern concerns. The 2000 federal census, for instance, recognized the evolving nature of racial self-identification when it allowed respondents to select as many different racial categories as they felt appropriate. This decision sparked heated debate within the African-American community. Some objected to a range of choices because they felt that it would undermine a sense of solidarity with or attachment to a community of African-Americans sharing a common purpose. If the antebellum experience serves as a guide, these people may have cause for concern.

Light-skinned mulattoes in Charleston, Savannah, Mobile, and New Orleans encouraged whites to distinguish them from blacks. In an effort to develop their own identity outside the black community, these light-skinned mulattoes formed exclusive organizations mirroring those of white society, including churches, schools, literary and gardening clubs, and mutual benefit societies. Many of these organizations excluded dark-skinned blacks. Some light-skinned African-Americans embraced the norms of the dominant culture so fully—and were, in turn,

accepted into it—that they operated large plantations worked by black slaves. Our results reveal the conditions under which they not only chose to act white but were accepted as non-black. In rejecting their blackness in part or in whole, mulattoes received more education, worked at higher-status occupations, and accumulated more wealth than blacks. They were better able to accomplish these things when they could separate themselves, when their fair complexion not only set them apart but elicited a favorable response from the dominant white community.

References

Akerlof, George A. and Rachel E. Kranton. "Economics and Identity." *Quarterly Journal of Economics* 115:3 (August 2000), pp. 715-753.

Altonji, Joseph G., Ulrich Doraszelski, and Lewis Segal. "Black/White Differences in Wealth." *Federal Reserve Bank of Chicago Economic Perspectives* 24:1 (2000), pp. 38-50.

Arrow, Kenneth J., "Models of Job Discrimination." In *Racial Discrimination in Economic Life*. Edited by Anthony H. Pascal. Lexington, Massachusetts: D.C. Heath & Co., 1972.

Austen-Smith, David, and Roland G. Fryer, Jr. "'Acting White'." Mimeo, Pennsylvania State University, 2002.

Blau, Francine D. and John W. Graham. "Black-White Differences in Wealth and Asset Composition." *Quarterly Journal of Economics* 105:2 (May 1990), pp. 321-339.

Blinder, Alan S. "Wage Discrimination: Reduced Form and Structured Estimates." *Journal of Human Resources* 8 (Fall 1973), pp. 436-55.

Bodenhorn, Howard. "The Complexion Gap: The Economic Consequences of Color among Free African Americans in the Rural Antebellum South." *NBER Working Paper 8957* (May 2002).

Bogger, Tommy. *Free Blacks in Norfolk, Virginia, 1790-1860: The Darker Side of Freedom*. Charlottesville and London: University of Virginia Press, 1997.

Conley, Timothy G. and David W. Galenson. "Nativity and Wealth in Mid-Nineteenth-Century Cities." *Journal of Economic History* 58: (1998), pp. 468-493.

Darity, William A. Jr., Patrick L. Mason, and James B. Stewart. "The Economics of Identity: The Origin and Persistence of Racial Norms." Working paper, UNC-Chapel Hill (January 2002).

Frazier, E. Franklin. *Black Bourgeoisie*. Glencoe, Illinois: Free Press, 1957.

Freeman, Howard E., David Armor, J. Michael Ross, and Thomas F. Pettigrew. "Color Gradation and Attitudes among Middle-Income Negroes." *American Sociological Review* 31:3 (June 1966), pp. 365-374.

Graham, Lawrence Otis. *Our Kind of People: Inside America's Black Upper Class*. New York: Harper-Collins, 1999.

Greif, Avner. "Cultural Beliefs and the Organization of Society: A Historical and Theoretical Reflection on Collectivist and Individualist Societies." *Journal of Political Economy* 102:5 (October 1994), pp. 912-50.

Hechter, Michael. "Rational Choice Theory and the Study of Race and Ethnic Relations." In *Theories of Race and Ethnic Relations*, pp. 264-279. Edited by John Rex and David Mason. Cambridge: Cambridge University Press, 1988.

Hechter, Michael, Debra Friedman, and Malka Appelbaum. "A Theory of Ethnic Collective Action." *International Migration Review* 16:2 (Summer 1982), pp. 412-434.

Hill, Mark E. "Color Differences in the Socioeconomic Status of African American Men: Results of a Longitudinal Study." *Social Forces* 78:4 (June 2000), pp. 1437-1460.

