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THE ECONOMICS OF IDENTITY AND THE ENDOGENEITY OF RACE

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ABSTRACT

Economic and social theorists have modeled race and ethnicity as a form of personal identity produced in recognition of the costliness of adopting and maintaining a specific identity. These models of racial and ethnic identity recognize that race and ethnicity are 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. 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 that mulatto identity. Adopting a mulatto identity generates pecuniary gains, but imposes psychic costs. Our empirical results imply that race is contextual and that there was a large pecuniary benefit to adopting a mixed-race identity.

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The Economics of Identity and the Endogeneity of Race

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

1. Introduction

Economic and social theorists have modeled race and ethnicity as a form of personal identity adopted in response to the costliness of 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 contextual 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 today's mixed black-white children self-identify as black, 17 percent self-identify as white, and the remaining 8 percent prefer not to select a single racial designation. About 10 percent of mixed-race youth adopt one racial designation at school and a different one at home. It is evident that among modern mixed-race youth racial 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 or may not be selected to distance oneself from a subordinate group or to improve one's standing with or acceptance into the dominant group. In a study of people of Mexican descent, Mason (2001) tests a model in which acculturation is a dominant strategy, and finds that light-

complexed 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 in life that by assimilating or acculturating they can defuse negative stereotypes and attain more than their dark-complexed counterparts. Later in life, light-skinned Mexicans are able to increase their incomes by adopting a non-Hispanic white identity (Mason 2001). Yet there may also be situations in which members of the subordinate group decide to maintain identities separate from the dominant group.

Our 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 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 test the model empirically. We find that African Americans were more likely to identify as mulatto when there were already a substantial number of other mulattos who had formed social networks and established a community. Yet, the probability of declaring a mulatto identity declined with the size and extent of the African-American community. We interpret this to mean that if blacks ostracized mulattos for separating themselves socially and economically, then the larger the black community (holding the number of mulatto households constant) the more costly it was to be ostracized. Similarly, whites became less accepting of a mulatto's distinctiveness as the city became increasingly African American and thus showed mulattos fewer preferences.

Once we demonstrate that the choice of a mulatto identity was associated with racial composition of the individual's neighborhood and city, we then investigate the economic consequences of adopting a mulatto identity.² We estimate differences in wealth between blacks and mulattoes and find that mixed-race householders, both male and female, accumulated more

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

² It is likely that these two measures are jointly determined. If the wage differential that can be received by individuals choosing to "pass" increases, this will cause more to make this choice. If more individuals choose to pass, this will change the wage differential. We return to this concern in our discussion of community effects and in our closing remarks.

wealth than black householders. Regression decompositions suggest that a substantial portion of the wealth gap was due to racial identification and to community factors. Consistent with our model, we find that mixed-race people realized smaller advantages relative to blacks as the size of the African-American community increased both absolutely and relatively. Thus, mixed-race people benefited when they could form a distinct intermediate racial class, standing between the dominant white and subordinate black communities.

2. The Economic and Social Consequences of Complexion

Social scientists have long concerned themselves with the 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 or contextual (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 legal conventions. For instance, an individual of African-American heritage may identify as mixed-race but not as white, in most cases.

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 explanations. 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 mulattos 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 closely guarded. Whiteness inhered certain privileges, some of which mulattos enjoyed that blacks did not. In some parts of the antebellum South, for example, mulattos 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, mulattos 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 the cost of coordination and enforcement. Thus, in the antebellum South, whites may have been more receptive to the inclusion of mulattos 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 modern 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. 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 Schelling (1978) observed, people may rely on “information that is color-discriminating.” If enough people believe that dark-skinned individuals are somehow different from light-skinned individuals, whether economically, socially or intellectually, the population at large will tend to consciously or unconsciously adopt those same markers as emblematic of status or ability.

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.³ Color, not action or qualifications, may then 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

³ Moreover, the extent to which there is repeated interaction—with members of both the dominant and subordinate cultures—will affect the ease with which a person assimilates. The frequency of interaction may depend on community size.

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, black on 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 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 (to a point), 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 decision to adopt a black or mulatto identity using game-theoretic techniques. Later sections estimate the economic extent of the mulatto advantage in late antebellum America.

3. 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 a group to limit the availability of opportunities to another group in addition to limiting the opportunities available to members of one's *own* 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.]

