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## Evidence on Discrimination in Employment: Codes of Color, Codes of Gender

William A. Darity Jr. and Patrick L. Mason

**T**here is substantial racial and gender disparity in the American economy. As we will demonstrate, discriminatory treatment within the labor market is a major cause of this inequality. The evidence is ubiquitous: careful research studies which estimate wage and employment regressions, help-wanted advertisements, audit and correspondence studies, and discrimination suits which are often reported by the news media. Yet, there appear to have been periods of substantial reductions in economic disparity and discrimination. For example, Donohue and Heckman (1991) provide evidence that racial discrimination declined during the interval 1965–1975. Gottschalk (1997) has produced statistical estimates that indicate that discrimination against black males dropped most sharply between 1965 and 1975, and that discrimination against women declined during the interval 1973–1994. But some unanswered questions remain. Why did the movement toward racial equality stagnate after the mid-1970s? What factors are most responsible for the remaining gender inequality? What is the role of the competitive process in elimination or reproduction of discrimination in employment?

The Civil Rights Act of 1964 is the signal event associated with abrupt changes in the black-white earnings differential (Bound and Freeman, 1989; Card and Krueger, 1992; Donohue and Heckman, 1991; Freeman, 1973).<sup>1</sup> Along with other im-

<sup>1</sup> Evidence on racial progress in economic status is contingent on the measure selected for consideration. While black-white earnings ratios rose for more than a decade following the passage of the Civil Rights Act, black-white family income ratios have remained in a stable, narrow band between 60 and 64 percent between 1960 and the present. The ratio actually declined below 60 percent during the 1982 recession (Darity and Myers, forthcoming). Moreover, there has been little change in black-white *per capita*

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portant pieces of federal legislation, the Civil Rights Act also played a major role in reducing discrimination against women (Leonard, 1989). Prior to passage of the federal civil rights legislation of the 1960s, racial exclusion and gender-typing of employment was blatant. The adverse effects of discriminatory practices on the life chances of African Americans, in particular, during that period have been well-documented (Wilson, 1980; Myers and Spriggs, 1997, pp. 32–42; Lieberman, 1980). Cordero-Guzman (1990, p. 1) observes that “up until the early 1960s, and particularly in the south, most blacks were systematically denied equal access to opportunities [and] in many instances, individuals with adequate credentials or skills were not, legally, allowed to apply to certain positions in firms.” Competitive market forces certainly did not eliminate these discriminatory practices in the decades leading up to the 1960s. They remained until the federal adoption of antidiscrimination laws.

Newspaper help-wanted advertisements provide vivid illustrations of the openness and visibility of such practices. We did an informal survey of the employment section of major daily newspapers from three northern cities, the *Chicago Tribune*, the *Los Angeles Times* and the *New York Times*, and from the nation’s capital, *The Washington Post*, at five-year intervals from 1945 to 1965. (Examples from southern newspapers are even more dramatic.) Table 1 presents verbatim reproductions of some of these advertisements in 1960 that explicitly indicate the employers’ preference for applicants of a particular race was, far more often than not, white applicants.

With respect to gender-typing of occupations, help-wanted advertisements were structured so that whole sections of the classifieds offered job opportunities separately and explicitly for men and women. Men were requested for positions that included restaurant cooks, managers, assistant managers, auto salesmen, sales in general, accountants and junior accountants, design engineers, detailers, diemakers, drivers, and welders. Women were requested for positions that included household and domestic workers, stenographers, secretaries, typists, bookkeepers, occasionally accountants (for “girls good at figures”), and waitresses.<sup>2</sup> The *Washington Post* of January 3, 1960, had the most examples of racial preference, again largely for whites, in help-wanted ads of any newspaper edition we examined. Nancy Lee’s employment service even ran an advertisement for a switchboard operator—

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*income* ratios for more than a century. Vedder, Gallaway, and Klingaman (1990) estimated that black income was 59 percent of white income in 1880. Darity, Guilkey, and Winfrey (1996) find that black mean income was about 60 percent of U.S. mean income in 1980 and 1990.

<sup>2</sup> The only significant exception to the help-wanted ads pattern of maintaining a fairly strict sexual division of labor that we could detect was evident in the *Los Angeles Times* employment section of early January 1945, where we found women being sought as aircraft riveters, assemblers, and army photographers. Of course, World War II was ongoing at that stage, and the comparative absence of men produced the “Rosie the Riveter” phenomenon. However, despite wartime conditions, even this temporary breakdown in gender-typing of occupations was not evident in the help-wanted ads for the *Chicago Tribune*, the *New York Times*, or the *Washington Post* at the same time. Moreover, racial preferences also remained strongly pronounced in wartime advertisements of each of the four newspapers.

presumably never actually seen by callers—requesting that all *women* applying be white! Advertisements also frequently included details about the age range desired from applicants, like men 21–30 or women 18–25. Moreover, employers also showed little compunction about specifying precise physical attributes desired in applicants.<sup>3</sup>

Following the passage of the Civil Rights Act of 1964, none of the newspapers carried help-wanted ads that included any explicit preference for “white” or “colored” applicants in January 1965. However, it became very common to see advertisements for “European” housekeepers (a trend that was already visible as early as 1960). While race no longer entered the help-wanted pages explicitly, national origin or ancestry seemed to function as a substitute. Especially revealing is an advertisement run by the Amity Agency in the *New York Times* on January 3, 1965, informing potential employers that “Amity Has Domestic’s”: “Scottish Gals” at \$150 a month as “mothers’ helpers and housekeepers,” “German Gals” at \$175 a month on one-year contracts, and “Haitian Gals” at \$130 a month who are “French speaking.” Moreover, in the “Situations Wanted” section of the newspaper, prospective female employees still were indicating their own race in January 1965.

The case of the help-wanted pages of the *New York Times* is of special note because New York was one of the states that had a state law against discrimination and a State Commission Against Discrimination in place, long prior to the passage of the federal Civil Rights Act of 1964. However, the toothlessness of New York’s State Commission Against Discrimination is well-demonstrated by the fact that employers continued to indicate their racial preferences for new hires in help-wanted ads, as well as by descriptions of personal experience like that of John A. Williams in his semi-autobiographical novel, *The Angry Ones* (1960 [1996], pp. 30–1).

Help-wanted ads were only the tip of the iceberg of the process of racial exclusion in employment. After all, there is no reason to believe that the employers who did not indicate a racial preference were entirely open-minded about their applicant pool. How successful has the passage of federal antidiscrimination legislation in the 1960s been in producing an equal opportunity environment where job applicants are now evaluated on their qualifications? To give away the answer at the outset, our response is that discrimination by race has diminished somewhat, and discrimination by gender has diminished substantially. However, neither employment discrimination by race or by gender is close to ending. The Civil Rights Act of 1964 and subsequent related legislation has purged American society of the most overt forms of discrimination. However, discriminatory practices have continued in more covert and subtle forms. Furthermore, racial discrimination is masked and rationalized by widely-held presumptions of black inferiority.

<sup>3</sup> The C.W. Agency, advertising in the *Los Angeles Times* on January 1, 1950, wanted a “Girl Model 38 bust, 25 waist, 36 hips;” “Several Other Types” with physical characteristics unspecified in the advertisement apparently also were acceptable.