Horton, James Oliver (ed.). *Free People of Color: Inside the African American Community*. Washington, D.C. and London: Smithsonian Institution Press, 1993.

Johnson, Whittington B. *Black Savannah, 1788-1864*. Fayetteville: University of Arkansas Press, 1996.

Komlos, John. "Toward an Anthropometric History of African-Americans: The Case of Free Blacks in Antebellum Maryland." In *Strategic Factors in Nineteenth Century American Economic History: A Volume to Honor Robert W. Fogel*, pp. 297-329. Edited by Claudia Goldin and Hugh Rockoff. Chicago: University of Chicago Press, 1992.

Mason, Patrick L. "Annual Income, Hourly Wages, and Identity Formation among Mexican Americans and other Latinos." Working paper, Florida State University (December 2001).

Murguia, Edward and Edward E. Telles. "Phenotype and Schooling among Mexican Americans." *Sociology of Education* 69:4 (October 1996), pp. 276-289.

McElreath, Richard, Robert Boyd, and Peter J. Richerson. "Shared Norms Can Lead to the Evolution of Ethnic Markers." Working paper, UCLA (undated).

Oaxaca, Ronald. "Male-Female Wage Differentials in Urban Labor Markets." *International Economic Review* 14:3 (October 1973), pp. 693-709.

Penha-Lopes, Vania. "What Next?" *Journal of Black Studies* 26:6 (July 1996), pp. 809-826.

Reiss, Albert J., Jr., with Otis Dudley Duncan, Paul K. Hatt, and Cecil C. North. *Occupations and Social Status*. New York: The Free Press, 1961.

Reuter, Edward B. *The Mulatto in the United States, Including a Study of the Role of Mixed-Blood Races throughout the World*. Richard G. Badger, 1918.

Schelling, Thomas, *Micromotives and Macrobehavior*. New York: W.W. Norton & Co., 1978.

Seltzer, Richard and Robert C. Smith. "Color Differences in the Afro-American Community and the Differences They Make." *Journal of Black Studies* 21:3 (March 1991), pp. 279-286.

Williamson, Joel. *New People: Miscegenation and Mulattoes in the United States*. New York: New York University Press, 1984.

Yinger, J. Milton. "Intersecting Strands in the Theoresation of Race and Ethnic Relations." In *Theories of Race and Ethnic Relations*, pp. 20-41. Edited by John Rex and David Mason. Cambridge: Cambridge University Press, 1988.

Zack, Naomi. *Race and Mixed-Race*. Philadelphia: Temple University Press, 1993.

Table1: Descriptive Statistics for Economic and Demographic Variables by Household Type (standard errors)

	Male-Headed Households		Female-Headed Households	
Variable	Blacks	Mulattoes	Blacks	Mulattoes
Total Wealth	231.57	844.15	168.79	613.17
	(1029.85	(3153.33)	(825.75)	(2159.78)
Age	40.46	39.52	42.34	40.55
	(11.61)	(10.96)	(13.04)	(12.95)
Socioeconomic	12.389	16.373	8.175	8.43
Index (SEI)	(9.47)	(12.81)	(7.93)	(9.94)
Illiterate	0.393	0.214	0.372	0.234
Number in House	4.608	5.128	3.800	4.191
	(2.40)	(2.58)	(2.28)	(2.46)
Males (20+) in House	1.291	1.380	0.499	0.550
	(0.68)	(0.76)	(0.81)	(0.96)
OCCUPATIONAL CLASSIFICATIONS				
Professionals	0.010	0.015	0.003	0.001
Proprietors/Mgrs	0.014	0.043	0.006	0.011
Clerk/Sales	0.010	0.018	0.014	0.006
Crafts	0.094	0.292	0.039	0.126
Operatives	0.302	0.146	0.063	0.013
Service	0.157	0.178	0.490	0.335
Laborers	0.350	0.203	0.060	0.023
NATIVITY				
Interstate Migrant	0.053	0.095	0.069	0.112
International	0.007	0.027	0.012	0.039
Immigrant				
CITY OF RESIDENCE				
Baltimore, Md	0.724	0.320	0.462	0.175
Baton Rouge, La	0.001	0.017	0.003	0.017
Charleston, SC	0.020	0.096	0.067	0.179
Frederick, Md	0.024	0.034	0.018	0.023
Louisville, Ky	0.036	0.038	0.043	0.031
Mobile, Al	0.003	0.044	0.007	0.038
Nashville, Tn	0.010	0.012	0.015	0.027
New Orleans, La	0.064	0.355	0.118	0.357
Petersburg, Va	0.090	0.035	0.189	0.065
Richmond, Va	0.026	0.050	0.077	0.089
# Observations	3,647	2,089	1,939	1,432

