Race-Relations Theories, Schools and the
Racial Dynamics of Basketball Performance

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ABSTRACT

Does the local, racial context influence racial differences in culture? I answer this question by testing predictions from group threat theory and the cultural division of labor about which high schools have greater black-white differences in basketball performance. Data are from the National Education Longitudinal Study are analyzed with multilevel ordered probit models. After controlling for predictors of sports performance in students' families, schools, and neighborhoods, we find evidence for both theories. Black-white differences in basketball performance is greater in schools that are about 50% black, as group threat predicts, and in schools with more hierarchical segregation within them, as the cultural division of labor predicts. We also find that racial conflict within the schools mediates the effect of group threat. The theoretical implications of the findings are discussed.

In this paper, I investigate black-white differences in sports performance as a socially constructed racial difference. Racial differences are group differences that form a symbolic barrier between socially created racial groups. Racial differences, as social constructions, should not be of equal size in all contexts because they depend on how much the local context accentuates social organization along the lines of race rather than some other element of social structure. In particular, racial group conflict is likely to create more stringent adherence to racial differences because group members use these differences to identify themselves and others as authentic group members (Barth 1969).

In this article, I examine how race relations among students in schools influence racial differences in basketball performance. I use two theories to understand school level variation in

racial relations: group threat theory and the cultural division of labor. These theories have been used to predict spatial and temporal variation in levels of group solidarity, racial discrimination, prejudicial attitudes, racial conflict, voting behavior, and other outcomes (e.g., Blalock 1967; Diez Medrano 1994; Hechter 1975; 1978; Okamoto 2003; Olzak 1992; Olzak and West 1991; Tolnay, Beck, and Massey 1989).

These theories also purport to explain racial differences in culture. Racial differences are beliefs and behaviors that vary systematically with racial identities other things equal. These differences can be found in regard to language (accents, vernaculars, or dialects), dress, style, etiquette, consumption, and leisure activities. Racial differences are integral to group processes as they signal legitimate identities and pattern social interaction (Brewer 1999; DiMaggio and Ostrower 1990; Lamont and Molnár 2002).

In this paper, I test predictions from group threat theory and the cultural division of labor for racial difference in levels of high school basketball participation, which are treated as a measure of sports performance within each school. Basketball is selected because it is a highly racialized yet popular activity with much weaker connections to discrimination, conflict, and politics than the outcomes examined previously with these theories. Schools are an apt institution for studying these theories because race relations and the contextual conditions specified by these theories vary considerably across schools (Goldsmith 2004; Moody 2001; Quillian and Campbell 2003). In addition, data from the National Education Longitudinal Study (NELS) contain much more information about individuals, schools, and neighborhoods than data typically used to research these theories.

Testing these theories' predictions about basketball performance in schools will improve our understanding of the theories, race relations in schools, and racial differences. I assume that all racial differences are socially and historically constructed in schools and other, larger contexts. The aim of this study is not to determine why blacks outperform whites in basketball. It is to learn whether or not racial dynamics in the local context influence racial differences.

I begin the introduction by developing the underlying theoretical model which is used to explain the relationship between local race relations and racial differences. The second section discusses basketball performance as a boundary marker. The third section explains the other correlates of high school sports participation and performance. I then outline the hypotheses that test the theoretical predictions. Methods, results, and discussion follow.

LITERATURE REVIEW

Theories of Racial Differences

Group threat theory and the cultural division of labor explain the underlying social contexts which account for variation in racial dynamics across time and space. Both theories contend that racial conflict is the underlying social condition leading to greater racial differences, so I focus on how the race relations theories explain this outcome. I also discuss the kinds of racial differences noted by the original formulators of these theories. I use more recent research to elaborate on the relationship between racial conflict and differentiation.

Group threat theory. This theory (Blalock 1967) explains variation in racial conflict across different places as the result of the subordinate group's relative size. As the subordinate group's relative size increases, the subordinated group becomes a greater real or perceived threat to the dominant group's resources and power. In response to this threat, the dominant group renews efforts to control their resources via discrimination, ultimately raising levels of group conflict.

Blalock (1967) believes that group threat accounts for the unique and oppressive forms of differentiation enforced by whites in the Jim Crow South. He argues that segregation did more than distribute resources unequally. Whites also segregated such things as water fountains and entrances to restaurants and created a racial etiquette system for symbolic and ideological reasons. These symbolic differences humiliated blacks and worked to unite all whites, regardless of economic position, behind an ideology of racial superiority.

Cultural Division of Labor. This theory (Hechter 1975; 1978) views levels of group conflict as a function of the type and extent of segregation. The theory posits two types of segregation: segmental and hierarchical. Segmental segregation refers to separation that is not necessarily unequal (i.e., horizontal segregation), and hierarchical segregation refers to separation that is unequal (i.e., vertical segregation).

Segregation increases group solidarity and group conflict by increasing intragroup interaction and decreasing intergroup interaction. Segregated environments also lead the subordinated group to see their lower status as a consequence of racial discrimination and they develop shared interests in eliminating the racial stratification system. The oppositional interests of the dominant and subordinate groups result in group conflict. The subordinated group develops an oppositional culture to socialize youth to resist oppression and emphasizes those

types of cultural differences which show their equality or that challenge their inferior status relative to the dominant group.

More recent work, which is nevertheless indebted to Barth (1969), considers racial differences to be symbolic boundary markers (Lamont and Molnár 2002). Symbolic boundaries “are conceptual distinctions made by social actors to categorize objects, people, practices, and even time and place (Lamont and Molnár 2002:168).”

Symbolic boundaries work in intergroup settings to differentiate co-ethnics from outsiders. Fluency with or knowledge of symbolic boundaries acts like cultural capital in that it has exchange value. The symbolic boundary is used to mark-off the limits of in-group trust, cooperation, and privilege and/or out-group suspicion, dislike, and subordination (Brewer 1999; Lamont and Molnár 2002). Adherence to norms of symbolic boundaries establishes one as “a good or legitimate in-group member (Brewer 1999:433).”