Table 1

**Examples of Racial Preference in Help Wanted Advertisements  
(Selected Newspapers, 1960)**

<i>CHICAGO TRIBUNE</i> January 3, 1960	<i>LOS ANGELES TIMES</i> January 2, 1960	<i>NEW YORK TIMES</i> January 3, 1960	<i>WASHINGTON POST</i> January 3, 1960
LABORATORY TECHNICIAN Experienced, Modern southside medical center. White. Salary open. Call Vincennes 6- 3401	COMPANION. White. Lite hswk. for single lady. Must drive. Local refers. CR 1-7704	COOK, housekeeper, Negro preferred, experience essential, prominent family, permanent position, high salary, MA 7- 5369	NURSE (practical) white, for small nursing home, Silver Spring area. Car nec. Good salary. EV 4-6161
WAITRESS—White. Good tips. 7611-15 Stonely Island RE 4-8837	GIRL, white, 25–40. Lite household duties. Rm, board, sal. Apply eves. after 5, 10572 S. Vermont Ave.	COOK-hswkr., fine position, top salary + bonus. Start Jan. Must be capable, white; ref. HU 2-7222	BOYS-WHITE Age 14 to 18. To assist Route manager full or part-time. Must be neat in appearance. Apply 1346 Conn. Ave. NW, room 1006, between 9 to 11 a.m. or 3:30 to 4:30 p.m.
WHITE-Firing (Stokers) and Manage Unf. Apt. Bldg.; Sal. \$350 + Apt. Age to 50. D.P. accepted. Write MXB 152, Tribune	HOUSEKEEPER— European or Oriental—2 adults, pri. quarters, under 45. Ref. GR, 2-4891	COOK-HOUSEKEEPER EUROPEAN OWN ROOM AND BATH. FAMILY OF FOUR. LONG ISLAND HOME. \$70 WEEKLY. 7-3212 TIMES.	DINING ROOM AND CLUB MANAGER AND ASSISTANT MANAGER OVERSEAS-FAR EAST. . White, married or single, 2-year contract. . Call NA, 8-5189 Monday 8:30–12:00
Man. empl. White, for small mfg. hse. North. 4- rm. furn. apt. and sa. Write MXB 303. Tribune	HSKPR., white, 22– 45, 2 school boys, Must live in. Refs. BR, 2-7041	COUPLE, \$400–500, white for business couple with 2 adult children. Private home Forest Hills. Man to work in business. BO 3-2649.	DRIVERS (TRUCK) Colored, for trash routes; over 25 years of age; paid vacation, year-around work; must have excellent driving record. Apply SHAYNE BROS.) 1601 W St., NE
WHITE married men who can furnish and opr. late air cond. Cadillac Limo.—Good opportunity. ID 2-4864		HOUSEKEEPER-cook, European; must be honest, clean, reliable; own room & bath; other help; recent references; good salary; 70's East Side. Re 4-25581	PAINTER—White, for apts. in S.E. area; exp. Apply rm. 7, 140 Eye St., NW
SINGLE, white man— work in first class tables. Room, board + \$60 per month, CR 2-0299		HOUSEKEEPER, white, sleep out, 5 1/2 days. 10 thru dinner, experienced, must love children; recent references; East Side TR 9-6001	MEN-COLORED \$125 WEEK I will teach three men the selling profession. Earnings will start from the first day on the job. If you are ambitious you can earn as high as \$250 a week after 30 days training. Apply 705 Park Rd., NW, 9:30 to 12 noon only. See Mr. Jackson.

Table 1—continued

CHICAGO TRIBUNE January 3, 1960	LOS ANGELES TIMES January 2, 1960	NEW YORK TIMES January 3, 1960	WASHINGTON POST January 3, 1960
Brand new organization has openings in all departments for men 18 to 25, white, for immediate employment. Guaranteed weekly salary \$95. Car furnished. Call Mr. Fulton, DE 2-0589, between 9:30 and 1.			AMBITIOUS MEN (WHITE) National concern requires services of 3 neat-appearing young men, 18-35, to work in the library dept. for executive person. . . For appointment call MR ALBRIGHT, ME, 8-1484, 9 a.m. 'til 2 p.m.
TOW TRUCK DRIVERS White, also work around station. See Carl, 530 N. La Salle St.			SERVICEMEN, OFFICE WORKERS, Etc. (White), EX 3-0397 8-6:30 Mon.
DOORMAN-WHITE age 30 to 45 married. . . Neat in appearance and at least 5'11" or taller in height. . . Address MEK 149, Tribune			STUDENTS Boys, white, 14 yrs. and over, jobs immediately available. Apply 3:30-4:30 p.m., Rm. 724 9th St., NW. See Mr. Faulkner

## Statistical Research on Employment Discrimination

Economic research on the presence of discrimination in employment has focused largely on black-white and male-female earnings and occupational disparities. The position typically taken by economists is that some part of the racial or gender gap in earnings or occupations is due to average group differences in productivity-linked characteristics (a human capital gap) and some part is due to average group differences in treatment (a discrimination gap). The more of the gap that can be explained by human capital differences, the easier it becomes to assert that labor markets function in a nondiscriminatory manner; any remaining racial or gender inequality in employment outcomes must be due to differences between blacks and whites or between men and women that arose outside the labor market.

One widely used approach is to estimate a regression equation where earnings levels or occupational status is the dependent variable, explained by some combination of factors like years and quality of education, experience, job tenure, region of country, and dummy variables for race and gender. If the coefficients on the race and gender variables are statistically significant and negative in sign after controlling for other factors, that is taken as evidence of discrimination within the labor market.

A second widely used approach is to apply the Blinder-Oaxaca decomposition procedure. This procedure involves estimation of separate earnings or occupational

status regressions for a reference group—for example, all males or all white males—and all other groups whose labor market outcomes are being compared against them. The Blinder-Oaxaca technique permits the researcher to sort between the extent to which the disparity in outcomes between the reference and the comparison group is due to differences in average group endowments (human capital) of income-generating characteristics and differences in treatment (discrimination) of given characteristics. The human capital gap is captured by isolating the effects of intergroup disparity in mean values of the variables included in the regressions; the discrimination is captured by isolating the effects of intergroup disparity in the estimated values of the constant term and coefficients in the regressions. Thus, the Blinder-Oaxaca decomposition identifies the presence of discrimination when there are palpable differences in the estimated structural equations producing economic outcomes for the reference and the comparison groups.

Our general expectation is the race-gender dummy variable approach and the Blinder-Oaxaca technique should lead to the same conclusions about the presence or absence of labor market discrimination. If a race or gender dummy is statistically significant or negative in the first approach, a Blinder-Oaxaca decomposition probably will reveal that the corresponding racial or gender group suffers a loss in economic outcome due to differential treatment of given characteristics. However, the first approach obviously constrains the coefficient estimates on the productivity-linked variables to be the same for all groups, while the Blinder-Oaxaca approach does not.

## **Regression Evidence on Gender Differentials**

The 1980s and 1990s have seen a general narrowing in wage differentials between men and women. In 1981, the annual earnings of women employed full-time and year-round were 59 percent of the annual earnings of men. By 1995, this ratio was 71 percent (Blau et al., 1998, pp. 134–140). When adjustments are made in regression equations for education, job experience, and so on, the differential shrinks still further. There are at least three reasons for the narrowing of the wage gap. First, Gottschalk (1997, p. 29) shows that from 1973 to 1994, men at or below the 78th percentile of the male wage distribution experienced absolute decreases in their real wage rate. Simultaneously, the wages of women rose at all points along the female wage distribution, although women above the median received the most dramatic wage improvements.<sup>4</sup> Second, female-male gaps in human capital, especially the gap in actual market experience, have declined (Blau et al., 1998, pp. 141–184). Third, legal pressure has succeeded in expanding the range of job

<sup>4</sup> Waldfogel (1998) also reports on differences in the trend of mean earnings for men and women. Examining the hourly wage rate of men and women ages 24 to 45 for 1978, 1988, and 1994, she finds that women earned \$10.49, \$11.58, and \$11.42, respectively. However, the mean hourly wage rates for men were \$16.25, \$15.68, and \$14.95 for 1978, 1988, and 1994, respectively.

opportunities for women; hence, the level of discrimination against women appears to have declined (Blau and Kahn, 1997).