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 then 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 than 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. 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 continuum of abilities among the school-age population and find that there will be capable students who exert little effort as well as those who select higher levels of effort consistent with ability. This weighing of opportunity and 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 the much commented on 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.⁴ 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 requirements. A similar motivation is less likely to have been operative in the 1860’s, when the identity of whites also was at stake

⁴ James Baldwin wrote that those who cross the line ‘do so at the grave expense of double alienation’ (quoted in Talty 2003, p. 144). Baldwin was reflecting on the risks of selecting a part-white identity. There was no guarantee that whites would embrace and reward a person’s intention to assimilate to the white norm, but there was a good chance that blacks would reject and punish assimilators when they interacted with members of the black community. Mixed-race individuals who professed their ‘blackness’, on the other hand, faced fewer opportunities in white society, but were more accepted in black society. It is interesting to note, in this regard, that W.E.B. Du Bois and Booker T. Washington made social and political statements with their choices of identity. Du Bois downplayed his white heritage and addressed a largely black audience. Booker T. Washington used his part-white heritage to gain access to a white audience. Du Bois and Washington are still viewed very differently by African-American scholars. We thank Gregory Price for reminding us of this.

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 mulattos' 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. By moving first, those in the majority can anticipate the effect their choice will have on the lower class. 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 identical to or different from the manner in which a black individual would be employed. There is a direct advantage as well as an indirect disadvantage to the employer in 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.⁵

⁵ We have anthropomorphised the population as an individual, but this is common in both the formal and informal modeling of the literature to greater or lesser degree (usually greater, if only implicitly).

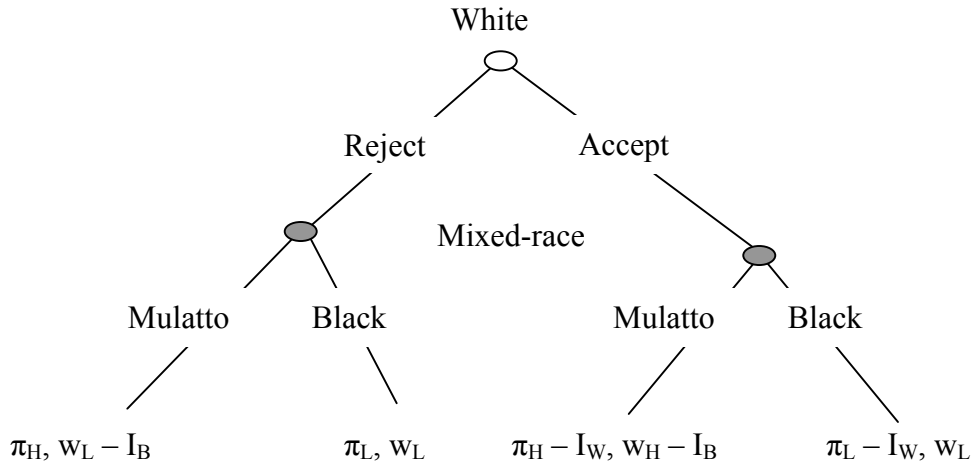


Figure 1. An extensive form game in which White moves first, choosing to ‘Accept’ or ‘Reject’. Mixed-race moves second, choosing ‘Mulatto’ or ‘Black’. Payoffs to White are given first. The payoffs are related as follows: $\pi_H > \pi_L > 0$, $w_H > w_L > 0$, $I_W > 0$, and $I_B > 0$.

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, 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 mulattos 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 will be 'Accept, Black' if $\pi_H - \pi_L > I_W$ and $I_B > w_H - w_L$, 'Accept, Mulatto' if $\pi_H - \pi_L > I_W$ and $w_H - w_L > I_B$, or 'Reject, Black' when $I_W > \pi_H - \pi_L$. 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.

4. Data

This study uses a large, self-weighted, regionally representative sample of all African Americans residing in the urban South in 1860. Information is drawn from the original manuscripts of the 1860 census for the cities of 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 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 exploring 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 certain outward appearances. Indeed, the directions given to marshals are singularly unhelpful in understanding how the determination was made. Printed directions given to the marshals state that, for free persons, a black “without admixture” is to be classified as black, and all mixed-blood people as mulattos (IPUMS 2003). Although we cannot determine exactly how racial classifications were arrived at – whether race was self-reported or attributed by the marshal – it is likely, given the direction provided, that marshals categorized persons according to locally accepted demarcations.

If we look to other sources for clues as to how citizens and marshals came to an understanding of racial classification, we see that racial classification involved an intricate hierarchy based on complexion. In his study of nineteenth century freedom papers in Maryland, Komlos (1992) finds no fewer than eight common skin-tone classifications, including dark, light, brown, copper, yellow, mulatto, bright, and chestnut. Bodenhorn (2002) finds an equal number in Virginia. Census marshals were forced to condense this intricate classification system into a dichotomous black/mulatto classification scheme. If we place African-American skin tones on a continuum from nearly white at one end to very black at the other (two common classifications

in the antebellum South), we can imagine a system in which census marshals were forced to inquire into many people's racial heritage. There is thus strong support for treating race as an endogenous choice, but we can further quantify the proportion of the population with the ability to choose. African-Americans otherwise classified as 'nearly white' may have been entered as 'mulatto' in the census regardless of that individual's personal choice of identity. Similarly, 'very black' individuals were likely entered as 'black' by the marshal regardless of their preferred social group affiliation. In Maryland's recorded freedom papers, 38.2 percent of African-Americans were identified as dark or black. Those classified as light (12.7%), yellow (7.1%), and bright (1.6%) accounted for another 21.4 percent of Maryland's African Americans, whom the marshals were likely to enter as mulattos regardless of their preferred more specific racial identity (Komlos 1992). This leaves 40.4 percent of the African American community to be classified on some basis—the marshal's decision, self-identification, or some locally accepted understanding.