Brewer (1999) explains why group conflict creates more racial differences (or a less permeable symbolic boundary). She argues that a social structure organized along group lines will by itself tend towards greater differentiation because social actors will rely on co-ethnics for resources, a phenomenon she labels “ingroup love.” However, in a conflict situation, identifying co-ethnics and outsiders becomes increasingly important because, first, the social networks will be especially segregated along group lines, and second, because outsiders go beyond withholding resources to actually being dangerous, a phenomenon she labels, “outgroup hate.” The greater repercussions of not adhering to norms of differentiation in conflict situations lead individuals to invest more energy in identifying themselves and others and they lead groups to invest more energy in enforcing the boundaries that symbolically mark identities (also see Barth 1969).

More recent research also confirms the idea from the two theories that racial groups stress particular kinds of symbolic criteria over others. For example, it was whites, not blacks, who enforced the racial etiquette system in the Jim Crow South. In general, each group emphasizes, in some cases in the face of opposition, those criteria that establish their positive distinctiveness to show their relative equality (Tajfel and Turner 1985).

Cultural Consumption, Race, and Basketball

Which criteria form symbolic boundaries for which groups is investigated by researchers of cultural consumption. They analyze varying rates of consumption for different cultural forms and practices across demographic categories to learn which forms of culture are being used by

which social groups to draw symbolic boundaries (Peterson and Anand 2004). While much of this work focuses on class and gender boundaries, there has been important research on racial boundaries too.

DiMaggio and Ostrower (1990) examine racial differences in cultural capital. They operationalize cultural capital along the lines of Bourdieu (1984) as appreciation or participation in arts forms like classical music, opera, and ballet. DiMaggio and Ostrower conclude that blacks have less cultural capital than whites because of class (rather than race) barriers. Whites, in contrast, avoid black cultural forms (i.e., jazz) even though they have the means to consume it because they will find few social benefits from gaining status among blacks and/or because they will lose status among whites. Bryson (1996), in her analyses of General Social Survey data, finds that more prejudiced whites show more dislike of musical styles associated with blacks than less prejudiced whites. Other research has shown that blacks use participation in black-tagged popular culture, like hip-hop music and basketball, to demonstrate authentic black identities and to gain status among blacks (Clay 2003; Pope and O'Sullivan 2003).

Douglas Hartmann (2000; 2003) argues that the attractiveness of sports like basketball to blacks results from an ideology that views sport as a progressive racial force emphasizing integration, equality, merit, and civil rights. Messner (1989), whose work is consistent with this view, shows how the perceived openness of sports results in many black (and working class white) adolescents investing considerable time and energy to become good at sports. Middle class whites, in contrast, begin disinvesting in sports during adolescence to concentrate on what they consider to be better career options.

Hartmann acknowledges that the popular ideology exaggerates the racial progressiveness of sport. Not only does racism, prejudice, and discrimination limit blacks' opportunities in sports, the achievement of successful blacks in sport, while prominent, is often reinterpreted in the media in ways that associate blacks with stereotypes of deviance and mental inferiority. Despite the limits of the popular ideology, Hartmann argues that sport is still more open than most institutions. Sport allows blacks to construct a positive identity and a black aesthetic, and blacks can use sport to resist domination and demonstrate relative equality.

Basketball is a prototypical example of this use of sports by blacks. In the media and in the elite levels of the sport, basketball is highly associated with blackness (Ogden and Hilt 2003). As should be the case if basketball is used as a symbolic barrier, blacks, compared to whites,

receive more social support to play, more readily identify with being a basketball player, and receive more status for being good players from co-ethnics (Harris 1994; Harrison, Lee, and Belcher 1999; Pope and O'Sullivan 2003). Moreover, scholars have recognized that blacks in the US use basketball performance to signal their greatness vis-à-vis whites, a pattern seen among subordinated ethnic groups in sport in other countries (Carrington 1998; Hartmann 2000; 2003; Messner 1992).

Basketball is also a good activity to study as a racial boundary marker because it is permeable. Basketball is a very popular recreational activity. While a greater proportion of blacks than whites play basketball, white participants outnumber black ones in sheer numbers (Dwyer 1994). It is played in cities, suburbs, and rural areas, especially at younger ages, by males and females, and for many reasons (Dwyer 1994).

Following the methodology of the consumption of culture school, I view racial differences in basketball performance, to the extent that they are actually structured by racial (as opposed to class or neighborhood) forces, to indicate the use of symbolic boundaries by racial groups to distinguish legitimate insiders and outsiders. I look at levels of basketball participation as a measure of basketball performance to better capture blacks' greater investments in the sport and one of the main ways in which blacks use basketball, which is to demonstrate their equality to whites (even though blacks' achievements are reinterpreted to reinforce black stereotypes). I now discuss research on high school sports participation, which is the sociological literature most similar to high school sports performance.

Social Determinants of Athletic Participation

Many sports, including basketball, have tryouts where students are selected by coaches, but even prior to that, individual students are persuaded or dissuaded from participating in the extra-curriculum by other peers and adults. School personnel are motivated to find students who will give a good showing of the school to the community, so they usually encourage, somewhat selfishly, academically successful students from high SES backgrounds to participate (Eckert 1989; Quiroz, Gonzalez, and Frank). Not surprisingly, extracurricular participation in most activities (including basketball) is positively associated with socioeconomic background (Eitle and Eitle 2002; Goldsmith 2003). Differences in prior socialization may also be part of the reason students' race, SES, and gender impact how many and which activities students participate in (McNeal 1999; Quiroz et al. 1996).