However, two substantial issues remain: the “family gap,” or the lower level of wages received by women with children (Waldfogel, 1998) and continued occupational segregation of women in lower-paid jobs. Both of these issues pose problems for the standard earnings regression framework. A respectable model of human capital must include job experience and education, but if the level of job experience and education are determined in part by social expectations of how much education women need and social patterns of who will need to take time off from work to look after children, then those variables may be embodying discrimination against women, rather than controlling for an exogenous variable. Similarly, if an earnings equation does not control for type of occupation, then it is open to the criticism that it is not comparing equivalent jobs. However, if it does control for type of occupation, and society is pushing women into particular jobs, then occupation becomes a variable that is embodying discrimination against women, rather than controlling for an exogenous factor (Mason, forthcoming-b).

There is strong evidence of a “family gap” in women’s earnings; a gap between women with children and those without. This difference goes some way to explaining the remaining overall gender gap in earnings. Waldfogel (1998) reports that the consensus estimate of the family penalty is 10–15 percent. Women with children systematically are paid a lower wage than women without children after adjusting for differences in human capital attributes. On the other hand, married men (who are much more likely to have children than unmarried men) receive a wage premium. Waldfogel shows that among workers 24 to 45 years of age, women without children receive wage rates that are 81.3 percent of men’s pay, while women with children receive wage rates that are only 73.4 percent of men’s pay. Waldfogel’s catalog of possible explanations for the family gap include unobserved heterogeneity (mothers are less motivated or supply less effort for market work than non-mothers); discrimination (employers prefer women without children); and institutional barriers to labor force participation by mothers (anemic maternity leave and child care policies as well as workplaces with inflexible workhours).

In addition, there continues to be strong evidence of occupational crowding by gender in the United States (England, 1982, 1984; Madden, 1987; King, 1992). For example, the index of occupational dissimilarity was 53 percent in 1990 (Bianchi and Spain, 1996, p. 23), which means that nearly half of women (or men) would have to change occupations to have equal gender representation in all occupations.<sup>5</sup> This is lower than the 1970 value of 68 percent, but it indicates substantial differences persist in occupational employment by gender. These differences can-

<sup>5</sup> The index of dissimilarity ( $D$ ) is calculated as:  $D = \sum_i (|f_i/F - m_i/M|) / 2 * 100$ , where  $f_i(m_i)$  is the fraction of women (men) in occupation  $i$  and  $F(M)$  represents the total number of women (men) in the labor force. A value of 100 indicates complete segregation, while a value of 0 indicates no segregation. Hence, a value of 68 percent indicates that two-thirds of women (or men) would have to obtain a new occupation in order to have equal representation in all occupations.

not be explained well by human capital differences between men and women; women continue to be more concentrated in lower-paying jobs than men with equivalent levels of education.

Intriguing evidence on gender inequality has been developed by Blau and Kahn (1996) in a cross-national study which compares gender inequality in nine OECD countries—Australia, Austria, Germany, Hungary, Italy, Norway, Sweden, Switzerland, and the United Kingdom—with the United States. Blau and Kahn (p. S30) report a seeming paradox: “1) U.S. women compare favorably with women in other countries in terms of human capital and occupational distribution; 2) the United States has had a longer and often stronger commitment to equal pay and equal employment opportunity policies than have most of the other countries in our sample; but 3) the gender pay gap is larger in the United States than in most countries.” From an international perspective, cross-national differences in human capital, occupation, and laws fail to explain the cross-national variation in gender disparity in earnings.

Instead, the major explanatory factor appears to be differences in the overall degree of inequality in the national economy. For example, Blau and Kahn (1996, p. S33) show that American and Australian women have two of the highest percentile rankings in the male wage distributions in their respective countries; in both cases, the average woman is at the 33rd percentile of the male wage distribution. However, Australian women have an hourly wage that is 73 percent of the Australian male mean, a wage ratio second only to Sweden’s 77 percent among the 10 countries studied. In contrast, American women have an hourly wage rate that is only 65 percent of the U.S. male mean, which is among the lowest of the countries studied, with Hungary and Switzerland also at 65 percent and the United Kingdom at 61 percent. Wage-setting institutions in each country appear to have a profound impact on the extent of male-female economic inequality. Countries like the United States and the United Kingdom with decentralized wage setting institutions and weaker trade unions tend to have the greatest general levels of inequality. Since those persons in the lower half of the income distribution are comparatively more penalized in the United States and the United Kingdom than elsewhere, gender inequality is worse relative to other countries as well.<sup>6</sup> For Australia, Austria, Germany, Italy, Norway, and Sweden, greater inequality in the male wage distribution can account for the higher gender gap (p. 48).

## **Regression Evidence on Racial Discrimination**

When we consider economic disparities by race, a difference emerges by gender. Using a Blinder-Oaxaca approach in which women are compared by their

<sup>6</sup> Supporting evidence for this position comes from the recent article in this journal by Fortin and Lemieux (1997, p. 89), who find that changes in the real value of the U.S. minimum wage can explain nearly one-third of the variation in female wage inequality over the past decade. This is an example of the interrelationship between overall wage equality and the male-female earnings differential.

various racial and ethnic subgroups, Darity, Guilkey and Winfrey (1996) find little systematic evidence of wage discrimination based on U.S. Census data for 1980 and 1990.<sup>7</sup> However, when males are examined using the same Census data a standard result emerges. A significant portion of the wage gap between black and white males in the United States cannot be explained by the variables included to control for productivity differences across members of the two racial groups.

Black women are likely to have the same school quality and omitted family background characteristics as black men (the same is true for white women and men). Hence, it strains credibility to argue that the black-white earnings gap for men is due to an omitted labor quality variable unless one also argues that black women are paid more than white women conditional on the unobservables. The findings of Darity, Guilkey and Winfrey (1996), Rodgers and Spriggs (1996) and Gottschalk (1997) indicate that in 1980 and 1990 black men in the United States were suffering a 12 to 15 percent loss in earnings due to labor market discrimination.

There is a growing body of evidence that uses color or “skin shade” as a natural experiment to detect discrimination. The approach of these studies has been to look at different skin shades within a particular ethnic group at a particular place and time, which should help to control for factors of culture and ethnicity other than pure skin color. Johnson, Bienenstock, and Stoloff (1995) looked at dark-skinned and light-skinned black males from the same neighborhoods in Los Angeles, and found that the combination of a black racial identity and a dark skin tone reduces an individual’s odds of working by 52 percent, after controlling for education, age, and criminal record! Since both dark-skinned and light-skinned black males in the sample were from the same neighborhoods, the study *de facto* controlled for school quality. Further evidence that lighter-complexioned blacks tend to have superior incomes and life chances than darker-skinned blacks in the United States comes from studies by Ransford (1970), Keith and Herring (1991) and Johnson and Farrell (1995).