Telles (2002, undated) and Telles and Lim (1998) provide detailed studies of racial classification in Brazil in the 1990s. These studies may provide valuable insight into antebellum racial classification practices because Brazil, like the antebellum United States but unlike the post-Civil War U.S., did not embrace a dichotomous racial classification scheme (Davis 1991). Indeed, a national survey of Brazilians in 1976 revealed the use of more than 100 racial designations, but six designations accounted for more than 97 percent of the responses (Telles, undated). This is comparable to the dozens of color designations found in the freedom papers given to free blacks, with the predominance of a half-dozen common terms, such as black, brown, mulatto, bright mulatto, dark mulatto, and yellow. The issue of concern in the Brazilian

studies, as it is here, is the concordance between self-description and interviewer classification. Telles (undated) reports that 79 percent of Brazilians were assigned the same racial classification by interviewers that they themselves adopted. Interestingly, the interviewers and subjects both classified 55 percent of the population white, but the remainder was perceived by interviewers as slightly more brown (versus black) than by the subjects. We must recognize that transferring the information gleaned from their rich data on perception to our data on wealth may be difficult due to potentially significant differences in time and place between the two societies studied.

Ultimately, it may be advantageous in our study that census marshals categorized the race of enumerated individuals because racial determinations were thus made by white, educated interviewers and because the marshals were “especially likely to be in positions in which decisions about racial classification affect[ed] the incomes of the persons being classified” (Telles and Lim 1998, p. 467). This matches the structure of our model: both parties that face benefits and costs are represented in the determination of identity. Moreover, if our assumption that marshals determined a respondent’s racial category is correct, it should bias the results against finding racial differences. Taking the data from modern Brazil as a guide, self-classification versus interviewer-identification of race has little effect on black-brown differences in income (Telles and Lim 1998, pp. 469-70).

Although our data on wealth accumulation are not as rich as that used in modern studies of racial differences (see Blau and Graham 1990; Altonji, Doraszelski and Segal 2000), they are rich enough to investigate differences in economic outcomes between blacks and mulattos. 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 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 personal property. 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 robust to the assignment of different reasonable values. 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.

5.Choice of Identity and 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. It follows that 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, mulattos risked severing their ties with the black community even while they were seldom openly welcomed into the white community. Mixed-race individuals, then, were more likely to adopt a mulatto identity when there were other mulattos nearby. 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 adopt a racial identity and affiliate with a racial group the larger and the more residentially concentrated it is.

To estimate the likelihood of an African American adopting a mulatto identity, we estimate a standard probit specification, where the probability of selecting a mulatto identity is a function of individual, neighborhood, and city characteristics. The variables believed to be among the more important determinants of a fair-complected African American's decision to claim a mulatto identity include the absolute size of the mulatto community (measured in households headed by mulattos) at the census ward level; the absolute size of the entire African American community (mulatto plus black households) at the city level; and the relative size of the African-American community to the total community (African Americans plus whites) in the city.

Our choice of these three variables was driven by both theoretical and pragmatic considerations. The pragmatic reason is that among the set of available variables believed to capture community effects, these were the only three that were not highly and jointly collinear. The three also have theoretical appeal. As previously mentioned, an individual's desire to adopt a particular racial designation is likely to depend on the number of other individuals in the neighborhood (defined here as the census ward) adopting a like designation. If in selecting a mulatto identity I alienate blacks, the psychic costs to me of doing so will be smaller the greater the number of other mulattos in my neighborhood, because I can still maintain identity with some group. Similarly, the benefits of selecting a mulatto identity may rise rapidly in the number of others selecting a similar designation due to economies of scale in providing community amenities and establishing community organizations, such as churches, gardening clubs, and literary societies.

The latter two variables reflect responses of the white community to the absolute and relative size of the African-American community. We include the absolute size of each city's African American population because whites were protective of their 'whiteness', and their willingness to confer the privileges of part-whiteness to light-complected African Americans may have depended on the absolute size of the African American community. The larger the black community, holding the number of mulattos constant, the lower the whites' psychic cost of conferring privileges to mulattos because 'whiteness' would retain its exclusivity. Yet as the black community increases, holding the number of mulattos constant, a mulatto's racial distinctiveness may have been overwhelmed by the mass of 'blackness.' In these instances, the payoff to whites of advantaging mulattos over black may have been diminished.