Interstudent competition also impacts students' opportunities to participate (McNeal 1999). Large schools try to accommodate more students by creating levels (like a junior varsity) but they are usually unable to keep up with demand. The student composition of schools also affects interstudent competition. Because high SES students have higher participation rates, schools with many high SES students will have relatively more competition for the available positions. Similarly, black students have higher participation rates in basketball, so students in schools with proportionately more blacks will find fewer opportunities in this sport.

Characteristics of students' residential neighborhoods also influence extracurricular participation (Goldsmith 2003). Extensive racial segregation in residential neighborhoods concentrates relatively more blacks than whites into neighborhoods with high poverty rates (Massey and Denton 1993). Differences in the poverty rates between blacks' and whites' neighborhoods may have important consequences for socialization in sports. Poor neighborhoods can support few organizations because of a shortage of expendable income (Massey and Denton 1993). The consequence for sports participation is that poor neighborhoods rarely contain organizations that provide opportunities for playing high status sports (Messner 1992). In contrast, opportunities to play a small set of sports are relatively more available, not only because the required facilities for some sports can be created with few resources but also because recreational activities in these few sports are publicly funded.

School Contexts, Race, and Basketball

The literature on athletic participation suggests family, school, and neighborhood factors influence blacks' and whites' basketball participation. However, racial differences in basketball performance may be very large net of these other factors. Eitle and Eitle (2002) report that net of SES and other family and school differences, black males are 5.7 times more likely to participate in high school basketball than white males. Goldsmith (2003), who adds controls for neighborhood differences, finds black males and females to be 4.4 and 2.6 times more likely to participate in basketball than white males and females, respectively. While racial differences in socialization prior to high school may account for some racial differences in basketball performance in high school, the structural conditions within the high school, especially those identified by group threat theory and the cultural division of labor, will either exacerbate or erode the preexisting racial differences.

Group threat theory argues that as the relative size of the subordinate group increases, so

does their perceived threat, the extent of racial conflict, and ultimately, the extensiveness of racial differences. Blalock (1967: chapter 5) recognized that the relationship between subordinate group size and group threat is not always linear; the form of the relationship depends on the dominant group's motivation and other factors (also see Tolnay, Beck, and Massey 1989). Research on race relations in schools has consistently identified a curvilinear relationship between subordinate group size and intergroup relations. Group relations worsen and then improve as the relative size of the subordinate group becomes larger, with the turning point occurring when the subordinate group reaches about one-half of the school (Goldsmith 2004; Longshore 1982; Moody 2001).

There are two conceivable ways that group threat can affect basketball performance in schools. One, whites respond to subordinate group threat by trying to monopolize participation in basketball. In fact, for much of the twentieth century, whites actively barred black participation in leagues and venues to make them all-white, and as group threat theory would predict, this practice was most thorough and lasted longer in the South than elsewhere in the US. The second way to apply group threat theory is to view basketball participation as a symbolic boundary. In this perspective, the expectation is that rising threat will lead to higher black participation and performance and lower white participation and performance.

I believe the latter trend will be more evident across schools because white coaches, teachers, and advisors offer more social support for blacks than whites to play basketball (Cashmore 1983; Harris 1994). Furthermore, successful black performance in basketball can be interpreted by whites through ideologies of blacks as deviant and as mentally inferior (Hartmann 2003). Given previous research showing that racial conflict in schools rises and falls with the subordinate group's relative size and the prediction from group threat theory that symbolic boundaries become less permeable under conditions of threat, I contend:

Hypothesis 1: Blacks' advantage in basketball performance will widen and then narrow as schools' proportion black rises, with the peak occurring when schools' proportion black is one-half.

This hypothesis will receive support if the race effect interacts with schools' proportion black in the curvilinear manner specified.

The cultural division of labor argues that symbolical boundaries become less permeable as hierarchical and segmental segregation rise. As the theory's name implies, it is used primarily

to study segregation in occupations, but it is a general theory which should be applicable in other institutions (Hechter 1978:298), like schools. Research on social interaction shows that whites and blacks rarely form interracial friendships, but there is also variation across schools (Hallinan and Williams 1989; Moody 2001; Quillian and Campbell 2003). Goldsmith (2004) shows that some schools have racial tracking systems, where minority groups are concentrated in the general education track and white students are concentrated in the college preparation track—thus creating hierarchical segregation. That type of segregation can also result from having social class differences between whites and blacks in the school. In addition, school structures influence levels of segregation among students. Students who take the same classes or participate in the same activities are more likely to become friends, so schools where blacks and whites are integrated into the same classes will have more social integration (Hallinan and Williams 1989).

According to the cultural division of labor, racial differences increase as the groups become more hierarchically and segmentally segregated. As such, this theory predicts:

Hypothesis 2: Racial differences in basketball performance will widen as schools become more (a) hierarchically and (b) segmentally segregated.

These hypotheses will receive support if the race effect interacts with schools' segmental and hierarchical segregation. The final hypothesis tests the assumed theoretical mechanisms. Both theories identify group conflict as a mechanism in a manner which forms:

Hypothesis 3: Racial conflict mediates the relationship between (a) subordinate group size and race's effect and (b) segregation and racial differences in basketball performance.

This hypothesis will receive support if the subordinate-group-size-by-race and the two segregation-by-race interactions disappear when levels of racial conflict in the school are held constant. Next I discuss the methods for testing these hypotheses.

METHODS

Data

I use data from the restricted version of the NELS (National Center for Education Statistics 1996). These are longitudinal data from a stratified probability sample which contains about 26,000 eighth-grade students in 1,000 schools in the base year, acquired in 1988. I rely on data from students, teachers, and administrators from the first follow-up, conducted in 1990 when most of the students were sophomores. Only this wave measures basketball participation.

In addition to NELS data, 1990 Census data is merged with student records at the zip-code level to measure characteristics of students' residential neighborhoods. Together, the data can track students' level of basketball participation as a function of student, school, and neighborhood characteristics.