Similar results are found by looking at skin color among Hispanics. Research conducted by Arce, Murguia, and Frisbie (1987) utilizing the University of Michigan’s 1979 National Chicano Survey involved partitioning the sample along two phenotypical dimensions: skin color, ranging from Very Light to Very Dark on a five-point scale; and physical features, ranging from Very European to Very Indian

<sup>7</sup> The 1980 and 1990 Censuses provide only self-reported information on interviewees’ race and their ancestry, which makes it possible to partition the American population into 50 different detailed ethnic and racial groups, like Asian Indian ancestry women, Mexican ancestry women, Polish ancestry women, French Canadian ancestry women, and so on. The explanatory variables were years of school, years of college, number of children, married spouse present, years of work experience, years of work experience squared, very good or fluent English, disabled, born in the United States, assimilated (that is either married to a person with a different ethnicity or having claimed two different ethnic groups in the census), location, region, and occupation. Annual earnings was the dependent variable. There was no control for the difference between potential and actual experience; hence, to the extent that the gap between potential and actual experience and the rate of return to actual experience varies by race, the results for the female regressions may be less reliable than the results for the male regression.

on a five-point scale. Chicanos with lighter skin color and more European features had higher socioeconomic status. Using the same data set, Telles and Murguia (1990) found that 79 percent or \$1,262 of the earnings differences between the dark phenotypic group and other Mexican Americans was *not* explained by the traditional variables affecting income included in their earnings regression. Further support for this finding comes from Cotton (1993) and Darity, Guilkey, and Winfrey (1996) who find using 1980 and 1990 Census data that black Hispanics suffer close to ten times the proportionate income loss due to differential treatment of given characteristics than white Hispanics. Evidently, skin shade plays a critical role in structuring social class position and life chances in American society, even between comparable individuals within minority groups.

Cross-national evidence from Brazil also is relevant here. Despite conventional beliefs in Brazil that race is irrelevant and class is the primary index for social stratification, Silva (1985) found using the 1976 national household survey that blacks and mulattos (or “browns”) shared closely in a relatively depressed economic condition relative to whites, with mulattos earning slightly more than blacks. Silva estimated that the cost of being nonwhite in Brazil in 1976 was about 566 cruzeiros per month (or \$104 U.S.). But Silva found slightly greater unexplained income differences for mulattos, rather than blacks vis-à-vis whites, unexplained differences he viewed as evidence of discrimination. A new study by Telles and Lim (1997), based upon a random national survey of 5000 persons conducted by the Data Folha Institute des Pesquisas, compares economic outcomes based upon whether race is self-identified or interviewer-identified. Telles and Lim view interviewer-identification as more useful for establishing social classification and treatment. They find that self-identification underestimates white income and overestimates brown and black incomes relative to interviewer-classification.

Despite the powerful results on skin shade, some continue to argue that the extent of discrimination is overestimated by regression techniques because of missing variables. After all, it seems likely that the general pattern of unobserved variables—for example, educational quality or labor force attachment—would tend to follow the observed variables in indicating reasons for the lower productivity of black males (Ruhm, 1989, p. 157). As a result, adjusting for these factors would reduce the remaining black-white earnings differential.<sup>8</sup>

As one might imagine, given the framework in which economists tackle the issue of discrimination, considerable effort has been made to find measures of all imaginable dimensions of human capital that could be used to test the presence of labor market discrimination. This effort has uncovered one variable in one data set which, if inserted in an earnings regression, produces the outcome that nearly all of the black male-white male wage gap is explained by human capital and none by labor market discrimination. (However, thus far no one has suggested a reasonable

<sup>8</sup> For a view that unobservable factors might favor black male productivity, thereby meaning that the regression coefficients are underestimating the degree of discrimination, see Mason (forthcoming-a).

missing variable for the skin shade effect.) The particular variable that eliminates evidence of discrimination in earnings against black men as a group is the Armed Forces Qualifying Test (AFQT) score in the National Longitudinal Survey of Youth (NLSY).

A number of researchers have confirmed with somewhat different sample sizes and methodologies that including AFQT scores in an earnings equation virtually will eliminate racial differences in wages. In this journal, June O'Neill (1990) examined the 1987 sample of men aged 22–29 who had taken the AFQT when they were interviewed seven years earlier. The average AFQT score for black men was 48 and for white men it was 73.<sup>9</sup> The unadjusted hourly wage ratio for these men was 83 percent. The ratio adjusted for region, schooling, and potential experience was 88 percent. The ratio adjusted for region, schooling, potential experience, and AFQT score was 95–96 percent, close to parity. Similarly, Maxwell (1994) looked at a cohort of men six years after leaving school, and found that the inclusion of AFQT scores in a wage regression explained two-thirds of the gap. Ferguson (1995) used the 1988–1992 samples of males aged 25–35 years, and found that while unadjusted gaps in earnings ranged between 13 to 20 percent, AFQT scores could explain one-half to two-thirds of that difference. Neal and Johnson (1996) found that AFQT scores could explain three-quarters of the black-white gap for men and all of the black-white gap for women. Neal and Johnson also found that AFQT's inclusion in log wage equations can completely explain wage differentials for Hispanic males and females.<sup>10</sup>

The conclusion of this body of work is that labor market discrimination against blacks is negligible or nonexistent. Using Neal and Johnson's (1996) language, the key to explaining differences in black and white labor market outcomes must instead rest with "premarket factors." These studies have led Abigail and Stephan Thernstrom (1997) in a prominent *Wall Street Journal* editorial to proclaim that "what may look like persistent employment discrimination is better described as employers rewarding workers with relatively strong cognitive skills."

<sup>9</sup> Interracial differences in AFQT scores appear to be more substantial than the interracial differences in the Scholastic Aptitude Test (SAT) and the National Assessment of Educational Progress (NAEP), although whites have higher scores than blacks on all three tests.

<sup>10</sup> Similar results emerge from preliminary research performed with the General Social Survey (GSS) that includes a 10-item cognitive skills test called Wordsum (White, 1997). The mean black score on Wordsum in the GSS sample was 4.72 and the mean white score was 6.21 out of the maximum possible score of 10, a difference similar in magnitude to the racial differences in AFQT scores. In an income equation controlling for age, sex, father's education, mother's education, occupational prestige, and religious affiliation, but not for Wordsum scores, the coefficient on the race variable is negative and statistically significant. But when Wordsum scores are included, the race variable actually becomes positive in sign and statistically significant! From this standpoint, blacks actually receive a positive racial premium relative to their productivity-linked characteristics, once cognitive skill is controlled via the Wordsum scores. Once again, the interpretation could be advanced that there is no statistical evidence of wage discrimination based upon these findings. But matters are not so straightforward. First, if occupational prestige is used as the labor market outcome to be explained rather than income, results change rather sharply. Even with Wordsum scores as an included variable in the prestige equation, the race coefficient remains strongly negative.

But matters are not so straightforward. The essential problem is what the AFQT scores are actually measuring, and therefore what precisely is being controlled for. There is no consensus on this point. AFQT scores have been interpreted variously as providing information about school quality or academic achievement (O'Neill, 1990), about previously unmeasured skills (Ferguson, 1995; Maxwell, 1994; Neal and Johnson, 1996), and even about intelligence (Herrnstein and Murray, 1994)—although the military did not design AFQT as an intelligence test (Rodgers and Spriggs, 1996).<sup>11</sup> The results obtained by O'Neill (1990), Maxwell (1994), Ferguson (1995), and Neal and Johnson (1996) after using the AFQT as an explanatory variable are, upon closer examination, not robust to alternative specifications and are quite difficult to interpret.

The lack of robustness can be illustrated by looking at how AFQT scores interact with other variables in the earnings equation. Neal and Johnson (1996), for example, adjust for age and AFQT score in an earnings equation, but not for years of schooling, presumably on the assumption that same-age individuals would have the same years of schooling, regardless of race. However, this assumption does not appear to be true. Rodgers, Spriggs and Waaler (1997) find that white youths had accumulated more schooling at a given age than black or Hispanic youths. When AFQT scores are both age and education-adjusted, a black-white wage gap reemerges, as the authors report (p. 3):<sup>12</sup>

. . . estimates from models that use our proposed age and education adjusted AFQT score [show] that sharp differences in racial and ethnic wage gaps exist. Instead of explaining three-quarters of the male black-white wage gap, the age and education adjusted score explains 40 percent of the gap. Instead of explaining the entire male Hispanic-white gap, the new score explains 50 percent of the gap . . . [B]lack women no longer earn more than white women do, and . . . Hispanic women's wage premium relative to white women is reduced by one-half.

