The Impact of Education on Inter-Group Attitudes: A Multiracial Analysis

Geoff Wodtke

University of Michigan

ABSTRACT

How does education affect racial attitudes? Past research addressing the impact of education on racial attitudes has focused almost exclusively on Whites' attitudes toward Blacks, neglecting important racial minority populations. This study transcends this narrow focus by analyzing the effect of education on beliefs about negative racial stereotypes, discrimination and racial preference policies among Whites, Blacks, Hispanics and Asians. Data from the Multi-City Study of Urban Inequality 1992-1994 indicate that there are important racial differences in the relationship between education and inter-group attitudes. Whites and Blacks with an advanced education were more likely to reject negative out-group stereotypes, but the link between education and beliefs about racial stereotypes was less consistent among Hispanics and Asians. In addition, education was positively associated with perceptions of discrimination against racial out-groups among Whites, Blacks and Asians but not among Hispanics. Despite the generally positive effects of education on perceptions of discrimination and rejection of negative stereotypes, a more advanced education was not associated with greater support for racial preferences in hiring and promotion among any group in the study. In fact, Whites, Blacks and Hispanics with higher levels of education were less likely to support racial preferences compared to their less educated peers. These results are consistent with a group conflict perspective that views formal educational institutions as promoting a dominant ideology that subverts support for

group-based redistributive policies, but given the paucity of research on education and minority racial attitudes, several other possible explanations for the observed relationships are considered.

INTRODUCTION

The impact of education on racial attitudes has been a hotly contested topic in the social sciences. On one side of the debate, education is depicted as having a profound liberalizing influence on negative inter-group attitudes (Apostle et al. 1983; Hyman and Sheatsley 1964; Hyman and Wright 1979; Hyman, Wright and Reed 1975; Quinley and Glock 1979). According to this perspective, an advanced education promotes a more enlightened world outlook, characterized by a heightened commitment to democratic norms of equality and tolerance of racial out-groups. This view is supported by a large body of empirical evidence showing that highly educated Whites are more likely to reject negative racial stereotypes, agree with structural explanations for Black-White inequality and endorse principles of equal treatment (Schuman et al. 1997). However, despite the positive association between education and a number of egalitarian racial attitudes, there remains one critical inconsistency in education's enlightening effects: among Whites, the highly educated are no more likely to support specific policies designed to overcome racial inequality (Jackman 1978; Jackman 1994; Jackman and Muha 1984). An alternative perspective on education that attempts to account for this inconsistency views education not as enlightening, but rather as an institution that endows dominant groups (e.g., Whites) with a set of cognitive skills and ideological commitments that enable them to articulate a more astute defense of their privileged position in the social hierarchy (Jackman 1994; Jackman and Muha 1984). In the absence of support for concrete measures to restructure relations of inequality, the positive effects of education on inter-group tolerance and support for principles of equality represent little more than "slopes of hypocrisy," glaring examples of educated Whites' more sophisticated defense of the status quo (Schuman et al. 1997, p. 304).

A fundamental weakness of both the "enlightenment" and "ideological refinement" approach to education is that they are based almost entirely on the attitudes and experiences of White Americans. Research about the impact of education on racial attitudes has largely failed to consider the perspective of racial minorities. Although more researchers have entered the debate, offering alternative explanations for the paradoxical effects of education (e.g., Sniderman and Piazza 1993), few have addressed the omission of racial minorities from research about education and inter-group attitudes (for several important exceptions see Kane and Kyyro 2001; Schuman et al. 1997; Tuch, Sigelman and Martin 1997). The purpose of this study is to extend research on education and racial attitudes with a multiracial analysis. First, I review several different theoretical perspectives on education, derived largely from research on Whites' attitudes towards Blacks, in order to provide a foundation for the discussion of education and inter-group attitudes in a more complex multiracial context. Then, using data from the Multi-City Study of Urban Inequality 1992-1994, I estimate and compare the effect of education on negative racial stereotypes, beliefs about the prevalence of racial discrimination, and support for racial preference policies among Whites, Blacks, Hispanics, and Asians. Multiracial analyses can provide a deeper understanding of the interplay between education, ideology and group interests as well as shed light on the conditions under which an advanced education may empower or undermine minority group efforts to overcome racial inequality (Bobo and Hutchings 1996; Kane and Kyyro 2001).

BACKGROUND

Education as Enlightenment

That education has a liberalizing impact on racial attitudes is a cultural axiom in the United States, and much research on temporal trends in racial attitudes credits higher levels of education among younger cohorts as the primary source of progressive changes in Whites' attitudes. For example, Hyman and Sheatsley (1956), commenting in the 1950s, remarked that the trend toward acceptance of racial integration is likely to accelerate because of "the continued influx of better educated and more tolerant young people into the effective adult public" (p. 39). Similar sentiments are echoed in more recent studies (e.g., Farley et al. 1994; Kluegel and Smith 1986). Enlightenment theory is premised on the notion that negative inter-group attitudes arise from narrow-minded, ill-informed and undemocratic world outlooks—ethnic prejudice is seen as "an antipathy based upon a faulty and inflexible generalization" (Allport 1958, p. 9). An advanced education attenuates prejudice and fosters a real commitment to racial equality by providing knowledge about the historical, social and economic forces responsible for inequality, teaching the dangers of prejudice, neutralizing fear of the unknown, promoting democratic norms of equality and civil rights, and facilitating contact between racial groups (Hyman and Wright 1979; McClelland and Linnander 2006; Quinley and Glock 1979).

A large body of empirical evidence supports the claims of enlightenment theory. Highly educated Whites are more likely than their poorly educated counterparts to reject negative racial stereotypes, accept residential and school integration in principle, attribute racial inequalities to structural causes, be more perceptive of racial discrimination and support democratic norms of equality (Apostle et al. 1983; Farley et al. 1994; Schuman et al. 1997). In addition, there is an emerging body of evidence linking more progressive racial attitudes to particular mechanisms

within postsecondary educational institutions. For example, students who are exposed to information on minorities in multicultural classes or who have frequent contact with minority students and faculty tend to express more liberal racial views (McClelland and Linnander 2006; van Laar, Sidanius and Levin 2008). There is, however, a critical inconsistency in the evidence supporting the enlightenment approach: education is positively associated with more progressive views on many racial issues, but educated Whites are no more supportive of affirmative action policies, including government interventions to integrate schools, government expenditures on aid for Blacks and racial preferences in higher education and the workplace (Jackman 1978; Jackman and Muha 1984; Schuman et al. 1997).

Several explanations for this paradox in the effect of education on Whites' racial attitudes have been sympathetic to the enlightenment framework, dismissing the non-effect of education on specific racial policies as an artifact. For example, several researchers have argued that the survey items used to gauge Whites' support for policies seeking to realize egalitarian racial principles confound opposition to racial equality with opposition to government (Margolis and Haque 1981). Educated Whites are indeed committed to racial equality; their lack of support for affirmative action policies merely represents their opposition to intrusions by the government in what they perceive to be private affairs (Sniderman and Piazza 1993). Unfortunately, there is little empirical evidence to support this explanation. Negative attitudes toward the federal government are not strongly related to education or racial policy attitudes (Jackman 1981), and Schuman et al. (1997) conclude their summary of a survey experiment on this matter stating that "opposition to government implementation of equal treatment and integration appears to be based much more on lack of strong commitment to those goals than on the role of government itself" (p. 304). An alternative explanation for the inconsistent relationship between education

and Whites' racial attitudes, the ideological refinement perspective, is grounded in group conflict theory and directly challenges a number of assumptions about negative inter-group attitudes and formal educational institutions.

Group Conflict, Education and Ideological Refinement

Group conflict involves "a struggle over…claims to status, power and other scarce resources in which the aims of the [competing] groups are not only to gain the desired values, but also to affect, change or injure rivals" (Bobo 1988, p. 91). Within this inter-group competition, distinct social groups are stratified into a hierarchy based on inequalities of power, and conflicting groups have objective interests based on the "shared advantages or disadvantages likely to accrue to a group" as a result of their position in the social hierarchy (Bobo 1988; Tilly 1978, p. 54). The dominant group (e.g., Whites) controls a disproportionately large share of valued resources, such as wealth and political power, while subordinate groups (e.g., Blacks) are denied a commensurate share. Furthermore, dominant groups have a vested interest in maintaining their privileged status, and in order to achieve this end, they develop an ideology that legitimates their social position and mollifies subordinate group challenges to the status quo (Kerbo 1983; Marx 1964).