Dependent variable. I use a question to students about their level of basketball participation to construct a four-category ordinal variable. The first category includes students reporting "did not participate." Also included in this category is a small number of students that reported that their school did not have basketball when the school actually did. The second and third categories include students saying they played basketball as an "intramural sport" and as a "junior varsity sport," respectively. The final category includes students saying they played basketball as a "varsity sport" or that they were a "captain/co-captain." I treat these four categories as a measure of basketball performance—how well they play. The assumption is that, *on average*, intramural players are better players than the students that do not play, that the JV players are better than the intramural players, and that the varsity and captain/co-captains are better than the JV players. In a perfect meritocracy, the categories would probably measure performance very well. High school basketball is not a perfect meritocracy, but school personnel are under some pressure to appear that way. This means that in a large data set like this one, the assumptions are likely to be true on average, but the measure will contain error. In the raw data, each level shows black-white differences. A lower percentage of whites than blacks are in the intramural (5.0 vs. 7.9), junior varsity (8.9 vs. 12.4), and varsity (5.5 vs. 9.2) levels, respectively.

Table 1 provides descriptive statistics and operational definitions for the theoretical and control variables. I discuss various concerns related to each measure below.

Theoretical variables. Student's race is coded from self-reports with a dummy variable called "black" (1 = yes). Whites are the reference group. Members of other racial groups are omitted from the data. The relative size of the subordinate group is measured as schools' proportion black, as reported by principals. In order for schools' proportion black to capture blacks' threat to whites, I hold constant the summed proportions of Latino/a, Asian, and American Indian students with a variable called "schools' proportion other race." When proportion other race is held constant, the impact of an increase in proportion black is equal to the impact of the same decrease in proportion white.

Segmental segregation is measured at the school level from data reported by teachers on

the number of students and the number of nonwhite (all but non-Hispanic white) students in their classes. While this information cannot be further disaggregated by race to create a measure of black-white segregation, it can be used to measure segmental segregation as the standard deviation of proportion minority in the classes within each school. A higher standard deviation indicates greater segregation.

Hierarchical segregation is measured from two indicators. The first indicator captures the hierarchy created by students' status position in the community by taking the average SES of white students sampled in the school minus the same for black students sampled in the school. SES is a z-score variable constructed by the NCES from information on parental occupations, income, education, and household resources. I use SES because it is the main student characteristic operating in schools to reproduce inequality in the community within the school (Eckert 1989) and because black-white differences in SES within schools reduce interracial friendships (Hallinan and Williams 1989; Moody 2001; Quillian and Campbell 2003).¹

The other indicator captures the hierarchy created by students' immediate status position in the school. Teachers are asked the track of their classes and given these options: (1) advanced, (2) honors, (3) general, (4) vocational, technical, or business and (5) other. Using this information plus information about non-white enrollment in each class, the second indicator is calculated as the difference in the average proportion of non-white students in advanced and honors classes minus the same proportion in general, vocational and other classes within each school. This measure summarizes information on many more students in the school than the other indicator because it is based on information about classes rather than sampled-students. It estimates the extent to which non-white students are under-represented in classes in the advanced or honors track relative to classes in other tracks.

The two indicators of hierarchical segregation are combined into a single index by transforming each indicator to have a unit standard deviation and then by taking the average of the available indicators in each school ($\alpha = .46$). The index equals zero when the average of the two indicators is zero. The first indicator equals zero when the mean SES of white and black students in a school are equal, and the second indicator equals zero when non-whites are equally represented in high and low status classes.

¹ Unfortunately, the indicator based on SES can only be calculated for about half of the schools in the sample because of the low number of students per school.

Schools' level of racial conflict is measured from an index created from two questions posed to teachers.² The first asks teachers the degree to which racial/ethnic conflict is a problem in the school (coded from 0 = not a problem to 3 = a serious problem). The second asks teachers how often racial/ethnic conflict occurs in the school (coded from 0 = never to 3 = often). The index of racial conflict, which also has a true zero point, is the average of these two questions for all teachers in the school ($\alpha = 0.84$). Previous research using these questions in a similar data set has shown that teachers' responses vary by school in ways that are consistent with the literature on school race-relations (Goldsmith 2004), suggesting they are valid indicators of schools' level of racial conflict.

Regression analyses using schools as the unit of analysis ($N = 910$) is used to further check the validity of the theoretical variables. The first two regressions test the prediction from group threat theory that the dominant group responds to subordinate group threat with greater discrimination. Past research applying this perspective in schools (Longshore 1982) suggests that threat rises and then falls as schools' proportion black rises, with peak threat occurring when this proportion is one-half. To test these ideas, I regress linear and squared measures of schools' proportion black onto the two measures of segregation, which proxy discrimination. Both models hold mean student SES and proportion other race constant.

The results reveal that both hierarchical and segmental segregation rise and then fall with schools' proportion black. Both regression models indicate the peak of discrimination occurs when proportion black equals 0.47 (which is almost exactly 0.5). These findings are very consistent with group threat theory.

Both theories make predictions about the causes of racial conflict. Group threat theory predicts that racial conflict rises and falls as schools' proportion black rises, with the peak of conflict occurring when proportion black equals one-half. The cultural division of labor predicts that racial conflict rises with hierarchical and segmental segregation. These predictions are tested

² The only question to students about race relations deals with friendliness rather than conflict. I cannot use this question because the absence of friendliness cannot be used to indicate the presence of conflict (Brewer 1999; Goldsmith 2004).

Table 1. Variable Definitions and Descriptive Statistics.