We also include the percentage of African Americans to the total population to capture white response to not only an increasing absolute black population, but an African American population that was increasing relatively. An increasing black population, holding the number of mulattos constant, may have had negative consequences for those adopting a mulatto identity. Blacks were often hostile toward a mulatto elite and whites may have been less willing to recognize any African American's whiteness if they felt threatened by a large and growing African American population. This is also consistent with Telles' (undated) finding that racial ambiguity (differences between self-reported and interviewer reported race) in Brazil is greater in areas with lower proportions of whites.

Before reporting the regressions, we must note a number of nontrivial empirical issues. We use the logarithm of the number of mulatto households in the ward and the number of African-American households in the city because initial trials suggested nonlinearities in the relationships. Log specifications were the most parsimonious specification. Because the independent variables are independent across, but not within wards, the standard errors are decreased using STATA's (2001) *cluster* command, which corrects the covariance matrix to recognize correlation within groups, but does not change the estimated coefficients.

We must also choose the relevant extent over which network effects⁶ act. Sarnikar (2002) contends that inferences must be drawn cautiously. We observe, for example, that an individual's choice is correlated with the choices of others, but we cannot determine whether that choice is due to social interaction effects or to some other unobservable characteristic(s) common to all individuals in the group. The issue is one of identifying the relevant reference group. Are all the inhabitants of the census ward the relevant reference group, or were social

interactions confined to more compact neighborhoods? The more compact the unit of observation, the more likely the results will be driven by common unobservable characteristics. Because wards were relatively large (several hundred to a few thousand households, depending on the city), it seems unlikely that there was a common unobservable characteristic driving the choice of racial identification.

Similarly, we cannot rule out endogenous self-selection into neighborhoods (Sarnikar 2002). Evans, Oates and Schwab (1992) demonstrate that, in certain circumstances, peer group effects disappear when the endogenous choice of peer group is controlled for. But because the relevant peer group is aggregated to the relatively large ward level in this study, we believe that the endogenous choice of neighborhood is not as serious an issue as it would be if we were considering choices at a less aggregated level.

Panel A of Table 2 reports the baseline regression, which regresses the three community variables on the dichotomous complexion variable (mulatto = 1). The independent variables take on the expected signs and are statistically significant. As expected, an increase in the number of residents in an individual's ward adopting a mulatto identity increases the probability that an individual adopted a mulatto identity. In both male- and female-headed households, the size of the mulatto community had the largest marginal effect on an individual's racial identification. Holding constant the size and proportion of the African American community, a one percent increase in the log number of mulatto households increased the probability of adopting a mulatto identity by 17 percent. But, holding constant the number of mulatto households in a ward, a one percent increase in the number of African-American households in a city decreased the probability that an individual would be identified as mulatto by 11.6 percent. As the African

⁶ A network effect or network externality exists whenever one person's choices affect others' utility received

American population made up a larger percentage of a city's total population, individuals became less likely to identify as mulatto. The marginal effect is small, but meaningful and statistically significant. A one percentage point increase in the proportion of a city's population that was African American decreased the likelihood of identifying as mulatto by about 2 percent.

Yinger's (1986) hypothesis indicates that the probability of adopting a mulatto identity should increase in the number of neighbors of like kind because a larger group with a common heritage will be better positioned to establish a viable community independent of blacks and whites. Our result is consistent with his hypothesis. The logarithmic specification and its superiority to (unreported) linear specifications also imply that the benefits increase rapidly at small numbers of households, but slowly at larger numbers of households. This is consistent our reading of the historical literature (Bogger 1997, Frazier 1957, Horton 1993, Johnson 1996, Williamson 1984), which holds that when there were relatively few mulatto households in a neighborhood, whites held these few mulattos in higher regard than blacks and offered them various privileges, including access to education, church membership, craft training and other social and economic advantages. The psychic cost to whites of recognizing a mulatto's whiteness was low when there were few mulattos in the neighborhood. As the number of mulatto households increased, however, an expansive definition of 'whiteness' diminished the value of being white or partly white. Whites became less willing to privilege partial whiteness and labored to narrow the definition of whiteness so as to exclude even many mulattos. The value of group attachment as a form of identity is obvious in this instance, particularly when the group was large enough to form a viable community, independent of white privilege.