Another specification problem arises when wage equations are estimated using both AFQT scores and the part of the NLSY sample that includes measures of psychological well-being (for "self-esteem" and "locus of control") as explanatory

<sup>11</sup> Indeed, if one uses a measure that, unlike the AFQT, was explicitly designed as a measure of intelligence, it does not explain the black-white gap in wages. Mason (forthcoming-b; 1996) demonstrates this by using in a wage equation an explanatory variable that comes from a sentence completion test given to 1972 respondents to the Panel Study of Income Dynamics (PSID)—a test which was designed to assess "g," so-called general intelligence. Mason finds that the significant, negative sign on the coefficient for the race variable is unaffected by inclusion of the PSID sentence completion test score as an explanatory variable. Indeed, Mason (1997) finds that although discrimination declined during 1968 to 1973, discrimination grew by 2.0 percent annually during 1973–1991. On the other hand, the rate of return to cognitive skill (IQ) was relatively constant during 1968–1979, but had an annual growth rate of 1.6 percent during 1979–1991.

<sup>12</sup> Mason (1997) finds a similar result when age and education-adjusted IQ scores are used.

variables. The presence of the psychological variables restores a negative effect on wages of being African-American (Goldsmith, Veum and Darity, 1997).<sup>13</sup>

Yet another specification problem becomes relevant if one interprets AFQT scores as providing information about school quality. But since there is a school survey module of the NLSY which can be used to provide direct evidence on school quality, using variables like the books/pupil ratio, the percent of students classified as disadvantaged, and teacher salaries, it would surely be more helpful to use this direct data on school quality rather than the AFQT scores. In another method of controlling for school quality, Harrison (1972) compared employment and earnings outcomes for blacks and whites living in the same black ghetto communities, on grounds that school quality would not be very different between them. Harrison found sharp differences in earnings favoring whites.<sup>14</sup>

One severe difficulty in interpreting what differences in the AFQT actually mean is demonstrated by Rodgers and Spriggs (1996) who show that AFQT scores appear to be biased in a specific sense. They show that if AFQT scores are treated as an endogenous variable and if equations for AFQT are estimated separately for blacks and whites, controlling for family background, school quality and psychological motivation, the coefficients for generating AFQT scores differ substantially between blacks and whites. White coefficients generate significantly higher scores for given characteristics than black coefficients.

Following the Blinder-Oaxaca approach, Rodgers and Spriggs then create a hypothetical set of "unbiased" black scores by running the mean black characteristics through the equation with the white coefficients. When those scores replace the actual AFQT scores in a wage equation, then the adjusted AFQT scores no longer explain black-white wage differences. A similar result can be obtained if actual white scores are replaced by hypothetical scores produced by running white characteristics through the equation with black coefficients.<sup>15</sup> Apparently, the AFQT scores themselves are a consequence of bias in the underlying processes that generate AFQT scores for blacks and whites. Perhaps AFQT scores are a proxy for skills that do not capture all skills, and thus leave behind a bias of uncertain direction. Or there may be other predictors of the test that are correlated with race but which are left out of the AFQT explanatory equation.

To muddy the waters further, focusing on the math and verbal subcomponents of AFQT leads to inconsistent implications for discriminatory differentials. For ex-

<sup>13</sup> Attention to the psychological measures also provides mild evidence that blacks put forth more effort than whites, a finding consistent with Mason's (forthcoming-a) speculation that there may be unobservables that favor black productivity. Mason argues that effort or motivation is a productivity-linked variable that favors blacks, based upon his finding that blacks acquire more schooling than whites for a comparable set of resources.

<sup>14</sup> Card and Krueger (1992) also directly control for school quality. They find that there is still a substantial wage gap left after controlling for school quality.

<sup>15</sup> Systematic racial differences in the structural equations for the determination of standardized test scores also are evident in the General Social Survey data. Fitting equations for Wordsum scores separately for blacks and whites also yields statistically distinct structures (White, 1997). See note 4 earlier.

ample, while a higher performance on the verbal portion of the AFQT contributes to higher wages for black women versus black men, it apparently has little or no effect on the wages of white women versus white men (Currie and Thomas, 1995). However, white women gain in wages from higher scores on the math portion of the AFQT, but black women do not. Perhaps this says that white women are screened (directly or indirectly) for employment and pay on the basis of their math performance, while black women are screened based upon their verbal skills. Perhaps this is because white employers have a greater “comfort zone” with black women who have a greater verbal similarity to whites. Or perhaps something not fully understood and potentially quirky is going on with the link between these test results and wages.

Finally, since skill differentials have received such widespread discussion in recent years as an underlying cause of growing wage inequality in the U.S. economy—see, for example, the discussion in the Spring 1997 issue of this journal—it should be pointed out that growth in the rewards to skill does not mean that the effects of race have diminished. If the importance of race and skill increase simultaneously, then a rising skill premium will explain more of the changes in *intra*racial wage inequality, which may well leave a larger unexplained portion of interracial wage inequality. For example, when Murnane et al. (1995) ask whether test scores in math, reading, and vocabulary skills for respondents in the National Longitudinal Study of the High School Class of 1972 and High School and Beyond datasets have more explanatory power in wage equations for 1980 graduates than 1972 graduates, their answer is “yes”—the rate of return to cognitive skill (test scores) increased between 1978 and 1986. However, in these same regressions, the absolute value of the negative race coefficient is larger for the 1980 graduates than it is for the 1972 graduates! These results confirm that there are increasing returns to skills measured by standardized tests, but do not indicate that the rise in returns to skills can explain changes in the black-white earnings gap very well.

The upshot is the following. There is no doubt that blacks suffer reduced earnings in part due to inferior productivity-linked characteristics, like skill gaps or school quality gaps, relative to nonblack groups. However, evidence based on the AFQT should be treated with extreme caution. Given that this one variable in one particular data set is the only one that suggests racial discrimination is no longer operative in U.S. employment practices, it should be taken as far from convincing evidence. Blacks, especially black men, continue to suffer significantly reduced earnings due to discrimination and the extent of discrimination.

### **Direct Evidence on Discrimination: Court Cases and Audit Studies**

One direct body of evidence of the persistence of employment discrimination, despite the presence of antidiscrimination laws, comes from the scope and dispensation of job discrimination lawsuits. A sampling of such cases from recent years is presented in Table 2. As the table reveals, discriminatory practices have occurred

Table 2

**Selected Court Cases Providing Evidence of Recent Employment Discrimination in the Private Sector**

<i>Employer</i>	<i>Allegations</i>	<i>Conditions of Resolution</i>	<i>Source</i>
Publix Super Markets (1997)	Gender bias in on the job training, promotion, tenure and layoff policies; wage discrimination; occupational desegregation; hostile work environment	Class-action law suit brought by 8 women (with evidence from 200 women) settled at \$81.5 million	St. Petersburg Times (February 2, 1997)
Shoney's International (1993)	Racial bias in promotion, tenure, and layoff policies; wage discrimination; hostile work environment	Victims (black employees numbering in the thousands) awarded \$105 million	The New York Times (February 6, 1993)
Brand Services, subsidiary of Waste Management, Inc. WMX Technologies, Inc. (California, 1996)	Employee fired from job solely on basis of race	Plaintiff awarded \$7.6 million	The San Francisco Examiner (April 19, 1996); The Wall Street Journal (April 22, 1996)
HBE Corporation (St. Louis, Missouri, 1996)	Discriminatory employment practices	Settlement of \$5 million	Rocky Mountain News (April 23, 1996)
US Air (1995)	Discriminatory employment practices	Confidential settlement reached among the parties, approximated at \$1.18 million for the two black pilots bringing suit against US Air.	Business Journal-Charlotte (April 11, 1994; March 25 and 27, 1995)
Harris Trust and Savings Bank (1989)	Female college graduates hired in clerical positions; males placed in better jobs; salary and training issues also	Bank agreed to pay \$14 million in back pay to women and nonwhite minority employees who joined the class-action lawsuit as part of a settlement.	The New York Times (January 11, 1989)
CSX Transportation (1995)	Racially motivated sexual harassment by a supervisor; differential treatment of black and white female employees; termination of plaintiff by supervisor after she filed a complaint.	Jury awarded \$3000 in punitive damages against the supervisor and over \$500,000 against the company	California Employment Law Monitor (July 31, 1995)