Independent variable	Description
<i>Theoretical variables</i>	
Black	Black or African American = 1; White or Caucasian = 0
Schools' proportion black	Schools' percent black / 100
Schools' hierarchical segregation	Index from (1) average white SES minus average black SES and (2) proportion non-white in high status classes minus the same in low status classes
Schools' segmental segregation	Standard deviation of proportion minority in each school's classes
Schools' racial conflict	Index of based on teacher reports of (1) how often does racial/ethnic conflict occur and (2) how much of a problem is racial/ethnic conflict. Both variables have four-point range (0 to 3).
<i>Control variables</i>	
Neighborhood poverty rate	Students' residential zip-code poverty rate, from 1990 Census SF-3
Schools' mean SES	Average SES of students sampled in the school
Schools' enrollment	Total enrollment / 100
Schools' proportion other race	Sum of percent Latino, Asian, and American Indian / 100
Private school	Private school = 1; else = 0
Female	Female = 1; male = 0
SES	Index created by the NCES
Grade point average	Index created by the NCES from student reports
Not in 10th grade	Student is not in 10th grade = 1; Student is in 10th grade = 0
Cultural capital	How often R takes music, art, and dance classes outside of school ("rarely or never" = 0 to "every day or almost" = 3)
Playing in a park	How often R goes to the park, gym, and pool outside of school ("rarely or never" = 0 to "every day or almost" = 3)
Playing ball	How often R plays ball or other sports outside of school ("rarely or never" = 0 to "every day or almost" = 3)
Number of students	10,695
Number of schools	910

by regressing the two measures segregation and the linear and squared indicators of proportion black onto the measure of schools' racial conflict. The same controls are used.

Results indicate significant, positive effects of hierarchical and segmental segregation on racial conflict, as the cultural division of labor predicts. In addition, as schools' proportion black rises, racial conflict rises and falls, peaking when proportion black equals 0.55. Thus, the theoretical variables are related in the ways the theories suppose, suggesting that these school-level measures are valid indicators of the theoretical constructs, and that group threat theory and the cultural division of labor can explain school race relations.

Control variables. Neighborhood characteristics are measured from 1990 Census data about students' residential zip-code areas. I use zip-code areas because they are the smallest ecological units available for merging Census data to the NELs. Although these areas are larger than one would like, recent reviews of the neighborhood effects literature suggest that the consequences of neighborhood stratification can be modeled accurately at many levels of aggregation, including zip-code areas (Sampson, Morenoff, and Rowley 2002). I measure neighborhood characteristics with the zip-code poverty rate, which, according to the literature reviewed above, should be positively associated with basketball performance.

To capture the effects of interstudent competition, I include control variables measuring schools' total enrollment, mean SES, and sector. Mean SES is the average SES of students sampled in the school. Sector is measured with a dummy variable denoting private schools (1 = yes), which often provide more extracurricular opportunities than public schools (McNeal 1999).

I control for students' SES, grade point average, and whether or not they have recently been held back a year to account for the biased way that school personnel encourage and discourage students to participate in the extra-curriculum. A control for cultural capital is used as well. Cultural capital is high status culture used to exclude the lower classes and to reproduce inequality across generations (Bourdieu 1984). Eitle and Eitle (2002) maintain that possession of cultural capital reduces susceptibility to social forces like the media that encourage participation in basketball. Like Eitle and Eitle, I measure cultural capital with indicators of participation in high status cultural activities outside of school.

To better isolate school effects, I control for other, non-school activities with information on how often the student "goes to the park, gym, and pool," and how often s/he "plays ball or other sports." The set of control variables resembles those commonly used in studies of extracurricular participation (e.g., Eitle and Eitle 2002; Goldsmith 2003; McNeal 1999).

Sample. All students in the 1990 wave of the NELs reporting their race as black or white

and with valid measures on all variables are included in the analyses. Cases missing data are omitted listwise because this technique produces unbiased results under a limited set of assumptions (Allison 2002). The final sample includes 10,695 students in 910 schools.

Analytic Strategy

The goal of the analyses is to estimate the effect of race on basketball performance across schools, and to see if this effect varies across schools in the ways predicted by group threat theory and the cultural division of labor. To model this process, I mix multilevel and ordered probit models (Hedeker and Gibbons 2002). Multilevel models are used 1) when researchers are interested estimating models where level-one units (students) are clustered within level-two units (schools) and 2) when level one effects (like black-white differences in performance) will vary across level-two units. In a linear multilevel model, the student level model would look like this:

$$Y_{ij} = \beta_{bj} (\text{black}) + \sum_{r=1}^R \beta_r X_{ir} + \sum_{k=1}^K \beta_k X_{ik} + \varepsilon_{ij}$$

where Y is basketball performance for the i -th individual in the j -th school; β indicates coefficients to be estimated; and r and k denote the theoretical variables and the control variables, respectively. The model does not show an intercept term because the intercept will be incorporated into cutoff points when the multilevel model is mixed with the ordered probit model. The coefficient, β_{bj} , is the coefficient for the dummy variable indicating whether the student is black or white and estimate is the magnitude of black-white differences in basketball performance in the j th school. According to the race-relations theories, β_{bj} will vary across schools and be a function of schools' proportion black and schools' racial segregation, so β_{bj} is modeled in a school-level equation:

$$\beta_{bj} = \gamma_{b0} + \sum_{r=1}^R \gamma_r X_{rj} + v_{bj}$$

where γ_{b0} equals the average β_{bj} across schools when the r theoretical variables equal zero. The slope coefficients, γ_r , tell us whether or not β_{bj} depends on the theoretical variables. The variance of the error term from the school-level equation, v_{bj} , estimates the variation in β_{bj} across schools—that is, black-white differences in basketball performance vary across schools. The multilevel model equation can be shown by substituting the school-level equation into the student-level equation and gathering terms, as shown below:

$$Y_{ij} = \gamma_{b0} (\text{black}) + \sum_{r=1}^R \gamma_r X_{rj} (\text{black}) + \sum_{r=1}^R \beta_r X_{ir} + \sum_{k=1}^K \beta_k X_{ik} + v_{bj} (\text{black}) + \varepsilon_{ij}. \quad (1)$$

In this equation, the coefficients, γ_r , estimate interactions between the r theoretical variables and the dummy variable denoting individual race (“black”). The interactions test the hypotheses outlined above. The coefficients β_r capture the main effects of the theoretical variables to estimate their effects on whites, while the sum of the main effects and interaction terms estimate their effects on blacks.