We add the household's reported aggregate wealth (real plus personal estate) as an additional regressor in Panel B of Table 2. Again, much of the historical and contemporary literature addressing the privileges associated with lighter complexions (Frazier 1957, Graham 1999) holds that "money whitens." In other words, wealthier individuals are more likely to identify as mulatto, for a given complexion, than less wealthy respondents. Including wealth in the estimated equation has no effect on size or significance of the community variables. Greater wealth, indeed, increased the probability that a given householder would be identified as mixed-race. The effect is positive and statistically significant in both the male and female equations, but the estimated marginal effect for males is more than twice that for female householders. A one percent increase in a male householder's log wealth increased the likelihood of his identifying as mulatto by about 12 percent; a female's by about 5 percent.

In Panel C of Table 2, we also report male and female specifications including several other individual and household characteristics (wealth is excluded because it is strongly correlated with several of the other variables). Again, the inclusion of individual and household characteristics does not substantially alter the size or significance of the community variables. Among male-headed households, after controlling for community effects, an increase in the Socioeconomic Index (a higher-paying or more respected employment) increased the likelihood of identifying as a mulatto, as did whether the immigrant had immigrated, or lived in a larger household. If the household head was illiterate, he was significantly less likely to identify as mulatto. For a female-headed household, the Socioeconomic Index of the head had a smaller and less statistically significant marginal effect on the probability that she would be identified as mulatto. Unlike for males, immigrant status and household size had no significant influence on a

woman's racial identity. Illiteracy, however, substantially reduced the probability that a woman was identified as mulatto, and the effect is somewhat stronger among women than men.

Like Telles (undated, p. 25) we interpret the results to imply that racial classification "is not merely ambiguous or situational, both of which suggest randomness, but rather is structured by particular characteristics of the population and urban contexts." The principal variables included in the regressions reflect our theoretical assertion that mixed-race individuals were more likely to adopt a mulatto identity when they had the support of a relatively large group of similar individuals. The number of other mulatto heads of household in the ward reflect the size of the group with which an individual would be most likely to have personal relationships. That the number of mulattos in the ward positively and strongly influences an individual's choice of mulatto identity is consistent with our belief that there are economies of scale in establishing a community and all the trappings that go with a legitimate community – schools, churches, clubs, and other organizations. The city population variables, on the other hand, capture how whites and blacks responded to the desire of mixed-race people to adopt a separate racial identity. If, holding the number of mulattos constant, the African-American community grew absolutely large blacks could punish or ostracize mixed-race individuals who attempted to set themselves apart. Similarly, if the African-American community grew large relative to the aggregate population, whites were less inclined to show preferences to anyone with any black heritage. We now turn to whether an individual's choice of identity had any real economic consequences. An analysis of differences in wealth accumulation between blacks and mulattos indicates that identity mattered.

6. The Economic Consequences of Mulatto Self-Identity

In this section we use data on individual and community characteristics from the 1860 manuscript census to determine the magnitude of the mulatto advantage among African Americans residing in urban places. Bodenhorn (2002) demonstrates a modest advantage for mulattos living in rural areas of the antebellum South, but offers no insight into whether such an advantage arose in urban areas. Before turning to the empirical work, we briefly explain our method.

6.1 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.

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:

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

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

where the \bar{X}_b and \bar{X}_m represent the mean values of the black and mulatto household variables.

Using these two equations it is easy to show that:

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

The first bracketed term is that part of the total estimated racial wealth gap ($\hat{e}_m - \hat{e}_b$) 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.

6.2 Wealth Regressions

Before turning to the wealth decompositions, we briefly discuss the results of the underlying 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.⁷ We also include the same community variables used in the probit estimates to determine the extent to which the advantages or disadvantages of living in a large mulatto or African-American community affected wealth accumulation.

The two regression specifications (ordinary least squares estimates of wealth levels and the natural logarithm of wealth) reported in Panels A and B of Table 3 generate reasonable coefficient estimates.⁸ 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.

⁷ 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.

⁸ The same specifications were estimated using median and robust regression techniques as a check on the effect of outliers. The results were comparable in that the coefficients were similar in size and significance.

Indeed, according to the estimates for black males in Panel A of Table 3, a one-point increase in an individual's SEI score was associated with a \$9.23 increase in household wealth; for mulatto males, a point increase was associated with a \$35.00 increase in total household wealth. Evaluated at the sample mean wealth for mulattos, a one-point increase in the SEI score generated a 4.1 percent increase in wealth. Literate male household heads had accumulated significantly more than illiterate ones. The connection between literacy and wealth was weaker and less significant for women, but the costs of illiteracy were large, reducing household wealth by between \$75 for black women and \$420 for mulatto men, or about one-half of the sample average wealth in both instances. 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.