Table 2—continued

<i>Employer</i>	<i>Allegations</i>	<i>Conditions of Resolution</i>	<i>Source</i>
General Motors Corporation (1983)	Gender and racial discrimination charged in employment practices	GM settled at \$42.5 million	The Christian Science Monitor (October 20, 1983)
Texaco (1996)	Racially discriminatory hiring, promotion and salary policies	Class-action lawsuit brought by six black current and former employees settled at \$176 million.	Inter Press Service (November 20, 1996) The Chicago Tribune (January 3, 1997)
Pitney Bowes, Inc. (1996)	Racially based harassment from colleagues	Verdict awarded plaintiff \$11.1 million	Los Angeles Times (September 10, 1996)
USX Corporation (1986)	Discriminatory hiring practices	Corporation ordered to pay \$16 million, including interest	American Metal Market (August 6, 1986)
TIMCO, North Carolina Aviation Contractor (1996)	Hostile work environment based upon race and upon gender	Defendant ordered to pay \$242,600 for back wages and corrective measures	FDCH Federal Department and Agency Documents (November 20, 1996)
National Car Rental (unresolved)	Hostile work environment based upon race; discriminatory hiring and promotion practices	?	USA Today (July 9, 1997)

at highly visible U.S. corporations often having multinational operations. The suits reveal racial and gender discrimination in employment, training, promotion, tenure, layoff policies, and work environment, as well as occupational segregation.

Perhaps the most notorious recent case is the \$176 million settlement reached between Texaco and black employees after disclosure of taped comments of white corporate officials making demeaning remarks about blacks, remarks that revealed an outlook that translated into corresponding antiblack employment practices. Clearly, neither federal antidiscrimination laws nor the pressures of competitive markets have prevented the occurrence of discriminatory practices that have resulted in significant awards or settlements for the plaintiffs.

Another important source of direct evidence are the audit studies of the type conducted in the early 1990s by the Urban Institute (Mincy, 1993). The Urban Institute audit studies sought to examine employment outcomes for young black, Hispanic, and white males, ages 19–25, looking for entry-level jobs. Pairs of black and white males and pairs of Hispanic and non-Hispanic white males were matched

as testers and sent out to apply for jobs at businesses advertising openings. Prior to application for the positions, the testers were trained for interviews to minimize dissimilarity in the quality of their self-presentation, and they were given manufactured résumés designed to put their credentials on a par. The black/white tests were conducted in Chicago and in Washington, D.C., while the Hispanic/non-Hispanic tests were conducted in Chicago and in San Diego.

A finding of discrimination was confirmed if one member of the pair was offered the position and the other was not. No discrimination was confirmed if both received an offer (sequentially, since both were instructed to turn the position down) or neither received an offer. This is a fairly stringent test for discrimination, since, in the case where no offer was made to either party, there is no way to determine whether employers were open to the prospect of hiring a black or an Hispanic male, what the overall applicant pool looked like, or who was actually hired. However, the Urban Institute audits found that black males were three times as likely to be turned down for a job as white males, and Hispanic males also were three times as likely as non-Hispanic white males to experience discrimination in employment (Fix, Galster and Struyk, 1993, pp. 21–22).

Bendick, Jackson and Reinoso (1994) also report on 149 race-based (black, white) and ethnicity-based (Hispanic, non-Hispanic) job audits conducted by the Fair Employment Council of Greater Washington, Inc. in the D.C. metropolitan area in 1990 and 1991. Testers were paired by gender. The audit findings are striking. White testers were close to 10 percent more likely to receive interviews than blacks. Among those interviewed, half of the white testers received job offers versus a mere 11 percent of the black testers. When both testers received the same job offers, white testers were offered 15 cents per hour more than black testers. Black testers also were disproportionately “steered” toward lower level positions after the job offer was made, and white testers were disproportionately considered for unadvertised positions at higher levels than the originally advertised job.

Overall, the Fair Employment Council study found rates of discrimination in excess of 20 percent against blacks (in the black/white tests) and against Hispanics (in the Hispanic/non-Hispanic tests). In the Hispanic/non-Hispanic tests, Hispanic male job seekers were three times as likely to experience discrimination as Hispanic females. But, surprisingly, in the black/white tests, black females were three times as likely to encounter discrimination as black males. The racial results for women in this particular audit stand in sharp contrast with the results in the statistical studies described above.

The most severe criticisms of the audit technique have come from Heckman and Siegelman (1993). At base, their central worry is that testers cannot be paired in such a way that they will not signal a difference that legitimately can be interpreted by the prospective employer as a difference in potential to perform the job, despite interview training and doctored résumés.<sup>16</sup> For example, what about intan-

<sup>16</sup> Although some of their criticisms along these lines frankly strike us as ridiculous; for example, concerns about facial hair on the Hispanic male testers used by the Urban Institute.

gibles like a person's ability to make a first impression, or the fact that certain résumés may be unintentionally superior to others?

In an audit study consciously designed to address many of the Heckman and Siegelman (1993) methodological complaints, Neumark, Bank, and Van Nort (1995) examined sex discrimination in restaurant hiring practices. Four testers (all college students, two men and two women) applied for jobs waiting tables at 65 restaurants in Philadelphia. The restaurants were separated into high, medium, and low price, according to average cost of a meal. Waiters at the high price restaurants tend to receive greater wages and tips than their counterparts in low price restaurants; specifically, the authors find that average hourly earnings for waiters were 47 and 68 percent higher in the high price restaurant than the medium and low price restaurant, respectively. One man and one woman applied for a job at each restaurant, so there were 130 attempts to obtain employment. Thirty-nine job offers were received.

One interesting twist to this methodology is that three reasonably comparable résumés were constructed, and over a three-week period each tester used a different résumé for a period of one week. This résumé-switching mitigates any differences that may have occurred because one résumé was better than another. To reduce other sources of unobserved ability—for example, the ability to make a good first impression—the testers were instructed to give their applications to the first employee they encountered when visiting a restaurant. That employee was then asked to forward the résumé to the manager. In effect, personality and appearance were eliminated as relevant variables for the interview decision, if not for the job offer decision.

Neumark et al. (1995) find that in the low-priced restaurants, the man received an offer while the woman did not 29 percent of the time. A woman never received an offer when the man did not. In the high-priced restaurants, the man received an offer while the woman did not in 43 percent of the tests, while the woman received an offer while the man did not in just 4 percent of the tests. Also, at high-priced restaurants, women had roughly a 40 percent lower probability of being interviewed and 50 percent lower probability of obtaining a job offer, and this difference is statistically significant. Hence, this audit study shows that within-occupation employment discrimination may be a contributing source to wage discrimination between men and women.

Another way to overcome some of the difficulties of the audit approach is the “correspondence test,” which has been used overseas in Britain and Australia, but not (to our knowledge) in the United States. This test involves investigators sending letters of inquiry from prospective “applicants” to employers, where the letters signal the “applicants’” ethnicity, typically by using a name that provides a strong clue about ethnic affiliation. Of course, the letters of inquiry are designed to demonstrate comparable written skills across the hypothetical members of each group and, again, manufactured résumés are submitted with the letters to present comparable credentials to employers.