Equation 1 is usually used when Y is continuous, but in this case it is not. I replace it with Y^* , which is a series of cutoff points that rank students into four ordered levels of basketball participation. Y^* can be modeled with an ordered probit model (Borooah 2002; Hedeker and Gibbons 1994) where

$$P(Y^* = 1) = \Phi(\delta_1 - Z_{ij})$$

$$P(Y^* = 2) = \Phi(\delta_2 - Z_{ij}) - \Phi(\delta_1 - Z_{ij})$$

$$P(Y^* = 3) = \Phi(\delta_3 - Z_{ij}) - \Phi(\delta_2 - Z_{ij})$$

$$P(Y^* = 4) = 1 - \Phi(\delta_3 - Z_{ij})$$

and Z_{ij} is equal to the right side of Equation 1. Φ represents the normal distribution function, and δ are estimated threshold points. Coefficients estimated in ordered probit models tell us whether the variable increases (positive coefficients) or decreases (negative coefficients) the probability of rising a level of participation. Models are estimated in MIXOR (Hedeker and Gibbons 2002).

RESULTS

Racial Differences in Basketball Performance

Table 2 shows results from two mixed multilevel models. Model 1 includes only the effects of race and gender. The coefficient for “black” is significantly positive in this model, suggesting that blacks have a higher probability of climbing a level of basketball participation than whites. Because these levels are associated with better performance, the results indicate that black youth are better basketball players than white youth.

Table 2. Multilevel Ordered Probit models of Four Levels of Basketball Participation onto Race and Control Variables.

	1	2
Black	0.30***	0.44***
Neighborhoods' poverty rate		0.31**
Schools' mean SES		-0.03
Schools' enrollment/100		-0.04***
Schools' proportion race		0.28**
Private school		0.00
SES		0.09***
Not in 10th grade		-0.13*
Grade point average		0.14***
Cultural capital		-0.04**
Playing in a park		0.09***
Playing of ball		0.39***
Female	-0.21***	0.08***
Threshold 1	0.76***	1.65***
Threshold 2	0.96***	1.89***
Threshold 3	1.50***	2.51***
Variance of race effect	0.36**	0.45***

Notes: ***, **, * indicate $p < .01$ and $.05$ on two-tailed tests, and $.05$ on a one-tailed test, respectively. One tailed tests are used when significance is not reached on a two-tailed test and the direction is predicted.

Model 2 adds all the control variables. The coefficient for black in Model 2 examines whether there are racial differences net of family, school, and neighborhood conditions. As seen there, the coefficient for black increases from 0.30 to 0.44. This means that the control variables suppress rather than explain the racial differences in basketball performance. Most of the control variables are significant in the expected direction. Robust, positive coefficients are estimated for students' SES, GPA, and neighborhood poverty, and robust, negative coefficients are estimated for school size and cultural capital. Thus, important differences between whites and blacks do appear accounted for, but they cannot explain racial differences in basketball performance.³

Race Relations and Basketball Performance

The ability of the race-relations theories to explain the variation in racial differences across schools is assessed with a series of models, shown in Table 3, which add the race-relations variables incrementally to test the hypotheses. All models include the control variables seen in Table 2 but their coefficients are not shown.⁴

Hypothesis 1 states that racial differences in basketball performance will increase and then ebb as schools' proportion black increases, with the peak occurring when proportion black equals 0.5. To test this, Model 1 includes linear and squared terms for proportion black and interactions between these and the race effect. The interactions test the hypothesis.

The results show that the linear and squared interactions are positive (1.86) and negative (-1.76), respectively, indicating that racial differences rise and then fall as proportion black rises. This relationship is shown in Figure 1. The figure shows lines for proportion blacks' effect on blacks' and whites' chances of moving up a level of participation. The racial difference in these chances is the gap between the lines, and this gap increases and then decreases with schools' proportion black. When proportion black equals zero, the gap is 0.44 (which is equal to the coefficient for the dummy variable "black"). The maximum gap, which is more than twice as large, is 0.93, and this occurs when proportion black equals $(-1.86 / [2 \times -1.76]) = 0.53$ (almost exactly 0.5). As proportion black increases further, the gap gets smaller, becoming 0.54 when proportion black reaches one.

³ I also investigated an interaction between race and gender. In Model 1, this interaction is negative and significant, but it isn't significant in Model 2. This finding suggests that black-white differences in performance are the same for boys and girls once other determinants of performance are held constant.

⁴ The effects of two variables change notably. First, the effect of schools' mean student SES changes from -0.03 to -0.07 or -0.08 and becomes significant. Second, the effect of students' neighborhood poverty rate changes from 0.31 to about 0.60 and remains significant.

Table 3. Multilevel Ordered Probit Models of Basketball Participation onto Theoretical Variables and Control variables.^a

	1	2	3	4	5
Race					
Black	0.44***	0.57***	0.47***	0.38***	0.24
Group threat theory					
Proportion black	-1.82***	-0.72***	-0.63***	-1.36***	-1.11**
Proportion black squared	1.23			0.77	0.38
Proportion black * black	1.86***			0.98	0.39
Prop. Black squared * black	-1.76*			-0.84	-0.05
Cultural division of labor					
Hierarchical segregation		-0.07***		-0.01	-0.01
Hierarchical Segregation * black		0.16***		0.12*	0.11*
Segmental segregation			-1.17***	-0.71***	-0.51
Segmental Segregation * black			1.81***	0.72	0.55
Racial conflict					
Racial conflict					-0.08**
Racial conflict * black					0.22**

***, **, * indicate $p < .01$ and $.05$ on two-tailed tests, and $.05$ on one-tailed tests, respectively.

One tailed tests are used when significance is not reached on a two-tailed test and the direction is predicted.