Based on group conflict premises, the ideological refinement perspective on education and inter-group attitudes argues—in paraphrase and modification of Jackman and Muha (1984)—that an advanced education cannot be seen as an enlightening agent because it does not liberate individuals from their group interests. Education does, however, provide dominant group members with more advanced intellectual skills and a broader mastery of information, and "in this way, it equips them to promote their interests more astutely—indeed, to become state of the art apologists for their groups social position" (p. 752). According to this view, prejudice

and inter-group negativism are not "anachronistic expressions of deficiencies in socialization," but are an integral part of dominant group efforts to maintain existing relations of inequality (p.759). Since The Civil Rights Movement, negative stereotypes and overt expressions of racism have become more inflammatory for inter-group relations and have thereby ceased to be effective ideological weapons. An advanced education allows dominant group members to articulate a more refined legitimizing ideology, one based not on assertions of categorical group differences but on individualism and meritocracy. Individualistic and meritocratic principles provide dominant group members with a seemingly principled means to deny the validity of group rights and group-based remedial policies and transform them into weaker measures consistent with individual rights. But in the context of an inter-group competition, where certain groups operate from disadvantaged structural positions, the provision of equal individual rights and meritocratic standards conveys a major competitive advantage to the group that controls the most material resources and effectively perpetuates the dominant group's privileged status. Therefore, we should not expect education to promote a real commitment to racial equality as hypothesized by enlightenment theory. Rather, highly educated members of the dominant group will simply be better equipped to justify current relations of inequality and subvert more radical challenges to their privileged social position.

Consistent with the ideological refinement approach, a number of studies on Whites' racial attitudes have found that education is positively associated with tolerance of racial out-groups and support for abstract principles of equality but negatively associated with support for specific group-based remedial policies, such as government expenditures on aid for Blacks and racial preferences (Jackman 1978; Jackman and Muha 1984; Schuman et al. 1997; Smith and Seelbach 1987). However, more recent evidence suggests that the relationship between

education and policy attitudes may be more complex. Schuman et al. (1997) found that education has a non-monotonic, U-shaped association with support for racial preferences in hiring and promotion, where Whites with a high school education are the least supportive of these policies. In addition, Glaser (2001) provides evidence that educated Whites' may well support preferences in areas where they are relatively insulated from racial competition but will react strongly against policies that threaten those resources which anchor their class position (e.g., access to universities). In assessing the impact of education on racial attitudes, it is important to recognize that the intensity of group competition varies by level of education and that different group-based policies are not equally threatening to the dominant group.

Education and Racial Minorities Inter-Group Attitudes

The enlightenment and ideological refinement theoretical paradigms were developed to explain certain patterns in the relationship between education, Whites' beliefs about Blacks and Whites' support for policies typically referencing Blacks as the beneficiary group. It is still unclear whether either theory can be extended to the study of education and inter-group attitudes in a more diverse social context with multiple ethnic/racial groups—in particular, Whites, Blacks, Hispanics and Asians. In a multiracial context, group interests are more complex because competition over social resources cannot be reduced to a simple Black-White/dominant-subordinate binary opposition. Rather, multiple racial groups are stratified in a hierarchy that corresponds to a continuum of dominance/subordination. In the United States, Blacks are situated economically, politically and socially at the bottom of the racial hierarchy, while Whites remain at the top; Asians, followed by Hispanics, fall somewhere in the middle (Feagin 2000; Song 2004). At a simple level, minority groups that occupy a disadvantaged position in the social hierarchy have an interest in fundamentally restructuring relations of inequality. Insofar as

an advanced education allows individuals to become more astute advocates for their group interests, we would expect educated minorities to be more sophisticated critics of racial inequality—highly sensitive to racial stereotypes, more perceptive of racial discrimination, committed to group rights and strong supporters of policies designed to redress inequality. For racial minorities, education may have attitudinal effects similar to the pattern predicted by enlightenment theory because these effects are more consistent with minority group interests. But, for minority groups, enlightenment is a misnomer, and such a pattern of education effects is better conceptualized as empowerment (Kane and Kyyro 2001, p. 713).

Although an advanced education would seem to promote a heightened awareness of group interests among minorities, within a social order in which one group, Whites, exercises near hegemony, formal educational institutions are the primary apparatus through which the dominant group's legitimizing ideology is propagated (Althusser 1971; Gramsci 1971). According to the ideological refinement perspective, formal educational institutions promote strong commitments to individualistic and meritocratic principles by emphasizing individual achievement, individual effort, competitiveness and reward based on merit. Furthermore, students, teachers and administrators in educational institutions are organized in hierarchies with advancement contingent on ability and achievement, providing students with a microcosm of how the larger society ought to be organized. Subordinate group members with a higher education have received more advanced intellectual training, but they have also received greater exposure to the "dominant creed" (Jackman and Muha 1984, p. 761). A formal education, therefore, may not foster a more sophisticated critique of inequality among racial minorities but rather impart a stronger commitment to individualism and meritocracy, principles that are largely inconsistent with subordinate group advancement. For highly educated racial minorities, a

proclivity for individualism and meritocracy may have a countervailing influence on the values of group rights and group-based equality, thereby muting the empowering effect of education (Kane 1995). There are several empirical studies that have examined the effect of education on Blacks' racial attitudes (Kane and Kyyro 2001; Schuman et al. 1997; Tuch, Sigelman and Martin 1997). In general, these studies find that highly educated Blacks are more likely to perceive racial discrimination, reject anti-black stereotypes and favor open housing laws. However, consistent with the view that a higher education will blunt support for policies in which group membership is salient, educated Blacks are less likely to support preferential hiring.

The empirical record regarding the association between education and minorities' inter-group attitudes is far from conclusive. First, it is unclear whether educated Blacks' opposition to racial preferences is grounded in a commitment to meritocracy and individualism or reflects a more prudent evaluation of that particular policy. For example, when Blacks who said they opposed school busing in the 1976 Detroit Area Study were asked to explain themselves, the most common response was not that busing policies violated individual rights (Schuman et al. 1997). Rather, many Black respondents explained that school quality was the critical issue and that it could be improved through different policies more effective than busing. Second, the few studies on education and racial attitudes that have incorporated the perspective of Blacks failed to include Hispanics, now the largest racial minority group in the country, or Asians. Hispanics and Asians complicate the empowerment and ideological refinement perspectives because these theories, as they have been adapted to account for subordinate group attitudes, are based on a simplistic White-Black/dominant-subordinate dichotomy. As discussed above, different minority groups occupy different structural positions on a continuum of domination/subordination. Several researchers have argued that Asians, and to a lesser extent

Hispanics, occupy a position in the United States racial hierarchy that is closer to that of Whites than to Blacks (Lee and Bean 2007). Because of their more advantageous (relative) social positions, Asians and Hispanics may be more likely to embrace a meritocracy from which they are more likely to benefit as a group (Cross and Slater 1995). However, these racial groups are very heterogeneous in terms of nativity and socioeconomic status, and they share in common with Blacks the experience of racism and discrimination which is also likely to have an important influence on their evaluation of affirmative action policies. What incorporating Asians and Hispanics into the group conflict paradigm demonstrates is that it is no simple matter to identify the interests of groups that occupy intermediate positions in the racial hierarchy. Depending on their social position, a subordinate group's interests may be more or less opposed to the interests of the dominant group. Indeed, several studies have documented racial differences in support for affirmative action policies that mirror the racial hierarchy—Whites are the least supportive, followed by Asians, Hispanics and Blacks who are the most supportive (Bobo 1998; Lopez and Pantoja 2004). By studying Whites, Blacks, Hispanics and Asians together, we can better understand how group interests, education and the dominant ideology interact to shape inter-group attitudes.