Riach and Rich (1991–2) report that in the British studies, letters that ap-

peared to be from Afro-Caribbean, Indian, or Pakistani applicants often received replies that indicated that the positions had been filled, while simultaneously, letters that appeared to be from Anglo-Saxon applicants received responses inviting them to interviews from the same employers. A similar pattern occurred in the Australian audits; inquiries from applicants with Vietnamese- or Greek-sounding names met with information that the position had been filled while Anglo-Saxon-sounding “applicants” again were asked to come for interviews. This is impressive direct evidence of discrimination from a powerful test procedure. However, the correspondence test is limited to identifying discrimination at the initial stage of the hiring process. It cannot identify discriminatory practices during the interview stage, at the point of job offer, or the terms of the job offer like the job audit using trained testers.

Yet another interesting direct test of discriminatory practices based upon gender can be found in Goldin and Rouse’s (1997) assessment of the effects of an alteration in audition procedures for symphony orchestras. In the past, juries watched candidates audition. However, many orchestras now have candidates audition behind a screen, so that their identity is unknown. Goldin and Rouse find that hiding the identity of the players behind a screen raises the probability that a woman will be hired by 50 percent. The implication is obvious: prior to the adoption of the screen on identity there was sex discrimination in the selection of musicians for symphony orchestras.

The direct evidence from the court cases, audit studies, and even symphony auditions confirms the persistence of discriminatory practices in employment. The evidence is consistent with the characterization of employer beliefs and actions found in the joint Russell Sage-Ford Foundation Multi-City Study of Urban Inequality (MCSUI), newly reported by Holzer (1997). Employers seem to possess strong racial and gender preferences in hiring. These preferences are the consequence of enduring stereotypical beliefs, which leads them to set up a racial/ethnic gender ranking of potential hires: white men generally preferred over white women (unless the job is female-typed), Hispanics of either gender preferred over blacks, black women preferred over black men.<sup>17</sup> The MCSUI findings suggest the primacy of race/color as a marker for disadvantageous treatment by employers.

## **The Theoretical Backdrop**

Standard neoclassical competitive models are forced by their own assumptions to the conclusion that discrimination only can be temporary. Perhaps the best-

<sup>17</sup> See especially Holzer (1997, p. 77–106). Holzer’s conclusions are derived from survey data from employers in the Atlanta, Boston, Detroit, and Los Angeles metropolitan areas. This data was coordinated with household surveys of the same cities. The surveys were conducted between May 1992 and May 1994. See also Kirschenman and Neckerman (1991) for detailed confirmation of the presence of this racial hierarchy among Chicago area employers.

known statement of this position emerges from Becker's (1957) famous "taste for discrimination" model. If two groups share similar productivity profiles under competitive conditions where at least some employers prefer profits to prejudice, eventually all workers must be paid the same wage. The eventual result may involve segregated workforces—say, with some businesses hiring only white men and others hiring only black women—but as long as both groups have the same average productivity, they will receive the same pay. Thus, in this view, discrimination only can produce temporary racial or gender earnings gaps. Moreover, alternative forms of discrimination are separable processes; wage discrimination and employment segregation are unrelated in Becker's model.

Despite the theoretical implications of standard neoclassical competitive models, we have considerable evidence that it took the Civil Rights Act of 1964 to alter the discriminatory climate in America. It did not, by any means, eliminate either form of discrimination. Indeed, the impact of the law itself may have been temporary, since there is some evidence that the trend toward racial inequality came to a halt in the mid-1970s (even though interracial differences in human capital were continuing to close) and the momentum toward gender equality may have begun to lose steam in the early 1990s. Moreover, we believe that the forms of discrimination have altered in response to the act. Therefore, it is not useful to argue that either racial or gender discrimination is inconsistent with the operation of competitive markets, especially when it has taken antidiscrimination laws to reduce the impact of discrimination in the market. Instead, it is beneficial to uncover the market mechanisms which permit or encourage discriminatory practices.

Since Becker's work, orthodox microeconomics has been massaged in various ways to produce stories of how discrimination might sustain itself against pressures of the competitive market. The tacit assumption of these approaches has been to find a way in which discrimination can increase business profits, or to identify conditions where choosing not to discriminate might reduce profits.

In the customer discrimination story, for example, businesses discriminate not because they themselves are bigoted but because their clients are bigoted. This story works especially well where the product in question must be delivered via face-to-face contact, but it obviously does not work well when the hands that made the product are not visible to the customer possessing the "taste for discrimination." Moreover, as Madden (1975, p. 150) has pointed out, sex-typing of jobs can work in both directions: "While service occupations are more contact-oriented, sexual preference can work both ways: for example, women are preferred as Playboy bunnies, airline stewardesses, and lingerie salespeople, while men seem to be preferred as tire salespeople, stockbrokers, and truck drivers."

Obviously, group-typing of employment will lead to a different occupational distributions between group A and B, but will it lead to different earnings as well? Madden (1975, p. 150, emphasis in original) suggests not necessarily:

. . . consumer discrimination causes occupational segregation rather than wage differentials. If the female wage decreases as the amount of consumer

contact required by a job increases, women seek employment in jobs where consumer contact is minimal and wages are higher. Only if there are not enough non-consumer contact jobs for working women, forcing them to seek employment in consumer-contact jobs, would consumer discrimination be responsible for wage differentials. Since most jobs do not require consumer contact, consumer discrimination would segregate women into these jobs, but not *cause* wage differentials.

Perhaps the best attempt to explain how discrimination might persist in a neoclassical framework is the statistical discrimination story, which, at base, is a story about imperfect information. The notion is that potential employers cannot observe everything they wish to know about job candidates, and in this environment, they have an incentive to seize group membership as a signal that allows them to improve their predictions of a prospective candidate's ability to perform.

However, this model of prejudicial beliefs does not ultimately wash well as a theory of why discrimination should be long-lasting. If average group differences are perceived but not real, then employers should *learn* that their beliefs are mistaken. If average group differences are real, then in a world with antidiscrimination laws, employers are likely to find methods of predicting the future performance of potential employees with sufficient accuracy that there is no need to use the additional "signal" of race or gender. It seems implausible that with all the resources that corporations put into hiring decisions, the remaining differentials are due to an inability to come up with a suitable set of questions or qualifications for potential employees.

Moreover, models of imperfect competition as explanations of discrimination do not solve the problem completely either. The reason for the immutability of the imperfection is rarely satisfactorily explained—and often not addressed at all—in models of this type (Darity and Williams, 1985). Struggle as it may, orthodox microeconomics keeps returning to the position that sustained observed differences in economic outcomes between groups must be due to an induced or inherent deficiency in the group that experiences the inferior outcomes. In the jargon, this is referred to as a deficiency in human capital. Sometimes this deficiency is associated with poor schooling opportunities, other times with culture (Sowell, 1981).<sup>18</sup> But the thrust of the argument is to absolve market processes, at least in a putative long run, of a role in producing the differential outcome; the induced or inherent deficiency occurs in pre-market or extra-market processes.

Certainly years of schooling, quality of education, years of work experience, and even culture can have a role in explaining racial and gender earnings differences. However, the evidence marshaled above indicates that these factors do not

<sup>18</sup> To address the effects of culture, following Woodbury (1993), Darity, Guilkey, and Winfrey (1996) held color constant and varied culture by examining outcomes among blacks of differing ancestries. Unlike Sowell's expectation, black males of West Indian and non-West Indian ancestry were being confronted with the same racial penalty in U.S. labor markets by 1990.

come close to explaining wage differentials and employment patterns observed in the economy. Instead, discrimination has been sustained both in the United States and elsewhere, for generations at a time. Such discrimination does not always even need direct legal support nor has it been eliminated by market pressures. Instead, changes in social and legal institutions have been needed to reduce it.