In all eight specifications, the community variables discussed previously have an economically meaningful and statistically significant effect on wealth accumulation. An increase in the number of mulatto households in the ward is associated with a decrease in wealth, interestingly, for both blacks and mulattos, though the effects are not statistically significant in most specifications. Combined with the results from the earlier probit specifications, we interpret this result to mean that a light-skinned African American was more likely to identify as mulatto the larger the size of the local mulatto community, but the driving force behind this decision was apparently not an enhanced ability to increase one's wealth. There were likely nonpecuniary benefits.

All eight specifications show that there were large costs associated with living in a large African American community. A one log point increase in the number of African American households (holding the number of mulatto households in the community constant) led to a decrease in household wealth by \$20 for black female-headed households to a remarkable \$557.47 for black, male-headed households. Given the average levels of household wealth, the negative impact of living among a large number of other African Americans was huge, as was the effect of living in an increasingly black city.

6.3 Decompositions

Although the specifics of the regression coefficients are insightful, the more important focus is on the wealth decompositions resulting from the estimates, which are reported in Table 4. 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 \$604 (\$844-\$240). Using parameter estimates from the mulatto equation (α_{0m} , β_m) to determine the importance of the racial difference in characteristics, we find that differences in economic and demographic characteristics explain 64 percent of the black-mulatto wealth gap. Using parameter estimates from the black equation for male-headed households, we can explain about 53 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 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 56 percent of the racial wealth gap. Thus, as much as 44 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 68 percent of the racial wealth gap.

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 address 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.

Our ultimate interest, however, is the consequence of adopting a mulatto or black identity given the racial heritage of other members of the community. Taking the three, previously discussed, community variables as a group, Lines 6 of Table 4 Panels A and B show that, depending on the specification, the costs of ‘blackness’ were large. The three variables, which we believe proxy for white attitudes toward blacks and mixed-race people, account for between 18 and 88 percent of the wealth gap for male-headed households. The latter figure, based on the functional relationships estimated for black men, suggests that the mulattos received highly preferential treatment and benefited economically from it. Decompositions based on data from female-headed households show a comparable effect.

7. 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.⁹

⁹ Interestingly, there is a movement among some reformers in Brazil to eliminate intermediate racial classifications because they are believed to be divisive within the nonwhite community (Telles 2002, undated) and younger Brazilians are somewhat more likely to self-identify as “black” rather than “brown”, relative to the classifications of interviewers.

Light-skinned mulattoes in Charleston, Savannah, Mobile, and New Orleans encouraged whites to distinguish them from blacks and made efforts 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 chose to ‘act white’ and were accepted as non-black. In rejecting their blackness in part or in whole, mulattos 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.

After the Civil War the adoption of the one-drop rule under Jim Crow mitigated, and eventually eliminated, the legal standing of mulattos. As a result, discussions of the relative advantages and disadvantages of mixed-race identities disappeared from public discourse. In recent years, however, the discussion has reemerged, probably as a consequence of the attention focused on the talents and racial heritages of such popular athletes and performers as Tiger Woods (black, white, Asian and Native American), Derrick Jeter (black and white), Maria Carey (black Venezuelan and white Irish), Lenny Kravitz (black and Jewish), and Halle Berry (black and white), among others.¹⁰ It is interesting, if not ironic, that in accepting her Academy Award Ms. Berry invoked the memory of Dorothy Dandridge as the first African American woman to

¹⁰ The subject is of growing interest because of the increasing number of mixed-race children, generally. The cover story on a recent issue of *Parade* (6 July 2003), distributed with many Sunday newspapers, provided some insights into the lives of several mixed-race youth and teenagers.

win an Oscar. Dandridge, a light-skinned mulatto, very much wanted to live in and be accepted by the black and white communities, but found limited acceptance in either (Talty 2003). Indeed, Dandridge may have summarized the mixed-race individual's quandary best when she wrote: "You have a part of white America in your soul, and a part of black America in your spirit, and they are pulling against one another" (quoted in Talty 2003, p. 146).

Given the so-called 'browning of America' and the recognition by the U.S. Census Bureau of people claiming multiple racial heritages, it may be time for economists to study in greater detail the consequences of mixed-race identities. It may also be time to abandon the notion that race can be captured with a dichotomous variable in empirical specifications. Race may be endogenous in certain circumstances. The issue, as well as the individual who straddles the race line, is more complex than can be captured with a binary variable. Future research should address issues of race and mixed-race by extending the existing, highly stylized models of race and by more fully investigating the causes, consequences, and interrelationships involved in an individual's choice of identity. We intend to pursue this line of investigation.

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).
- Evans, William N., Wallace E. Oates, and Robert M. Schwab. "Measuring Peer Group Effects: A Study of Teenage Behavior." *Journal of Political Economy* 100:5 (October 1992), pp. 966-991.
- 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.
- Sarnikar, Supriya. *Empirical Essays on Network Effects in Markets*. Unpublished Ph.D. dissertation, University of Arizona, 2002.
- 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.