Previous research on education and racial policy attitudes also suffers from several measurement and methodological deficiencies. Many past studies have analyzed survey questions about discrimination, stereotypes and racial policies that make reference to a single group—Blacks (Kane 1995; Schuman et al. 1997; Tuch, Sigelman and Martin 1997). However, negative stereotypes and discrimination impact all racial minorities, and affirmative action programs never single out particular groups as the sole beneficiaries in the real world. Measuring attitudes using questions that reference a single racial group does not fully capture the

dynamic array of attitudes that emerge in a multiracial social context. This study attempts to overcome this limitation by analyzing a battery of survey items that reference Blacks, Hispanics and Asians separately. Another limitation of past research involves the use of ordinary least squares (OLS) multiple regression to model categorical response variables (e.g., Jackman and Muha 1984; Kane 1995). Categorical response variables, such as the ordinal Likert-scaled survey items that are frequently used to measure racial attitudes, violate the OLS regression assumption of conditional normality. Several other problems are common when OLS regression is used to model discrete outcomes including heteroskedasticity, which can lead to inappropriate inferences, and nonsensical predicted values. To avoid the difficulties of using OLS regression models for discrete responses, this study uses ordinal logistic regression to model the effect of education on racial attitudes. Using data from the Multi-City Study of Urban Inequality 1992-1994, I estimate and compare the association between education and beliefs about negative racial stereotypes, labor market discrimination and support for preferential hiring policies among Whites, Blacks, Hispanics and Asians. By estimating the effect of education on racial attitudes among multiple minority groups, this study addresses the relative scarcity of research on the correlates of minorities' racial attitudes.

Several hypotheses follow from the theory and empirical research on the relationship between education and inter-group attitudes discussed above. First, among all racial groups, I expect education to be positively associated with both rejection of negative racial stereotypes and perceptions of discrimination. Second, consistent with the ideological refinement approach, I expect that education will have a zero or negative association with support for racial preference policies among all racial groups. This expectation is also consistent with the results of previous research which indicate that higher levels of education are associated with less favorable

attitudes toward affirmative action policies among Whites and Blacks (Jackman 1978; Jackman and Muha 1984; Kane 1995; Schuman et al. 1997; Tuch, Sigelman and Martin 1997). Third, recognizing the potential for differential congruency between the dominant ideology and a group's social position, I expect there to be racial differences in the effect of education on group-based policy attitudes. In particular, I expect there to be a more notable negative association between education and support for racial preferences among Whites and Asians because meritocratic ideology is more consistent with their group position. By contrast, I expect the negative relationship between education and support for racial preferences to be less notable for Blacks and Hispanics because of the countervailing influence of their group interests.

METHOD

Data

I use data from the Multi-City Study of Urban Inequality 1992-1994 (MCSUI), a cross-sectional study based on multi-stage area probability samples of households in Detroit, Atlanta, Los Angeles, and Boston (Holzer et al. 2000). The MCSUI oversampled census tracts and census blocks with high concentrations of Blacks, Hispanics and Asians in order to generate larger numbers of these respondents. A household survey was successfully administered via personal interview to 2,790 non-Hispanic Whites, 3,111 non-Hispanic Blacks, 1,783 Hispanics, and 1,124 Asians who were at least 21 years old. The raw response rates ranged from 68% to 78% in the four cities. I excluded a small number of respondents who identified as "other race" to yield a total analytic sample of 8,808 White, Black, Hispanic and Asian adults.

The MCSUI has several advantages over other surveys commonly used for the analysis of racial attitudes, such as the General Social Survey (GSS) or the American National Election Studies (ANES). First, the MCSUI obtained attitudinal information from large samples of Blacks, Hispanics and Asians, which allows for a more comprehensive analysis of minority group racial attitudes. Although inferences from the MCSUI strictly apply to only four metropolitan areas while results from the GSS and ANES can be generalized on a national level, for the purposes of the present study, the ability to obtain reliable estimates from a diverse group of respondents outweighs the MCSUI's more limited geographic scope. Second, the MCSUI contains a wide variety of questions about different racial attitudes that reference Blacks, Hispanics and Asians separately in the question text. The use of survey items measuring attitudes toward Blacks, Hispanics and Asians may provide new insight into the mediating role of group interests in the association between education and inter-group attitudes.

Variables

I focus on three sets of response variables that reference Blacks, Hispanics and Asians separately: (1) beliefs about whether a group prefers to live on welfare or be self-supporting, (2) beliefs about the amount of discrimination a group encounters in the labor market and (3) attitudes toward racial preferences in hiring and promotion. The exact text of these survey items is contained in Appendix A. The first set of items measure a common racial stereotype related to work ethic, whether or not a group prefers to live on welfare or be self-supporting, on an ordinal scale ranging from 1 (prefers to live on welfare) to 7 (prefers to be self-supporting). Because there were few observations in the extremes of the scale, I collapsed categories to create a three-level ordinal variable where higher values indicate that a respondent thinks members of the referenced group are less inclined to be self-supporting. For beliefs about discrimination, respondents were asked whether a group encounters "a lot," "some," "only a little," or "no" discrimination that hurts their chances of getting a good job. These four-level ordinal variables were coded such that higher values indicate a greater degree of perceived discrimination against the referenced group. Attitudes toward preferential hiring and promotion for a particular group were measured on a scale ranging from 1 (strongly favor) to 5 (strongly oppose). These measures were also recoded into three-level ordinal variables because of sparseness in the extremes of the five-point scale such that the values 1, 2 or 3 respectively indicate that a respondent "opposes," "neither favors nor opposes" or "favors" racial preferences.

Education, the independent variable of interest, was measured in years and ranges from 0 (no formal education) to 17 years or more. In multivariate analyses, education is expressed as a set of dummy variables for "less than high school" (<12 years), "high school graduate" (12 years), "some college" (13-15 years) and "college graduate" (>16 years). By expressing

education as a set of dummies, I can observe any nonlinearity in its effects. Control variables include gender, age, employment status, political ideology, family income, race of interviewer and nativity. Each of these variables has been identified as an important correlate of racial attitudes (Klineberg and Kravitz 2003; Lopez and Pantoja 2004; Schuman et al. 1997). Gender and employment status were coded as dummies, 1 for female and 0 for male, and 1 for currently employed and 0 for not employed. Political ideology was measured on a 7 point scale ranging from 1 (extremely liberal) to 7 (extremely conservative). Due to small numbers of respondents in the extremes of the scale, response categories were collapsed into a single dummy variable with 1 for "liberal" and 0 for "moderate" or "conservative." Race of interviewer was expressed as a series of dummies for Black, Hispanic and Asian interviewers, with White interviewers as the reference category. Nativity was coded as a dummy variable indicating whether a respondent was born in the United States. Family income was measured in intervals ranging from 1 (less than $4,999) to 20 ($150,000 or more). Values (in dollars) were assigned based on the mid-point of the response intervals. Table 1 presents statistics describing the demographic characteristics of the sample by race. Tables 2, 3 and 4 contain descriptive statistics for each set of response variables.

Analysis

The three sets of response variables in this study were measured with discrete ordered scales. Plausible models for ordinal dependent variables include cumulative logit models and cumulative probit models. Cumulative probit models generally provide fits similar to cumulative logit models, but parameter interpretation is simpler with cumulative logits (Agresti 2002, p. 283). Thus, I use the proportional odds model (i.e., ordinal logistic regression), a particular type

of cumulative logit model that uses all cumulative logits simultaneously. If Y is a variable with J ordered response categories, then the cumulative logits are defined as

$$logit\big(P(Y > j)\big) = \log\left(\frac{P(Y>j)}{1-P(Y>j)}\right) = \log\left(\frac{P(Y>j)}{P(Y\leq j)}\right) \quad j = 1, \dots, J-1\,, \tag{1}$$

and the proportional odds model has the form

$$logit\big(P(Y > j|\boldsymbol{x})\big) = \alpha_j + \boldsymbol{\beta}'\boldsymbol{x} \quad j = 1, \dots, J-1 \tag{2}$$

where $\boldsymbol{x}$ is vector of covariates, α_j is an intercept term for the j^{th} cumulative logit and $\boldsymbol{\beta}$ is a vector of parameters to be estimated from the data. The proportional odds model allows different intercepts for each cumulative logit where α_j decreases in j because the cumulative probabilities necessarily decrease in j. The unique feature of this model is that it constrains the effect parameters $\boldsymbol{\beta}$ to be the same for each cumulative logit, that is, the model includes a single coefficient for each covariate. This constraint is based on the proportional odds assumption (or the parallel regressions assumption) that the effect of each covariate in $\boldsymbol{x}$ is the same across the $J-1$ cumulative logits. The advantage of the proportional odds model over other cumulative logit models that do not constrain the parameters $\boldsymbol{\beta}$ to be constant across cumulative logits is that effects are much easier to summarize and interpret. However, this constraint is sometimes a poor fit and the model may need to be generalized to include separate effects for each cumulative logit (Agresti 2002, p. 275-282).