Table 2: Regression Results for Total Wealth, Black and Mulatto Heads of Households (std errors)

Panel A: Ordinary Least Squares - Wealth Levels

	Black Men	Mulatto Men	Black Women	Mulatto Women
Age	22.27	24.09	-10.42	35.63
	(8.74)	(39.78)	(8.31)	(25.98)
Age Squared	-0.150	0.19	0.18	-0.32
	(0.10)	(0.47)	(0.09)	(0.29)
SEI	9.237	35.29	0.22	-9.73
	(1.75)	(5.37)	(2.38)	(5.98)
Interstate Migrant	163.57	-324.37	-54.60	25.97
	(76.18)	(241.99)	(77.81)	(191.98)
Immigrant	1529.11	314.46	1166.39	745.38
	(205.79)	(422.57)	(171.19)	(302.11)
Illiterate	-101.44	-386.04	-74.11	-348.49
	(35.90)	(180.30)	(43.95)	(161.69)
Number House	19.10	26.13	15.96	21.09
	(7.78)	(29.45)	(9.13)	(26.33)
Males in House	-16.51	157.17	2.21	52.90
	(27.51)	(99.52)	(25.98)	(67.45)
Constant	-646.91	-1606.35	135.04	-630.54
	(186.63)	(821.01)	(178.65)	(554.24)
Adj R-square	0.09	0.07	0.10	0.04

Panel B: Ordinary Least Squares - log Wealth

Age	0.08	0.05	0.06	0.04
	(0.01)	(0.02)	(0.01)	(0.02)
Age Squared	-0.0006	-0.0002	-0.0005	-0.0003
	(0.0001)	(0.0002)	(0.0002)	(0.0002)
SEI/100	2.56	2.59	0.84	0.96
	(0.25)	(0.29)	(0.39)	(0.45)
Interstate Mover	0.12	-0.06	0.01	0.19
	(0.11)	(0.13)	(0.13)	(0.15)
Immigrant	1.29	0.18	0.43	0.90
	(0.30)	(0.23)	(0.28)	(0.23)
Illiterate	-0.28	-0.25	0.14	-0.16
	(0.05)	(0.10)	(0.07)	(0.12)
Number House	0.07	0.09	0.08	0.06
	(0.01)	(0.02)	(0.02)	(0.02)
Males in House	0.007	-0.02	0.14	0.05
	(0.04)	(0.05)	(0.04)	(0.05)
Constant	1.22	1.70	1.13	1.99
	(0.27)	(0.44)	(0.30)	(0.42)
Adj R-square	0.19	0.22	0.26	0.20

Table 2 - continued

Panel C: Median Regression - Wealth Levels

	Black Men	Mulatto Men	Black Women	Mulatto Women
Age	2.15	-4.83	0.62	0.83
	(0.44)	(1.44)	(0.18)	(0.54)
Age-Squared	-0.02	0.10	-0.006	-0.008
	(0.005)	(0.02)	(0.002)	(0.006)
SEI	1.25	3.76	0.14	0.82
	(0.09)	(0.19)	(0.05)	(0.12)
Interstate Migrant	1.11	4.09	1.46	31.30
	(3.86)	(8.71)	(1.70)	(3.99)
Immigrant	115.22	7.97	-1.57	436.45
	(10.26)	(15.17)	(3.68)	(6.28)
Illiterate	-6.47	-2.18	5.09	1.54
	(1.83)	(6.49)	(0.96)	(3.36)
Number House	1.99	7.96	1.02	2.85
	(0.40)	(1.06)	(0.20)	(0.55)
Males in House	1.65	5.71	3.70	3.82
	(1.39)	(3.60)	(0.57)	(1.40)
Constant	-33.31	10.27	2.88	-6.39
	(9.50)	(29.61)	(3.92)	(11.47)
Pseudo R-square	0.02	0.02	0.04	0.01