^a Control variables, thresholds, and the variance of the race effect are not shown. I use the same control variables as those shown in Table 2. The variance of the race effect is not significant in any of the models; its values are 59 to 72 percent smaller in these models than the one estimated Model 2 of Table 2, where $P = (s^2_1 - s^2_2) / s^2_1 * 100\%$

Also notice in the figure that blacks' and whites' chances of rising a level of participation tend to decline as schools enroll proportionately more blacks. The lower chances of climbing levels in schools with many blacks are likely the result of interstudent competition. If blacks are more likely to play high school basketball than whites, then students in a school with many blacks will have more competition to make the basketball team. The effect of proportion black reflects interstudent competition and group threat.

Model 2 tests Hypothesis 2a: racial differences increase with schools' hierarchical segregation. This model omits all the effects of proportion black except the linear one (to account for interstudent competition) and adds the measure of hierarchical segregation and its interaction with race. The results show a positive interaction (0.16), indicating that racial differences grow where there is more hierarchical segregation, as expected. As seen in Figure 1 and the coefficients, whites' and blacks' chances of ascending a level decline (-0.07) and rise ($-0.07 + 0.16 = 0.09$), respectively, as hierarchical segregation rises.

Model 3 is equivalent to model 2 except that it examines Hypothesis 2b: racial differences increase with schools' segmental segregation. Results for this model also show a positive interaction between race and segmental segregation (1.81), supporting the hypothesis. The coefficients and Figure 1 show that segmental segregation lowers whites' chances of moving up (-1.17) and increases blacks' chances of moving up ($-1.17 + 1.81 = 0.64$).

Model 4 includes all the measures of proportion black and segregation. Once again, the main interest is the interactions. The results show that the interaction terms for proportion black, its square, and segmental segregation, are smaller and not significant.⁵ The interaction for hierarchical segregation remains significant (0.12), so hierarchical segregation widens racial differences net of segmental segregation and group threat.

⁵ Diagnostic tests reveal severe multicollinearity among the main effect of race and the interaction terms. The hypotheses tests for these variables may be too conservative, but none of them would be significant at even a probability level of .30. Most likely, they are not significant.

Figure 1. Effects of Race-Relations Variables on Chance Ascending Basketball Levels.

Figures a, b, and c are calculated from Table 3, models 1, 2, and 3, respectively, using the coefficients for the theoretical variables. For example, the effect of proportion black (pb) on whites is $-1.82*pb + 1.23*pb^2$. Its effect on blacks is $0.44 + (-1.82 + 1.86)*pb + (1.23 - 1.76)*pb^2$.

Model 5 adds the measure of racial conflict and its interaction with race. According to Hypothesis 3, racial conflict mediates the effects of group threat and both types of segregation. However, the previous model shows that group threat and segmental segregation do not widen racial differences in basketball performance net of hierarchical segregation, so these parts of the hypothesis are already rejected. Adding the racial conflict terms to the model does not substantively change the coefficient for the hierarchical-segregation-by-race interaction, so that portion of the hypotheses is rejected as well.

However, the main effect and interaction for the conflict variable are significant. The positive interaction (0.22) indicates that black-white differences amplify in schools with more conflict. As conflict escalates, the chance of climbing a level falls for whites (-0.08) and rises for blacks ($-0.07 + 0.22 = 0.15$). Thus, racial conflict exacerbates racial differences, as both theories presume.

In the end, two social conditions, hierarchical segregation and racial conflict, explain why racial differences in performance vary across schools. To see their impact more clearly, the probabilities of being in different levels of basketball participation are calculated from model 5 for whites and blacks in two kinds of schools. The first, called, “racially equal schools,” are schools without hierarchical segregation and racial conflict (that is, both variables are set to zero⁶). In all, there are about 40 (out of 910) schools like this in the data, so they are somewhat hypothetical. The second, called “racially unequal schools,” have high levels of hierarchical segregation and racial conflict (that is, both variables are set to two (2) standard deviations above zero). There are 275 schools like this or worse in the data. All other independent variables, including those measuring the racial and ethnic mix of the school, are held constant at their grand mean.

The probabilities, shown in Figure 2, reveal that whites’ probabilities of playing basketball are *higher* in the equal schools than in the unequal schools in the intramural ($0.052 > 0.047$), junior varsity ($0.073 > 0.063$), and varsity ($0.030 > 0.024$) levels. For blacks, the differences are in the opposite direction. Their probabilities of playing are *lower* in the equal schools than in the unequal schools in the intramural ($0.047 < 0.072$), junior varsity ($0.115 < 0.159$), and varsity ($0.060 < 0.106$) levels. Thus, the change from equal to unequal schools raises racial differences because the change effects blacks and whites in opposite directions.

⁶ Hierarchical segregation is zero when the average SES of blacks equals that of whites and when non-whites are equally represented in high and low status classes. Racial conflict is zero when all of a school’s teachers report that racial conflict is “never” a problem and “never” occurs.

Figure 2. The Probability of Being in Each Level of Basketball Performance for Black and White Sophomores in Racially Equal and Racially Unequal Schools.

Note: The probabilities are calculated from model 5 of table 4. Hierarchical segregation and racial conflict are set to zero (which corresponds with no hierarchical segregation and no racial conflict) in racially equal schools and set to two (2) standard deviations above zero in racially unequal schools. All other independent variables, including those for schools' racial mix, are held constant at their grand mean.