For each racial group, I estimated by maximum likelihood (ML) proportional odds models of the effect of education on beliefs about whether a group prefers to live on welfare or be self-supporting, perceptions of discrimination, and support for racial preferences in hiring and promotion, controlling for the above mentioned factors. Wald tests were conducted to evaluate the validity of the proportional odds assumption (Brant 1990; Long 1997). In several models, these tests indicated that more complex models which allow the education coefficients to vary

across the $J-1$ cumulative logits provided a better fit to the data. However, if the coefficients from more complex models are not substantially different across cumulative logits in practical terms, the parsimony of the proportional odds model is preferred. For models in which the proportional odds assumption appeared to be violated, generalized ordered logit models were estimated with separate effect parameters for each cumulative logit. Generalized ordered logit models have the form

$$logit\big(P(Y > j|\boldsymbol{x})\big) = \alpha_j + \boldsymbol{\beta_j'x} \quad j = 1, \dots, J-1 \tag{3}$$

where the vector of coefficient parameters is now indexed by j. In general, the separate coefficient estimates for the effect of education from the generalized ordered logit models were not substantially different. Thus, only the results from the proportional odds models are reported.

Coefficients from the proportional odds model are cumulative log odds ratios which can be interpreted in several ways. At a very simple level, the direction of a coefficient indicates whether the probability of being in a response category higher than j is increasing or decreasing in levels of the covariate. Coefficients on the log odds scale can also be converted to cumulative odds ratios by solving $\exp\big(\widehat{\boldsymbol{\beta}}\big)$ and interpreted as the multiplicative effect on the cumulative odds associated with a unit change in the covariate. Examining a profile of predicted probabilities is another useful way to interpret proportional odds models. Estimated cumulative probabilities can be computed by solving

$$P(Y > j|\boldsymbol{x}) = \frac{\exp\left(\widehat{\alpha}_j + \widehat{\boldsymbol{\beta}}'\boldsymbol{x}\right)}{1+\exp\left(\widehat{\alpha}_j + \widehat{\boldsymbol{\beta}}'\boldsymbol{x}\right)} \quad j = 1, \dots, J-1\ . \tag{4}$$

Because several covariates (family income, nativity) had a nontrivial amount of missing data, multiple imputation (MI) was used to fill in missing values on all variables used in the analysis. MI is a procedure in which missing data are replaced with $m > 1$ values that are

simulated from an imputation model that approximates the multivariate analyses to be performed. Then, each of m simulated datasets are analyzed separately using standard methods, and the results are combined to produce estimates and standard errors that account for the uncertainty of missing data (Rubin 1987). MI is preferable to both listwise deletion and single imputation methods because it avoids loss of statistical power and does not overstate the precision of estimates. I created $m = 10$ datasets with simulated missing values using the imputation by chained equations procedure (Royston 2005). The results from all multivariate analyses are based on the combined estimates from these 10 datasets. The MCSUI also includes post-stratification weights that produce estimates representative of the proportionate distribution of the adult population in the four study areas as established by the 1990 United States Census of Population and Housing. Multivariate analyses were conducted using both the weighted and unweighted samples and results did not differ substantially, so the unweighted results are reported. Huber-White robust variance estimates were used to adjust for geographic clustering of respondents. Tables 5, 6, and 7 contain cumulative log odds ratios, adjusted standard errors, and estimated probabilities from the (unweighted, MI combined) proportional odds models of the effect of education on stereotypical beliefs, perceptions of discrimination, and racial policy attitudes.

RESULTS

Descriptive Analyses of Inter-group Attitudes

Table 1 summarizes demographic characteristics by race, revealing stark socioeconomic differences between racial groups. Whites and Asians have much greater incomes and substantially more college graduates than both Blacks and Hispanics. About 40% of Asians and 31% of Whites are college graduates compared to 13% of Blacks and 7% of Hispanics. There are also large differences in nativity between racial groups with large numbers of Hispanics and Asians born in foreign countries. It is important to note that because of the MCSUI sample design nearly all Asians live in Los Angeles (94%) and most Hispanic respondents reside in either Los Angeles (57%) or Boston (39%).

Table 2 contains descriptive statistics for beliefs about negative stereotypes by race. There are several clear patterns in these data. First, there is substantial target group variation in beliefs about work ethic within racial groups. Few respondents of any race say that Asians prefer to be on welfare and majorities of all racial groups say that Asians prefer to be self-supporting which is consistent with prior research finding that Asians are perceived to be a "model minority" (Wong et al. 1998). Second, there are also large cross-race differences in beliefs about a group's work ethic. In general, Black and White respondents are less likely to say that racial out-groups prefer to be on welfare and more likely to say that they prefer to be self-supporting. Hispanic and Asian respondents are much more likely than both Blacks and Whites to give the negative view that a group prefers to live on welfare. For example, 67% of Hispanics and 76% of Asians say that Blacks prefer to live on welfare. In addition, 75% of Asian respondents also say that Hispanics prefer to live on welfare while only 21% say Hispanics prefer to be self-supporting. The large proportion of Asian respondents with negative

beliefs about Blacks and Hispanics may reflect unique tensions between these racial groups in the city of Los Angeles, especially following the riots in 1992. Finally, there are a surprisingly large number of Blacks and Hispanics who have negative attitudes about the work ethic of their racial in-group. Over 50% of Hispanic respondents say that Hispanics prefer to live on welfare and about one-third of Black respondents report that Blacks would rather live on welfare than be self-supporting.

Beliefs about discrimination in the labor market are summarized in Table 3. Asian respondents perceive lower levels of discrimination than any other group. For example, only a slight majority (51%) of Asians say that Hispanics face some or a lot of discrimination, compared to 73% of Whites, 75% of Blacks and 85% of Hispanics. White, Black and Hispanic respondents are also far more likely than Asians to say that Blacks are discriminated against. In addition to variation by race of respondent, there is also important target group variation in levels of perceived discrimination. Overall, respondents are most likely to say that Blacks and Hispanics encounter discrimination, where more than 70% of all respondents say that these groups face some or a lot of discrimination. Fewer respondents report that Asians are actively discriminated against. Black and Hispanic respondents are also more likely to say that there is a lot of discrimination directed at their respective in-groups. Over 60% of Black respondents say that Blacks are discriminated against a lot compared to 43% of Hispanic respondents. By contrast, 55% of Hispanic respondents say that Hispanics face a lot of discrimination compared to 34% of Black respondents. These results show that respondent race and target group race (as well as the interaction between the two) influence beliefs about discrimination.

Table 4 presents levels of support for racial preferences in hiring and promotion, a group-based redistributive policy. Support for racial preferences is generally much greater among

minority groups compared to Whites. However, consistent with prior research, these results also suggest a racial hierarchy of support for affirmative action policies: Blacks and Hispanics are the most supportive followed by Asians and Whites who have much less favorable attitudes (Lopez and Pantoja 2004). For example, a majority of Blacks (51%) and Hispanics (54%) favor preferences for Hispanics, but only 28% of Asians and 19% of Whites support this policy; similar patterns hold for racial preferences targeting Blacks and Asians. There is also significant target group variation in support for preferential hiring, where Whites, Blacks and Hispanics have less favorable attitudes toward policies targeting Asians. Policy support is also strongest when minority respondents evaluate policies targeting their racial in-group. For example, among Black respondents, 67% favor racial preferences for Blacks whereas 51% and 41% favor preferences targeting Hispanics and Asians, respectively. A similar pattern holds for Hispanics, where 54% favor preferences for Hispanics but smaller proportions support preference policies targeting Blacks (46%) and Asians (44%). Target group variation in policy support is far less pronounced among Asian respondents.