- Talty, *Mulatto America: At the Crossroads of Black and White Culture: A Social History*. New York: HarperCollins, 2003.
- Telles, Edward E. "Self vs. Social Classification of Race: Inconsistency, Category Ambiguity and Affirmation in Brazil." Working paper, UCLA, January 2002.
- Telles, Edward E. "Racial Ambiguity among the Brazilian Population." Working paper, UCLA, undated.
- Telles, Edward E. and Nelson Lim. "Does it Matter Who Answers the Race Question?: Racial Classification and Income Inequality in Brazil." *Demography* 35:4 (November 1998), pp. 465-474.
- 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 Theorisation 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)

<u>Variable</u>	<u>Male-Headed Households</u>		<u>Female-Headed Households</u>	
	<u>Blacks</u>	<u>Mulattoes</u>	<u>Blacks</u>	<u>Mulattoes</u>
Total Wealth	231.57 (1029.85)	844.15 (3153.33)	168.79 (825.75)	613.17 (2159.78)
Age	40.46 (11.61)	39.52 (10.96)	42.34 (13.04)	40.55 (12.95)
Socioeconomic Index (SEI)	12.389 (9.47)	16.373 (12.81)	8.175 (7.93)	8.43 (9.94)
Illiterate	0.393	0.214	0.372	0.234
Number in House	4.608 (2.40)	5.128 (2.58)	3.800 (2.28)	4.191 (2.46)
Males (20+) in House	1.291 (0.68)	1.380 (0.76)	0.499 (0.81)	0.550 (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 Immigrant	0.007	0.027	0.012	0.039
NEIGHBORHOOD AND CITY CHARACTERISTICS				
Mulattos in Ward African-Americans In City	62.77 3,522	102.99 2,229	70.75 2,575	109.21 1,671
African Americans as % of Total City	14.12	10.89	15.01	11.28
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: Determinants of Identity, Probit Models
(Marginal effects reported instead of coefficient estimates to facilitate interpretation)

	Males	Females
<u>Panel A: Baseline Community Effects Regressions</u>		
Log Mulatto Households in Ward	0.175*** (7.60)	0.172*** (6.87)
Log African-American Households in City	-0.116*** (-4.89)	-0.116*** (-5.66)
African-Americans as % of All Households in City	-0.022*** (-7.18)	-0.018*** (-6.59)
Log likelihood	-3127.35	-1979.94
Pseudo R-square	0.17	0.14
<u>Panel B: Baseline Community Effects plus Household Wealth</u>		
Log Mulatto Households in Ward	0.170*** (7.90)	0.164*** (6.88)
Log African-American Households in City	-0.103*** (-4.78)	-0.104*** (-5.41)
African-Americans as % of All Households in City	-0.018*** (-7.00)	-0.013*** (-5.32)
Log Household Wealth	0.122*** (5.86)	0.054*** (6.10)
Log likelihood	-3068.73	-1936.89
Pseudo R-square	0.18	0.16
<u>Panel C: Baseline Community Effects plus Individual Attributes other than Wealth</u>		
Log Mulatto Households in Ward	0.163*** (7.28)	0.157*** (6.02)
Log African-American Households in City	-0.107*** (-4.76)	-0.109*** (-5.04)
African-Americans as % of All Households in City	-0.019*** (-7.35)	-0.018*** (-6.41)
Socioeconomic Index	0.005*** (5.46)	0.003* (1.83)
Interstate Mover	0.048 (1.49)	0.009 (0.21)
International Immigrant	0.138* (1.91)	0.103 (0.95)
Illiterate	-0.098*** (-4.31)	-0.132*** (-4.27)
Household Size	0.015*** (4.95)	0.007 (1.48)
Males in Household	-0.006 (-0.59)	-0.011 (-0.78)
Log likelihood	-3050.21	-1952.40
Pseudo R-square	0.19	0.15

Notes: z-statistics reported in parentheses. * denotes significance at 1%; ** at 5%; *** at 10%. Standard errors are robust standard errors to account for clustering of the data by ward.

Sources: See Table 1 and text.