Taking the ratio of whites' to blacks' probability of playing basketball shows how large the racial differences are in each school type. In the equal schools, blacks are 1.4, 1.6, and 2.0 times more likely than whites to play intramurals, junior varsity, and varsity, respectively. In racially unequal schools, these three ratios are larger, at 1.9, 2.5, and 4.4, respectively. Clearly, racial differences are larger in unequal schools than in equal ones. Next, I discuss what has been learned.

DISCUSSION

This paper examines whether or not black-white differences become larger in the places predicted by group threat theory and the cultural division of labor, two theories that view racial differences as integrally related to processes of oppression and conflict. The analysis provides much evidence that these theories can do this, and below, I explain the findings and their implications in detail. However, there are limitations to the study. I turn to these first.

As I see it, an important methodological concern is that the measures of racial conflict, segmental segregation, and hierarchical segregation are not specifically about blacks and whites and are based on limited amounts of information on each school. These problems may sound worse than they really are. The relationships among these variables and their estimated consequences for racial differences are consistent with previous research and theoretically interpretable, suggesting that they are capturing important differences between schools.

More importantly, the analyses examine a single racial difference, levels of high school basketball performance. This outcome, because it is a sport, is also often seen as trivial and unserious—just a game. But of course, basketball is more than that. It is perhaps the most racialized form of popular culture and a key practice fueling racist ideologies about white and black bodies (Harrison and Lawrence 2004; Hartmann 2003). This paper attempts to see basketball as a symbolic practice intertwined with the racial stratification system—to link together what activities people play and get good at with spatial variation in race relations and racial oppression.

Theoretical Findings and Implications

These limitations notwithstanding, the study's findings shed light on racial differences. The data show that blacks play high school basketball more than whites and at higher levels net of the influences of families, neighborhoods, and schools. In fact, the evidence suggests that, in aggregate, the net effect of all these 'other' factors is to actually hide rather than explain the full extent of racial differences in basketball.

While this finding is unusual, one of the main suppressors of racial differences in this

study, SES, has been identified as a suppressor of other racial differences too. Blacks, compared to whites, participate more in social and political organizations, have more optimistic educational and occupational expectations, more positive attitudes towards school, and greater appreciation for jazz even though there is a positive relationship with each of these outcomes and SES (Ellison and London 1992; Ainsworth-Darnel and Downey 1998; DiMaggio and Ostrower 1990).

Group threat theory receives considerable support. As schools' proportion black rises, levels of within school segregation, racial conflict, and racial difference all rise and then decline. For all of these outcomes, the estimate of schools' proportion black at which they peak is between 0.47 and 0.55, uncannily close to one-half—the number predicted by many other studies (Goldsmith 2004; Moody 2001). A research project focusing specifically on why this proportion is so important would be a valuable contribution to the literature.

Other claims of group threat theory receive less support. The effect if group threat theory on racial differences is not mediated by racial conflict. Net of levels of hierarchical segregation within schools, group threat does not impact racial differences. If levels of hierarchical segregation are exogenous to group proportions—that is, if schools' racial mix determines levels of segregation within the schools' classes—then it can be said that group threat creates racial differences among students within schools because it creates segregation. If this cannot be assumed, then group threat's effect is spurious.

The findings show mixed support for the cultural division of labor. As the theory predicts, higher levels of segmental segregation and hierarchical segregation are associated with greater racial differences. However, only hierarchical segregation influences racial differences when the effects of both are modeled together. The theories prediction that racial conflict mediates the segregation-racial differences relationship is not supported either. Instead, hierarchical segregation widens racial differences net of levels of racial conflict.

Why does hierarchical segregation impact racial differences more than segmental segregation and independently of racial conflict? Most likely, it is because hierarchical segregation, by definition, dishonors and oppresses the subordinated group in a way that horizontal segregation does not automatically do so. It may be the oppression of the subordinated group that leads them to emphasize racial differences that show their positive characteristics. In addition, there can be independent effects from racial segregation and racial conflict because they cannot be highly correlated. Racial segregation keeps the groups apart, limiting the amount of conflict they can have, no matter how oppositional their agendas (Goldsmith 2004).

The finding that racial conflict leads whites to reduce their investment in basketball

participation and blacks to increase it is consistent with the idea that racial differences are like cultural capital in that they have exchange value. In places with more racial conflict, conformity to the symbolic boundaries of racial identities has greater benefits than it does in places with more racial amity. In the latter places, correctly identifying oneself and others increases the resources accrued from in-group members and reduces the risks of associating with out-group members (Brewer 1999).

These findings also have broad implications for theories of racial difference. First, not all racial differences can be reduced to class differences, neighborhood differences, or other, non-racial, types of differences. The evidence provided here suggests that these “other” kinds of differences can actually mask how large racial differences are.

Second, the finding that racial differences are influenced by the immediately by the local racial context is not compatible with essentialist theories of race. For example, theories that view racial differences as a function of biology would predict black-white differences to be invariant with respect to space and race relations. In addition, theories which locate racial differences in an invariant culture inherited from the past (e.g., a legacy of slavery) also cannot account for spatial variation in racial differences and the immediate impact that racial contexts have on racial differences. Finally, theories of racial differences that see the cause of difference at macro-levels like nations are also incomplete. Allowances must be made for local racial contexts to influence individual behaviors.

Finally, the findings have important implications for studies of race and sports too. It is believed that sports like basketball are alluring to blacks because they are institutions where blacks can create an aesthetic and show their relative equality to whites (Hartmann 2003). This explanation may account for the underlying attractiveness that basketball has for blacks, but local contexts also create racial differences. This study suggests there two important local processes. First, in places with more conflict, whites and blacks conform more to the symbolic boundary that defines basketball as for blacks, possibly because there are increased social benefits and decreased social costs from doing so. Second, blacks emphasize basketball in places they are relatively more subordinated, presumably because it becomes more important to oppose whites with racial differences that show them positively.

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