The descriptive statistics presented here offer a basic overview of group differences in racial attitudes and indicate that there is substantial racial and target group variation. The hierarchical pattern of racial differences in policy attitudes is consistent with group conflict expectations that support for such policies is determined by a group's social position. In order to address the central focus of this study, I next examine the association between education and racial attitudes among all four minority groups. These analyses address the above hypotheses that higher levels of education are associated with rejection of racial stereotypes, greater recognition of discrimination, and less support for group-based remedial policies.

Education and Racial Stereotypes

Table 5 contains log cumulative odds ratios and predicted probabilities from models of beliefs about the work ethic of Blacks, Hispanics and Asians. Among White respondents, the effect of education is clear: highly educated Whites are significantly less likely to say that racial out-groups prefer to be on welfare, net of other factors. For Black respondents, the pattern is similar, where college educated Blacks are much less likely to say that minority groups prefer to live on welfare. For example, an estimated 31% of Black respondents who completed college say that Hispanics prefer to live on welfare compared to 39% of Blacks with a high school education. For Hispanic respondents, the effect of education on negative stereotypes is much less clear. The education coefficients are all in the hypothesized direction, but few reach traditional significance levels. Because only 7% (n = 117) of Hispanics in the MCSUI completed college, the non-effect of education on stereotypical beliefs may reflect lack of statistical power. Nevertheless, the estimated probability that Hispanic respondents with a college education say their racial in-group prefers to live on welfare is 0.48. The estimated probability of saying that Blacks prefer to live on welfare is even greater (P = 0.62) among Hispanic respondents. For Asian respondents, there is also little evidence that education is related to beliefs about out-group stereotypes, although Asians with a college education are more likely to reject negative views about the work ethic of their racial in-group. A large proportion of Asian respondents at all levels of education say that Blacks and Hispanics prefer to live on welfare. For example, an estimated 76% of Asian respondents who have completed college and about the same proportion of Asians with less than a high school education (P = 0.75) believe that Blacks prefer to live on welfare. Thus, the MCSUI data provide fairly clear evidence that well-educated Whites and Blacks are more likely to reject negative racial stereotypes about work ethic, but for Hispanics and Asians, education appears to have less of an impact on these inter-group attitudes.

Education and Perceptions of Discrimination

Results from the models of beliefs about discrimination are presented in Table 6. In general, for Whites, Blacks and Asians, those with a higher education perceive a greater degree of discrimination against racial minorities. Among Whites, the college educated are significantly more likely to report that Blacks, Hispanics and Asians face some or a lot of discrimination that hurts their chances of getting a good job. For Black respondents, an advanced education is associated with significantly higher levels of perceived discrimination against Hispanics and Asians; perception of discrimination against Blacks is nearly universal, with over 90% (estimated) of Black respondents at all levels of education reporting that their racial in-group faces some or a lot of discrimination. College educated Asians are also significantly more likely to say that minority groups are discriminated against. For example, an estimated 64% of Asians who have completed college think that Blacks experience some or a lot of discrimination compared to 44% of Asians with less than a high school education. The relationship between education and beliefs about discrimination is less consistent among Hispanic respondents. Hispanics with an advanced education are no more likely to say that racial minorities are discriminated against than their less-educated counterparts. In general, these data indicate that education is associated with a greater degree of perceived discrimination among all racial groups except for Hispanics.

Education and Support for Racial Preferences

Table 7 contains coefficient estimates and predicted probabilities from the models of support for racial preferences in hiring and promotion. These results indicate that education is not associated with greater support for racial preferences among any group in the study—this despite the greater propensity for those with a higher education to say that discrimination makes it more difficult for

racial minorities to get good jobs. In fact, there is evidence that Whites, Blacks and Hispanics with a more advanced education are significantly less likely to support racial preferences compared to their peers with lower levels of education. Among Black respondents, the estimated probability of favoring racial preferences targeting Blacks is 0.73 for those with less than a high school education and 0.66 for those who have completed college. Education does not appear to be associated with racial preferences targeting out-groups among Black respondents. For Hispanics, those with a more advanced education are much less likely to support racial preference policies. For example, an estimated 56% of Hispanics with less than a high school education favor preferences targeting their in-group compared to 43% of those who have completed college. Among White respondents, the effect of education appears to be somewhat nonlinear, where those with middling levels of education are the least supportive of racial preference policies. For Asians, the education coefficients are in the hypothesized direction, but there are no significant differences in support for preferential hiring by level of education. Thus, these results provide no evidence that an advanced education is associated with more supportive attitudes toward group-based redistributive policies; rather, those with the lowest levels of education have the most favorable attitudes toward racial preferences in hiring and promotion. Furthermore, there is little evidence that well-educated Whites and Asians are any more opposed to racial preference policies than Blacks and Hispanics with a higher education.

DISCUSSION

The results presented here do not provide much support for the empowerment perspective that an advanced education will enable racial minorities to become more astute critics of inequality. An advanced education was associated with rejection of racial stereotypes for Whites and Blacks, but it had no impact on these negative attitudes among Hispanics and Asians. And although a more advanced education was generally associated with greater perception of discrimination, education had no effect on support for preferential hiring policies designed specifically to overcome discrimination in the labor market. In fact, among Whites, Blacks and Hispanics, the highly educated held less favorable attitudes toward racial preferences than their counterparts with very low levels of education. At a simple level, these results are partly consistent with the ideological refinement approach which contends that an advanced education may impact attitudes about inflammatory racial stereotypes and beliefs about discrimination but will have little effect on support for group-based redistributive policies. From this perspective, therefore, a formal education not only provides dominant group members with the ideological tools to subvert the redistributive demands of subordinate groups but also socializes racial minorities in such a way that their support for more radical social policies is somewhat diluted. However, without more detailed data on the reasons why racial minorities oppose certain policies, we should be very cautious about these conclusions. Although the observed relationship between education and attitudes toward group-based remedial policies is consistent with the ideological refinement approach, there are several other plausible explanations for this pattern of educational effects which I will discuss below.

One speculative explanation for the negative effect of education on policy attitudes among Blacks and Hispanics involves the stigmatization that racial minorities may experience in

the workplace as a result of their presumed affirmative action status. Several researchers have identified a phenomenon related to racial preference policies termed "the stigma of incompetence" (Heilman, Block and Lucas 1992; Heilman 1997). Minority employees are perceived by their coworkers to be less competent because of their presumed status as an "affirmative action hire." Minorities with higher levels of education are more likely to have direct experience with affirmative action programs and therefore are more likely to have experienced stigmatization. Such stigmatization may cause educated minorities to lose faith in the efficacy of preferential hiring. Thus, according to this perspective, educated minorities are less supportive of preference policies not because of certain ideological dispositions, but because they are more attuned to the negative effects of these policies.

It is important to note, however, that this explanation is not entirely independent of the ideological refinement argument. Stigmatization is not a natural consequence of racial preference policies themselves; rather, attributions of incompetence and stigmatization are the result of long-standing racial stereotypes and the sacred status of individualism and meritocracy in the work environment. In order for minority employees to be stigmatized as a result of their presumed affirmative action status, coworkers must first have a deep commitment to meritocracy and a strong belief that the extant credentialing system accurately reflects potential job performance. Furthermore, coworkers must assume that minority hires were not equally (or better) qualified for the position, or that minority employees cannot match the performance of "better qualified" White employees. These assumptions are intimately related to an advanced proclivity for individualism and meritocracy as well as negative racial stereotypes. For example, racist beliefs that Blacks have an inferior work ethic increases the chances that coworkers will assume a new minority hire was unqualified or cannot otherwise match the job performance of

White employee. In the absence of negative racial stereotypes relating to attributes that affect job performance and strong commitments to meritocracy, it is unlikely that minorities would frequently suffer stigmatization in the workplace. In addition, the racist assumptions that permit attributions of incompetence obscure several of affirmative action's primary objectives: first, to overcome contemporary discrimination in the labor market and second, to compensate for systematic obstacles minorities have faced when striving to obtain the necessary qualifications for employment.