Table 3: Determinants of Household Wealth, Black and Mulatto Heads of Households

	<u>Panel A: Ordinary Least Squares – Wealth Levels</u>			
	Black Men	Mulatto Men	Black Women	Mulatto Women
Age	22.310*** (7.26)	25.280 (39.90)	-10.302 (12.16)	35.702* (21.85)
Age Squared	-0.149* (0.08)	0.174 (0.49)	0.179 (0.16)	-0.324 (0.25)
SEI	9.232*** (2.813)	35.003*** (7.35)	0.288 (4.03)	-10.226 (6.47)
Interstate Migrant	162.739 (121.56)	-352.045* (189.90)	-57.706 (71.74)	10.897 (179.90)
Immigrant	1529.489** (667.11)	318.916 (498.78)	1168.59** (488.88)	747.669** (374.52)
Illiterate	-100.01** (39.82)	-420.105*** (115.78)	-75.237 (52.08)	-346.901*** (82.47)
Number in House	19.158** (9.03)	26.297 (42.98)	15.841* (8.12)	20.279 (19.81)
Males in House	-16.918 (40.90)	150.255 (151.43)	2.657 (35.82)	47.956 (56.91)
Log Mulatto Households In Ward	9.043 (18.14)	-202.892* (108.31)	-14.767 (25.64)	-117.096 (88.47)
Log African-American Households in City	-557.265*** (21.21)	-232.665*** (21.33)	-20.434 (41.35)	-289.180*** (19.817)
Percent African-American Households in City	-58.466*** (3.44)	-23.937*** (6.90)	-3.378 (4.68)	-30.391*** (5.41)
Constant	4809.728*** (386.89)	1517.922 (1036.73)	408.25 (432.76)	2716.174*** (513.32)
Observations	3,647	2,089	1,939	1,432
Adjusted R-Square	0.10	0.07	0.11	0.05

Table 3: continued

	<u>Panel B: Ordinary Least Squares – Wealth Logs</u>			
	Black Men	Mulatto Men	Black Women	Mulatto Women
Age	0.075*** (0.02)	0.052** (0.021)	0.056*** (0.018)	0.042** (0.021)
Age Squared	-0.001*** (0.0002)	-0.0002 (0.0003)	-0.0005** (0.0002)	-0.0003 (0.0002)
SEI	0.026*** (0.003)	0.026*** (0.004)	0.009 (0.006)	0.009 (0.008)
Interstate Migrant	0.117 (0.13)	-0.082 (0.109)	-0.0007 (0.127)	0.168 (0.179)
Immigrant	1.285*** (0.435)	0.183 (0.229)	0.433 (0.378)	0.904*** (0.287)
Illiterate	-0.279 (0.199)	-0.271** (0.108)	0.136 (0.132)	-0.160 (0.116)
Number in House	0.065*** (0.021)	0.094*** (0.016)	0.077*** (0.020)	0.062*** (0.020)
Males in House	0.008 (0.055)	-0.026 (0.063)	0.143*** (0.038)	0.041 (0.050)
Log Mulatto Households In Ward	-0.019 (0.081)	-0.144 (0.104)	-0.037 (0.065)	-0.166 (0.101)
Log African-American Households in City	-0.657*** (0.066)	-0.392*** (0.042)	-0.378*** (0.067)	-0.453*** (0.054)
Percent African-American Households in City	-0.085*** (0.013)	-0.028* (0.016)	-0.057*** (0.021)	-0.041** (0.021)
Constant	8.020*** (0.723)	5.977*** (0.660)	5.254*** (1.076)	7.085*** (0.572)
Observations	3,647	2,089	1,939	1,432
Adjusted R-Square	0.19	0.23	0.27	0.21

Notes: Standard errors in parentheses. Standard errors are robust standard errors, adjusted to account for clustering of the data by census ward. All regressions include unreported city dummy variables that are jointly significant in all specifications. * implies statistical significance at 10 percent; ** at 5 percent; and *** at 1 percent.

Sources: U.S. Census Bureau. Eighth Census (1860). Manuscript censuses.

Table 4: Regression Decompositions, Racial Wealth Gap

	Male-Headed Households		Female-Headed Households	
	Mulatto	Black	Mulatto	Black
	Functions	Functions	Functions	Functions
<u>OLS - Wealth Levels</u>				
1. Evaluated at mulatto means	\$844.55	\$562.60	\$622.92	\$357.34
2. Evaluated at black means	455.15	239.59	348.42	160.33
3. Unadjusted differential	612.58	612.58	444.38	444.38
4. Explained Gap (1)-(2)	389.94	323.01	274.50	197.01
5. Explained Gap as % of undadjusted gap	63.6%	52.7%	61.8%	44.3%
6. Percent of Unadjusted Gap explained by Community variables	18.3%	88.0%	40.8%	3.2%
<u>OLS - Log Wealth</u>				
1. Evaluated at mulatto means	4.82	4.57	4.96	4.95
2. Evaluated at black means	4.28	3.91	4.47	4.43
3. Unadjusted differential	0.97	0.97	1.00	1.00
4. Explained Gap (1) - (2)	0.54	0.66	0.49	0.52
5. Explained Gap as % of unadjusted gap	55.7%	68.0%	49.0%	52.0%
6. Percent of Unadjusted Gap explained by Community variables	26.3%	69.3%	26.0%	36.0%

Note: See text for discussion of regression decomposition.

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