James Heckman (1997, p. 406) draws a similar conclusion in his examination of a specific sector of employment, the textile industry:

. . . substantial growth in Southern manufacturing had little effect on the labor-market position of blacks in Southern textiles prior to 1965. Through tight and slack labor markets, the proportion of blacks was small and stable. After 1964, and in synchronization with the 1964 Civil Rights Act, black economic progress was rapid. Only South Carolina had a Jim Crow law prohibiting employment of blacks as textile workers, and the law was never used after the 1920s. Yet the pattern of exclusion of blacks was prevalent throughout Southern textiles, and the breakthrough in black employment in the industry came in all states at the same time. Informally enforced codes and private practices, and not formally enforced apartheid, kept segregation in place, and market forces did not break them down.

Nontraditional alternatives to orthodox microeconomic analysis can lead to a logically consistent basis for a persistent gap in wage outcomes. These alternatives typically break down the line between in-market and pre-market discrimination so often drawn in conventional economics. The first of these involves a self-fulfilling prophecy mechanism. Suppose employers believe that members of group A are more productive than members of group B on average. Suppose further that they act upon their beliefs, thereby exhibiting a stronger demand for A workers, hiring them more frequently and paying them more.

Next, suppose that members of group B become less motivated and less emotionally healthy as a consequence of the employment rebuff. Notice that the original decision not to hire may have been completely unjustified on productivity grounds; nonetheless, the decision made *in* the labor market—a decision not to hire or to hire at low pay—alters the human capital characteristics of the members of group B so that they become inferior candidates for jobs. The employers' initially held mistaken beliefs become realized over time as a consequence of the employers' initial discriminatory decisions. As Elmslie and Sedo (1996, p. 474) observe in their development of this argument, "One initial bout of unemployment that is not productivity based can lay the foundation for continued future unemployment and persistently lower job status even if no future discrimination occurs."

More broadly, depressed expectations of employment opportunities also can have an adverse effect on members of group B's inclination to acquire additional human capital—say, through additional schooling or training. The effects of the past could be passed along by the disadvantaged group from generation to generation, another possibility ignored by orthodox theory. For example, Borjas (1994)

writes of the ethnic intergenerational transmission of economic advantage or disadvantage. He makes no mention of discrimination in his work but a potential interpretation is that the effects of past discrimination, both negative and positive, are passed on to subsequent generations. Other evidence along these lines includes Tyree's (1991) findings on the relationship between an ethnic group's status and performance in the past and the present, and Darity's (1989) development of "the lateral mobility" hypothesis based upon ethnic group case histories.

More narrowly, the group-typed beliefs held by employers/selectors also can have a strong effect on the performance of the candidate at the interview stage. In an experiment performed in the early 1970s, psychologists Word, Zanna and Cooper (1974, pp. 109–120) found that when interviewed by "naïve" whites, trained black applicants "received (a) less immediacy, (b) higher rates of speech error, and (c) shorter amounts of interview time" than white applicants. They then trained white interviewers to replicate the behavior received by the black applicants in the first phase of their experiment, and found that "naïve" white candidates performed poorly during interviews when they were "treated like blacks." Such self-fulfilling prophecies are familiar in the psychology literature (Sibicky and Dovidio, 1986).

A second nontraditional theory that can lead to a permanent gap in intergroup outcomes is the noncompeting groups hypothesis advanced by the late W. Arthur Lewis (1979). Related arguments emerge from Krueger's (1963) extension of the trade-based version of the Becker model, Swinton's (1978) "labor force competition" model for racial differences, and Madden's (1975) male monopoly model for gender differences, but Lewis's presentation is the most straightforward. Lewis starts with an intergroup rivalry for the preferred positions in a hierarchical occupational structure. Say that group A is able to control access to the preferred positions by influencing the required credentials, manipulating opportunities to obtain the credentials, and serving a gatekeeping function over entry and promotion along job ladders. Group B is then rendered "noncompeting."

One theoretical difficulty with this argument that its proponents rarely address is that it requires group A to maintain group solidarity even when it may have subgroups with differing interests. In Krueger's (1963) model, for example, white capitalists must value racial group solidarity sufficiently to accept a lower return on their capital as the price they pay for a generally higher level of income for all whites (and higher wages for white workers). In Madden's (1975) model, male capitalists must make a similar decision on behalf of male workers.

This noncompeting group hypothesis blurs the orthodox distinction between in-market and pre-market discrimination, by inserting matters of power and social control directly into the analysis. This approach then links discrimination to racism or sexism, rather than to simple bigotry or prejudice. It leads to the proposition that discrimination—in the sense of differential treatment of those members of each group with similar productivity-linked characteristics—is an endogenous phenomenon. "In-market" discrimination need only occur when all the earlier attempts to control access to jobs, credentials, and qualifications are quavering.

One interesting implication here is that growth in skills for what we have been calling group B, the disadvantaged group, may be accompanied by a surge of in-market discrimination, because that form of discrimination has become more necessary to preserve the position of group A. There are several instances of cross-national evidence to support this notion. Darity, Dietrich and Guilkey (1997) find that while black males were making dramatic strides in acquiring literacy between 1880 and 1910 in the United States, simultaneously they were suffering increasing proportionate losses in occupational status due to disadvantageous treatment of their measured characteristics. Geographer Peggy Lovell (1993) finds very little evidence of discrimination in earnings against blacks in northern Brazil, where blacks are more numerous, but substantial evidence of discrimination against them in southern Brazil. Northern Brazil is considerably poorer than southern Brazil and the educational levels of northern black Brazilians are more depressed than in the south.<sup>19</sup> It is easy to argue that the exercise of discrimination is not “needed” in the north, since blacks are not generally going to compete with whites for the same sets of jobs. Indeed, there is relatively more evidence of discrimination against mulattos than blacks, the former more likely to compete directly with whites for employment. A third example, in a study using data for males based upon a survey taken in Delhi in 1970, Desi and Singh (1989) find that the most dramatic instance of discriminatory differentials in earnings was evident for Sikh men vis-à-vis Hindu high caste men. On the other hand, most of the earnings gap for Hindu middle caste, lower caste and scheduled caste men was due to inferior observed characteristics. Since these latter groups could be excluded from preferred positions because of an inadequate educational background, it would not be necessary for the upper castes to exercise discrimination against them. Sikh males, on the other hand, possessed the types of credentials that would make them viable contestants for the positions desired by the Hindu higher castes.

A final alternative approach at construction of a consistent economic theory of persistent discrimination evolves from a reconsideration of the neoclassical theory of competition. Darity and Williams (1985) argued that replacement of neoclassical competition with either classical or Marxist approaches to competition—where competition is defined by a tendency toward equalization of rates of profit and where monopoly positions are the consequence of competition rather than the antithesis of competition—eliminates the anomalies associated with the orthodox approach (Botwinick, 1993; Mason, 1995, forthcoming-b). A labor market implication of this approach is that wage diversity, different pay across firms and industries for workers within the same occupation, is the norm for competitive labor markets. In these models, remuneration is a function of the characteristics of the individual and the job. The racial-gender composition of the job affects worker bargaining power and thereby wage differentials. In turn, race and gender exclu-

<sup>19</sup> The portion of the gap that can be explained by discrimination is much lower in the high black region of Brazil, the Northeast, than the rest of Brazil. We know of no evidence which suggests that this is or is not true for the U.S. south.

sion are used to make some workers less competitive for the higher paying positions. This approach emphasizes that the major elements for the persistence of discrimination are racial or gender differences in the access to better paying jobs within and between occupations.

Whatever alternative approach is preferred, the strong evidence of the persistence of discrimination in labor markets calls into question any theoretical apparatus that implies that the discrimination must inevitably diminish or disappear.

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