The results of this multiracial analysis are consistent with both the ideological refinement perspective and the "stigma of incompetence" explanation; however, both accounts of education and minorities' racial attitudes are highly speculative. Further research should focus on understanding the underlying sources of opposition to preference policies among minority groups. To more rigorously adjudicate between these various explanations, future research should utilize qualitative interviews or open ended survey questions that may be able to ascertain the logic and motivation underlying minorities' attitudes toward to preferential hiring, discrimination and the qualities of racial out-groups. In addition to exploring, evaluating and scrutinizing the explanations outlined in this study, future research should seek to overcome several of its limitations. By using a sample of households from four metropolitan areas, the population to which results can be generalized is somewhat restricted. Also, this study focuses on a single affirmative action policy, but there is a wide variety of such policies in different economic and educational institutions. Future research should attempt to analyze nationally representative samples of minority groups and examine a more comprehensive set of policy attitudes. Even with these limitations, the results of this analysis suggest that an advanced

education is not particularly enlightening or empowering for any racial group with respect to inter-group attitudes.

TABLES

Table 1. Sample characteristics, MCSUI 1992-1994

Variable	% Missing	Total (N=8808)	Whites (N=2790)	Blacks (N=3111)	Hispanics (N=1783)	Asians (N=1124)
Education, %						
Less than high school	0.36	26.88	13.75	24.98	56.47	17.81
High school graduate		27.97	27.00	33.59	22.95	22.89
Some college		24.24	28.26	28.54	13.72	19.06
College graduate		20.91	30.99	12.88	6.86	40.25
City, %						
Detroit	0.00	17.15	26.09	23.82	1.68	1.07
Atlanta		17.25	23.01	26.49	1.68	2.05
Los Angeles		45.56	29.93	35.45	57.21	93.86
Boston		20.04	20.97	14.24	39.43	3.02
Gender, %						
Female	0.03	59.49	54.86	66.07	60.07	51.87
Male		40.51	45.14	33.93	39.93	48.13
Employment, %						
Unemployed	0.15	46.64	41.59	51.63	49.04	41.59
Employed		53.36	58.41	48.37	50.96	58.41
Political Ideology, %						
Liberal	7.06	32.35	29.52	39.72	28.72	25.81
Moderate		29.67	33.10	31.84	21.34	28.11
Conservative		31.74	35.56	25.00	34.19	35.94
Haven't thought about it		6.24	1.83	3.44	15.74	10.14
Nativity						
Foreign Born	17.20	37.78	9.13	6.80	81.97	87.14
U.S. Born		62.22	90.87	93.20	18.03	12.86
Age, mean(SD)	0.45	43.86 (16.38)	46.86 (17.16)	44.61 (16.43)	37.01 (12.86)	45.29 (16.19)
Income, mean(SD)	15.93	31206 (28956)	42976 (33369)	24343 (23322)	21000 (19030)	37932 (32879)

Table 2. Beliefs about negative racial stereotypes, MCSUI 1992-1994

Variable	% Missing	Total (N=8808)	Whites (N=2790)	Blacks (N=3111)	Hispanics (N=1783)	Asians (N=1124)
Blacks prefer to be on welfare, % (DINTLBLK)						
Prefer to be self-supporting		25.75	29.03	34.75	15.17	7.26
Neither	5.92	25.40	26.51	31.44	18.02	16.49
Prefer to be on welfare		48.85	44.46	33.81	66.81	76.24
Hispanics prefer to be on welfare, % (DWELFHIS)						
Prefer to be self-supporting		27.09	33.31	31.65	21.95	5.79
Neither	8.13	27.68	29.56	30.49	25.10	18.84
Prefer to be on welfare		45.23	37.14	37.87	52.95	75.37
Asians prefer to be on welfare, % (DWELFASN)						
Prefer to be self-supporting		67.08	72.56	59.96	59.68	85.34
Neither	9.46	20.66	18.32	26.11	21.59	9.67
Prefer to be on welfare		12.25	9.12	13.93	18.73	4.99

Table 3. Beliefs about racial discrimination, MCSUI 1992-1994

Variable	% Missing	Total (N=8808)	Whites (N=2790)	Blacks (N=3111)	Hispanics (N=1783)	Asians (N=1124)
Blacks face discrimination, % (DDISCBLK)						
None	3.08	6.00	9.76	1.27	6.43	9.34
A little		14.43	17.43	5.42	14.08	33.56
Some		37.36	44.73	29.92	35.63	42.80
A lot		42.22	28.08	63.39	43.87	14.30
Hispanics face discrimination, % (DDISCHIS)						
None	3.61	7.75	9.31	7.65	3.85	10.63
A little		18.62	18.02	16.87	11.09	37.93
Some		41.53	49.63	41.06	30.56	40.61
A lot		32.10	23.05	34.41	54.50	10.82
Asians face discrimination, % (DDISCASN)						
None	5.86	15.35	14.51	15.35	19.69	10.90
A little		31.36	29.81	29.54	31.54	39.89
Some		40.77	44.24	39.33	36.05	43.34
A lot		12.52	11.45	15.79	12.72	5.87

Table 4. Attitudes toward racial preferences, MCSUI 1992-1994

Variable	% Missing	Total (N=8808)	Whites (N=2790)	Blacks (N=3111)	Hispanics (N=1783)	Asians (N=1124)
Preferences For Blacks, % (DAFFHBLK)						
Oppose		29.25	51.67	14.07	18.44	32.76
Neither	1.04	27.81	28.42	19.01	35.07	39.17
Favor		42.94	19.91	66.93	46.49	28.07
Preferences For Hispanics, % (DAFFHHIS)						
Oppose		29.45	52.58	18.39	15.14	32.91
Neither	1.03	31.60	28.92	31.02	30.62	39.38
Favor		38.95	18.51	50.60	54.24	27.71
Preferences For Asians, % (DAFFHASN)						
Oppose		31.44	52.90	24.03	17.45	29.60
Neither	1.18	35.02	30.43	35.38	39.00	36.43
Favor		33.55	16.67	40.59	43.55	33.97

Notes: (1) DAFFHHIS, DAFFHASN not included in Detroit study--sample sizes for Whites, Blacks, Hispanics and Asians on these items are 2062, 2370, 1753 and 1112, respectively.

Table 5. Education coeficients from ordinal logistic regression models of beliefs about negative racial stereotypes, MCSUI 1992-1994

Outcome	Whites (N=2790)			Blacks (N=3111)			Hispanics (N=1783)			Asians (N=1124)		
	β	SE	P(Y=3)	β	SE	P(Y=3)	β	SE	P(Y=3)	β	SE	P(Y=3)
Blacks prefer to be on welfare (DINTLBLK)												
Less than high school	ref	ref	0.54	ref	ref	0.40	ref	ref	0.69	ref	ref	0.75
High school graduate	-0.140	0.128	0.51	-0.195	0.100	0.35	0.192	0.138	0.73	0.237	0.265	0.79
Some college	**-0.451**	**0.137**	0.43	**-0.424**	**0.121**	0.30	-0.052	0.164	0.67	0.326	0.306	0.81
College graduate	**-0.860**	**0.142**	0.34	**-0.743**	**0.152**	0.24	-0.283	0.201	0.62	0.011	0.238	0.76
Hispanics prefer to be on welfare (DWELFHIS)												
Less than high school	ref	ref	0.46	ref	ref	0.38	ref	ref	0.52	ref	ref	0.74
High school graduate	-0.117	0.125	0.43	0.041	0.093	0.39	0.178	0.128	0.57	0.406	0.264	0.81
Some college	**-0.375**	**0.132**	0.37	0.019	0.107	0.39	-0.039	0.157	0.51	0.207	0.289	0.78
College graduate	**-0.866**	**0.135**	0.27	**-0.291**	**0.140**	0.31	-0.162	0.204	0.48	0.074	0.251	0.75
Asians prefer to be on welfare (DWELFASN)												
Less than high school	ref	ref	0.14	ref	ref	0.17	ref	ref	0.19	ref	ref	0.08
High school graduate	**-0.288**	**0.145**	0.11	**-0.254**	**0.109**	0.13	-0.059	0.129	0.18	**-0.557**	**0.270**	0.05
Some college	**-0.781**	**0.159**	0.07	**-0.270**	**0.122**	0.13	**-0.493**	**0.178**	0.12	**-1.094**	**0.333**	0.03
College graduate	**-1.126**	**0.163**	0.05	**-0.576**	**0.165**	0.10	-0.140	0.239	0.17	**-0.602**	**0.283**	0.04