Panel D: Median Regression - log Wealth

Age	0.06	0.02	0.03	0.01
	(0.01)	(0.02)	(0.007)	(0.009)
Age-Squared	-0.0005	0.0001	-0.0003	-0.0001
	(0.0001)	(0.0002)	(0.00008)	(0.0001)
SEI/100	2.28	3.13	0.60	1.84
	(0.23)	(0.30)	(0.20)	(0.21)
Interstate Migrant	0.04	0.01	0.05	0.46
	(0.10)	(0.14)	(0.07)	(0.07)
Immigrant	0.55	0.15	-0.05	2.11
	(0.26)	(0.24)	(0.14)	(0.10)
Illiterate	-0.15	-0.13	0.18	-0.02
	(0.05)	(0.10)	(0.04)	(0.06)
Household Size	0.04	0.12	0.04	0.05
	(0.01)	(0.02)	(0.007)	(0.009)
Males in House	0.02	-0.02	0.11	0.07
	(0.03)	(0.06)	(0.02)	(0.02)
Constant	1.87	2.14	2.29	2.81
	(0.25)	(0.46)	(0.15)	(0.19)
Pseudo R-square	0.06	0.11	0.18	0.08

Notes: Standard errors in parentheses. All regressions include unreported city dummies that are jointly significant in all specifications.

Table 3: Regression Decompositions, Racial Wealth Gap

	Male-Headed Households		Female-Headed Households	
	Mulatto Functions	Black Functions	Mulatto Functions	Black Functions
OLS - Wealth Levels				
1. Evaluated at mulatto means	$836.82	$516.04	$577.82	$334.03
2. Evaluated at black means	398.96	216.84	284.92	157.40
3. Unadjusted differential	612.58	612.58	444.38	444.38
4. Explained Gap (1)-(2)	437.86	299.21	292.90	176.63
(% of undadjusted gap)	(71.5%)	(48.8%)	(65.9%)	(39.8%)
OLS - Log Wealth				
1. Evaluated at mulatto means	4.78	4.52	4.47	3.91
2. Evaluated at black means	4.21	3.87	3.90	3.33
3. Unadjusted differential	0.98	0.98	1.00	1.00
4. Explained Gap (1) - (2)	0.58	0.65	0.57	0.58
(% of unadjusted gap)	(59.1%)	(67.0%)	(57.0%)	(58.0%)
Median Regression - Wealth Levels				
1. Evaluated at mulatto means	127.76	99.41	82.74	97.07
2. Evaluated at black means	86.80	51.93	48.94	40.63
3. Predicted differential*	75.84	75.84	42.11	42.11
4. Explained Gap (1)-(2)	40.96	47.49	33.80	56.44
(% of unadjusted gap)	(54.0%)	(62.6%)	(80.3%)	(134.0%)
Median Regression - Log Wealth				
1. Evaluated at mulatto means	4.46	4.23	4.05	3.66
2. Evaluated at black means	4.05	3.86	3.57	3.16
3. Predicted differential*	0.61	0.61	0.88	0.88
4. Explained Gap (1)-(2)	0.41	0.38	0.48	0.50
(% of unadjusted gap)	(68.3%)	(62.9%)	(53.9%)	(56.4%)

Note: See text for discussion of regression decomposition. * We use the predicted differential here because the unconditional medians were the same ($50) for blacks and mulattoes.

Sources: calculations based on regressions reported in Table 2; data from 1860 population census manuscripts.

Table 4: Relationship between Size and Density of the Mixed-Race Population and Unexplained Wealth Gap
Dependent variable: unexplained portion of wealth gap using coefficients from Table 2, Panel A

Variable	Males Coefficient Estimate (Std Error)	Females Coefficient Estimate (Std Error)
Log(Mulattoes in Ward)	0.27	0.20
	(0.18)	(0.22)
Log(Mulattoes in City)	0.60	0.43
	(0.30)	(1.29)
Log(African-Americans in Ward)	-0.47	-0.26
	(0.22)	(0.26)
Log(African-Americans in City)	-0.46	-0.23
	(0.27)	(1.16)
Mulattoes/African-Americans in Ward	-0.01	-0.007
	(0.006)	(0.005)
Mulattoes/African-Americans in City	-0.005	-0.001
	(0.008)	(0.03)
African-Americans/All in Ward	0.02	0.006
	(0.008)	(0.01)
African-Americans/All in City	-0.02	-0.01
	(0.01)	(0.01)
Adjusted R-square	0.12	0.15
Number of Observations	2,088	1,432

Note: See text for explanation of variables and estimation procedure. Standard errors adjusted to account for clustering of the data by ward.

Source: See Tables 1, 2 and 3.