Notes: (1) The reported coefficients are cumulative log odds ratios with standard errors in parentheses; (2) results are based on combined estimates from 10 multiple imputation datasets; (3) models include controls for sex, age, employment status, family income, liberal/conservative political ideology, nativity, city and race of interviewer; (4) stardard errors are adjusted for clustering using the Huber-White robust variance estimate; (5) P(Y=3) is the predicted probability of a respondent saying that [GROUP] prefers to live on welfare given level of education and holding control variables at their mean; (6) **bold** coefficients indicate $P(|Z|>z)<0.05$.

Table 6. Education coeficients from ordinal logistic regression models of beliefs about racial discrimination, MCSUI 1992-1994

Outcome	Whites (N=2790)			Blacks (N=3111)			Hispanics (N=1783)			Asians (N=1124)		
	β	SE	P(Y>2)	β	SE	P(Y>2)	β	SE	P(Y>2)	β	SE	P(Y>2)
Blacks face discrimination (DDISCBLK)												
Less than high school	ref	ref	0.66	ref	ref	0.93	ref	ref	0.79	ref	ref	0.44
High school graduate	0.146	0.141	0.69	-0.065	0.111	0.93	**0.220**	**0.108**	0.82	0.379	0.197	0.54
Some college	**0.395**	**0.144**	0.74	0.095	0.122	0.94	0.178	0.139	0.81	**0.594**	**0.218**	0.59
College graduate	**0.791**	**0.144**	0.81	0.245	0.146	0.95	0.169	0.158	0.81	**0.806**	**0.227**	0.64
Hispancis face discrimination (DDISCHIS)												
Less than high school	ref	ref	0.65	ref	ref	0.69	ref	ref	0.87	ref	ref	0.42
High school graduate	0.173	0.134	0.69	**0.270**	**0.098**	0.75	-0.183	0.122	0.85	0.248	0.183	0.48
Some college	**0.398**	**0.138**	0.74	**0.488**	**0.111**	0.79	-0.098	0.149	0.86	**0.411**	**0.188**	0.52
College graduate	**0.677**	**0.139**	0.79	**0.705**	**0.133**	0.82	-0.047	0.203	0.87	**0.587**	**0.185**	0.57
Asians face discrimination (DDISCASN)												
Less than high school	ref	ref	0.48	ref	ref	0.53	ref	ref	0.46	ref	ref	0.34
High school graduate	0.249	0.138	0.54	0.038	0.102	0.54	**0.371**	**0.120**	0.55	**0.498**	**0.186**	0.46
Some college	**0.382**	**0.142**	0.58	0.101	0.113	0.55	0.160	0.138	0.50	**0.662**	**0.205**	0.50
College graduate	**0.397**	**0.135**	0.58	**0.412**	**0.139**	0.63	0.043	0.168	0.47	**0.979**	**0.206**	0.58

Notes: (1) The reported coefficients are cumulative log odds ratios with standard errors in parentheses; (2) results are based on combined estimates from 10 multiple imputation datasets; (3) models include controls for sex, age, employment status, family income, liberal/conservative political ideology, nativity, city and race of interviewer; (4) stardard errors are adjusted for clustering using the Huber-White robust variance estimate; (5) P(Y>2) is the predicted probability of a respondent saying that [GROUP] faces some or a lot of discrimination given level of education and holding control variables at their mean; (6) **bold** coefficients indicate P(|Z|>z)<0.05.

Table 7. Education coeficients from ordinal logistic regression models of attitudes toward racial preferences, MCSUI 1992-1994

Outcome	Whites (N=2790)			Blacks (N=3111)			Hispanics (N=1783)			Asians (N=1124)		
	β	SE	P(Y=3)	β	SE	P(Y=3)	β	SE	P(Y=3)	β	SE	P(Y=3)
Favor Preferences for Blacks (DAFFHBLK)												
Less than high school	ref	ref	0.23	ref	ref	0.73	ref	ref	0.472	ref	ref	0.32
High school graduate	**-0.386**	**0.122**	0.17	**-0.282**	**0.121**	0.67	0.087	0.131	0.494	-0.288	0.170	0.26
Some college	**-0.384**	**0.133**	0.17	**-0.442**	**0.134**	0.64	-0.193	0.148	0.424	-0.273	0.183	0.27
College graduate	-0.203	0.137	0.19	**-0.351**	**0.170**	0.66	-0.280	0.205	0.403	-0.239	0.183	0.27
Favor Preferences for Hispanics (DAFFHHIS)												
Less than high school	ref	ref	0.21	ref	ref	0.52	ref	ref	0.564	ref	ref	0.31
High school graduate	**-0.426**	**0.153**	0.15	-0.109	0.112	0.50	-0.057	0.134	0.551	-0.288	0.174	0.26
Some college	**-0.337**	**0.164**	0.16	-0.101	0.144	0.50	**-0.305**	**0.141**	0.489	-0.293	0.183	0.25
College graduate	-0.273	0.164	0.17	0.066	0.161	0.54	**-0.528**	**0.211**	0.433	-0.177	0.187	0.28
Favor Preferences for Asians (DAFFHASN)												
Less than high school	ref	ref	0.19	ref	ref	0.42	ref	ref	0.455	ref	ref	0.36
High school graduate	**-0.434**	**0.153**	0.13	-0.087	0.111	0.40	-0.057	0.135	0.441	-0.145	0.175	0.33
Some college	**-0.346**	**0.163**	0.15	-0.141	0.138	0.39	-0.191	0.156	0.408	-0.173	0.181	0.32
College graduate	-0.280	0.159	0.15	-0.041	0.166	0.41	**-0.666**	**0.222**	0.300	-0.131	0.186	0.33

Notes: (1) The reported coefficients are cumulative log odds ratios with standard errors in parentheses; (2) results are based on combined estimates from 10 multiple imputation datasets; (3) models include controls for sex, age, employment status, family income, liberal/conservative political ideology, nativity, city and race of interviewer; (4) stardard errors are adjusted for clustering using the Huber-White robust variance estimate; (5) P(Y=3) is the predicted probability of a respondent favoring racial preferences for [GROUP] given level of education and holding control variables at their mean; (6) DAFFHHIS, DAFFHASN not included in Detroit study--sample sizes for Whites, Blacks, Hispanics and Asians on these items are 2062, 2370, 1753 and 1112, respectively; (7) **bold** coefficients indicate $P(|Z|>z)<0.05$.

APPENDIX A - MCSUI survey items

Negative racial stereotypes

"Next, for each group I want to know whether you think they tend to prefer to be self-supporting or tend to prefer to be on welfare. Where would you rate (GROUP) on this scale, where 1 means tends to prefer to be self-supporting and 7 means tends to prefer to be on welfare? A score of 4 means you think that the group is not towards one end or the other and, of course, you may choose any number in between that comes closest to where you think people in the group stand. What about Blacks? (DWELFBLK) What about Asians? (DWELFASN) What about Hispanics or Latinos? (DWELFHIS)"

Beliefs about discrimination

"Now I am going to ask you some questions on a different topic. We are interested in whatever thoughts and opinions you have. There are no right or wrong answers. The first topic is discrimination. In general, how much discrimination is there that hurts the chances of [GROUP] to get good paying jobs? Do you think there is a lot, some, only a little, or none at all? How about for Hispanics or Latinos? (DDISCHIS) How about for blacks? (DDISCBLK) How about for Asians? (DDISCASN)"

Racial preferences

"Some people feel that because of past disadvantages, there are some groups in society that should be given preference in hiring and promotion. Others say that it is unfair to give these groups special preferences. What about you? Do you strongly favor, favor, neither favor or oppose, oppose, or strongly oppose special preferences in hiring and promotion to [GROUP]? What about blacks? (DAFFHBLK) What about Hispanics or Latinos? (DAFFHHIS) What about Asians? (DAFFHASN)"

REFERENCES

Agresti, A. 2002. *Categorical Data Analysis (2nd Ed.)*. Hoboken, NJ: John Wiley & Sons.

Allport, G. W. 1958. *The Nature of Prejudice*. Garden City, NY: Doubleday.

Althusser, L. 1971. "Ideology and Ideological State Apparatuses." Pp. 127-188 in *Lenin and Philosophy and Other Essays*. New York: Monthly Review Press.

Apostle, R. A., C. Y. Glock, T. Piazza, and M. Suelzle. 1983. *The Anatomy of Racial Attitudes*. Berkeley, CA: University of California Press.

Bobo, L. 1988. "Group Conflict, Prejudice, and Paradox of Contemporary Racial Attitudes." in *Eliminating Racism: Means and Controversies*, edited by P. A. Katz and D. A. Taylor. New York: Plenum.

—. 1998. "Race, Interests and Beliefs about Affirmative Action: Unanswered Questions and New Directions." *American Behavioral Scientist* 41:985-1003.

Bobo, L., and V. L. Hutchings. 1996. "Perceptions of Racial Group Competition: Extending Blumer's Theory of Group Position to a Multiracial Social Context." *American Sociological Review* 61.

Brant, R. 1990. "Assessing Proportionality in the Proportional Odds Model for Ordinal Logistic Regression." *Biometrics* 46:1171-1178.

Cross, T., and R. B. Slater. 1995. "Alumni Children Admissions Preferences at Risk: The Strange Irony of How the Academic Achievements of Asians may Rescue Affirmative Action for Blacks." *The Journal of Blacks in Higher Education* 6:87-90.

Farley, R., C. Steeh, M. Krysan, T. Jackson, and K. Reeves. 1994. "Stereotypes and Segregation: Neighborhoods in the Detroit Area." *American Journal of Sociology* 100:750-780.

Feagin, M. 2000. *Racist America*. New York: Routledge.

Glaser, J. M. 2001. "The Preference Puzzle: Educational Differences in Racial-Political Attitudes." *Political Behavior* 23:313-334.

Gramsci, A. 1971. *Selections from the Prison Notebooks of Antonio Gramsci*. New York: International Publishes.

Heilman, M. E., C. J. Block, and J. A. Lucas. 1992. "Presumed Incompetent? Stigmatization and Affirmative Action Efforts." *Journal of Applied Psychology* 77:536-544.

Heilman, M. E., Block, C. J. & Stathatos, P. 1997. "The Affirmative Action Stigma of Incompetence: Effects of Performance Information Ambiguity." *Academy of Management Journal* 40:603-625.

Holzer, H., J. Kirschenman, P. Moss, and C. Tilly. 2000. "Multi-City Study of Urban Inequality, 1992-1994 [Atlant, Boston, Detroit, and Los Angeles Telephone Survey Data], 2nd ICPSR version." Inter-University Consortium for Political and Social Research.

Hyman, H. H., and P. B. Sheatsley. 1956. "Attitudes toward Desegregation." *Scientific American* 195:35-39.

—. 1964. "Attitudes toward Desegregation." *Scientific American* 211:16-23.

Hyman, H. H., and C. R. Wright. 1979. *Education's Lasting Influence on Values*. Chicago: University of Chicago Press.

Hyman, H. H., C. R. Wright, and J. S. Reed. 1975. *The Enduring Effects of Education*. Chicago: University of Chicago Press.

Jackman, M. R. 1978. "General and Applied Tolerance: Does Education Increase Commitment to Racial Education?" *American Journal of Political Science* 22:302-324.

—. 1981. "Education and Policy Committment to Racial Integration." *American Journal of Political Science* 25:256-269.

—. 1994. *The Velvet Glove: Paternalism and Conflict in Gender, Class and Race Relations*. Berkeley, CA: University of California Press.

Jackman, M. R., and M. J. Muha. 1984. "Education and Intergroup Attitudes: Moral Enlightenment, Superficial Democratic Commitment, or Ideological Refinement?" *American Sociological Review* 49:751-769.

Kane, E. W. 1995. "Education and Beliefs About Gender Inequality." *Social Problems* 42:74-90.

Kane, E. W., and E. K. Kyyro. 2001. "For Whom Does Education Enlighten? Race, Gender, Education, and Beliefs about Social Inequality." *Gender and Society* 15:710-733.

Kerbo, H. R. 1983. *Social Stratification and Inequality: Class Conflict in the United States*. New York: McGraw-Hill.

Klineberg, S. L., and D. A. Kravitz. 2003. "Ethnic Differences in Predictors of Support for Municipal Affirmative Action Contracting." *Social Science Quarterly* 84:425-440.

Kluegel, J. R., and E. R. Smith. 1986. *Beliefs About Inequality: Americans' Views of What Is and What Ought to Be*. New York: Aldine de Gruyter.

Lee, J., and F. D. Bean. 2007. "Reinventing the Color Line: Immigration and America's New Racial/Ethnic Divide." *Social Forces* 86:561-586.

Long, J. S. 1997. *Regression Models for Categorical and Limited Dependent Variables*. Thousand Oaks, CA: Sage.

Lopez, L., and A. D. Pantoja. 2004. "Beyond Black and White: General Support for Race Conscious Policies among African Americans, Latinos, Asian Americans and Whites." *Political Research Quarterly* 57:633-642.

Margolis, M., and K. E. Haque. 1981. "Applied Tolerance of Fear of Government? An Alternative Interpretation of Jackman's Findings." *American Journal of Political Science* 25:241-255.

Marx, K. 1964. *Selected Writings in Sociology and Social Philosophy*. New York: McGraw-Hill.

McClelland, K., and E. Linnander. 2006. "The Role of Contact and Information in Racial Attitude Change among White College Students." *Sociological Inquiry* 76:81-115.

Quinley, H. E., and C. Y. Glock. 1979. *Anti-semitism in America*. New York: Free Press.

Royston, P. 2005. "Multiple Imputation of Missing Values: Update." *The Stata Journal* 5:1-14.

Rubin, D.B. 1987. *Multiple Imputation for Nonresponse in Surveys*. New York: J. Wiley & Sons.

Schuman, H., C. Steeh, L. Bobo, and M. Krysan. 1997. *Racial Attitudes in America: Trends and Interpretations (Revised Edition)*. Cambridge, MA: Harvard University Press.

Smith, K. B., and W. C. Seelbach. 1987. "Education and Intergroup Attitudes: More on the Jackman and Muha Thesis." *Sociological Spectrum* 7:157-170.

Sniderman, P. M., and T. Piazza. 1993. *The Scar of Race*. Cambridge, MA: Harvard University Press.

Song, M. 2004. "Who's at the Bottom? Examining Claims About Racial Hierarchy." *Ethnic and Racial Studies* 27:859-877.

Tilly, C. 1978. *From Mobilization to Revolution*. Reading, MA: Addison-Wesley.

Tuch, S. A., L. Sigelman, and J. K. Martin. 1997. "Fifty Years After Myrdal: Blacks' Racial Policy Attitudes in the 1990s." in *Racial Attitudes in the 1990s: Continuity and Change*, edited by S. A. Tuch and J. K. Martin. Westport, CT: Praeger.

van Laar, C., J. Sidanius, and S. Levin. 2008. "Ethnic-Related Curricula and Intergroup Attitudes in College: Movement Toward and Away From the In-Group." *Journal of Applied Social Psychology* 38:1601-1638.

Wong, P., C. F. Lai, R. Nagawasa, and T. Lin. 1998. "Asian Americans as a Model Minority: Self-perceptions and Perceptions by Other Racial Groups." *Sociological Perspectives* 41:95-118.