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## Racial Position Segregation in Intercollegiate Football: Do Players become more Racially Segregated as they Transition from High School to College?

Joshua D. Pitts · Daniel M. Yost

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**Abstract** This study revisits the issue of racial position segregation or racial “stacking” in intercollegiate football. Estimating a probit model, we examine the impact that a player’s race has on the probability of him changing positions when he moves from high school to the collegiate ranks. Descriptive statistics of our data reveal significant evidence that racial position segregation is widespread in high school football. The data also offers much information about which players are likely to change positions and the positions that they are likely to switch to when transitioning from high school to college. Most notably, our probit results reveal that African American high school quarterbacks and white high school running backs are significantly more likely to change positions in college than their white and African American counterparts, respectively. Thus, while other positions do not appear to become more racially segregated as players transition from high school to college, the quarterback and running back positions do appear to become significantly more racially segregated.

**Keywords** Race · Athletics · Football · Position segregation · Stacking · Statistical discrimination

**JEL** J15 · J49 · J71 · L83

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## Introduction

Sport has long been heralded as having paved the way to such significant actions as *Brown v. Board of Education* and the Civil Rights Act of 1964. Jack Johnson held the world heavyweight title in boxing, Jesse Owens won four Olympic gold medals in track and field, Jackie Robinson broke the Major League Baseball (MLB) color barrier, and Ernie Davis won the Heisman Trophy in college football all before 1964. Thus, one might argue that sport has served as an avenue to equal opportunity for African Americans. At the very least, it would seem that the sports labor market opened up earlier to African Americans than the general labor market. Currently, 67% of players in the National Football League (NFL) are African American (National Football League 2011), and 78% of players in the National Basketball Association (NBA) are African American (National Basketball Association 2011). Furthermore, over half of the top 50 highest paid American athletes are African American (Sports Illustrated 2011). However, U.S. Census data on median earnings among full-time, year round workers reveals that African American males earn slightly less than white females and only about 73.5% as much as white males.<sup>1</sup> Indeed it seems that the labor market outcomes of African Americans in sports labor markets are more similar to their white counterparts than those in non-sports labor markets. However, the sports labor market may not be free from racial discrimination. For example, Holmes (2011) finds evidence of salary discrimination against African American MLB players, while Berri and Simmons (2009) find evidence of salary discrimination against African American quarterbacks in the NFL. Branham (2008) and Madden (2004) bring to light that African American coaches in the NFL are seemingly on a shorter leash and held to a higher standard than similar white coaches. Also, Kanazawa and Funk (2001) find evidence of customer discrimination against African American NBA players. Thus, it seems that none of the three major American sports is without some form of discrimination.

In this study, we examine the issue of racial position segregation or racial “stacking” in intercollegiate football. Racial position segregation refers to the phenomenon of white and African American players being relegated to certain types of positions on a team. Viewing a team as a firm, the issue can be seen as a case of inter-firm segregation. Carrington and Troske (1998) show that the wage gap between white and African American workers is primarily a “within-plant phenomenon”. That is, whites tend to occupy higher paying positions than African Americans within a given firm. Similarly, Bayard et al. (2003) find that much of the gender wage gap can be attributed to women being segregated into lower paying occupations within firms. Just as the wages of African American and female workers suffer from inter-firm segregation in the general labor market, the earnings of African American athletes have been shown to suffer from position segregation in the sports labor market. Yetman and Eitzen (1972) and Eitzen and Yetman (1977) show that those positions dominated by white players in sports generally receive higher salaries and more endorsement opportunities. Thus, racial position segregation is not without economic consequence for African American players.

<sup>1</sup> These figures were calculated from the U.S. Census Bureau’s Historical Income Tables on Full-Time, Year Round Workers by Median Income and Sex (Table P-36).

General observation suggests that racial position segregation is not as significant an issue as in the past. One need not look very hard to find examples of African Americans playing positions that were generally considered off-limits by many in the past. As the first African American to play in the Atlantic Coast Conference, Darryl Hill is considered by many to be the “Jackie Robinson of southern college football.” As Hill acknowledges, college football provided an opportunity for upward mobility, yet it did not come without a price.

“One of the toughest places I played was Clemson University. You know, 50,000 drunk southern gentlemen are waiting to see this brother come out on the field. Not a black person in the stands anywhere. The black people had to sit outside the stadium on a red, dirt hill called ‘Nigger Hill.’ And that’s where they watched the game. Talk about double-teamed, I was triple-teamed. Every time I look up there and see these black people sitting on this dirt hill, I said, I’m gonna show these folks.”

(Darryl Hill in Greenberg and Bernstein 2008)

Since Hill’s ground breaking 1963 season, there has been significant improvement in the racial integration of college football (Eitzen and Yetman 1977; Hawkins 2002). Prior to the 1960’s, organized college football was almost completely segregated. Those who played did so mostly at a limited number of African American institutions. As desegregation took hold, African American participation grew. In 1992 and 2002 respectively, it has been reported that nearly half of Division I football players were of African American descent (Lewis 1995; Hawkins 2002). In 2010, pursuant to the 2009–2010 National Collegiate Athletic Association (NCAA) Student-Athlete Ethnicity Report, African American players composed the majority of Division I football players at 45.8% (National Collegiate Athletic Association 2010a). This is the first time African American players represented the dominant demographic since the NCAA began monitoring African American participation.

Wilbur Hackett can personally attest to the transformation of college football. As a linebacker for the 1967 University of Kentucky football team, Hackett became the first African American to captain a Southeastern Conference (SEC) football team. This was no small accomplishment given that most SEC teams had yet to include African American players on their rosters. Following his playing career, Hackett became a college football official. As an official, he recognized the improvement in the racial make-up of college football teams.

“When I look around and I see 11 African American football players on defense and I look over there and there’s a black quarterback, it does my heart good. And, I do feel good about the fact that these young men are getting these opportunities. It makes me feel good because I know where it was and where it is now.”

(Wilbur Hackett in Greenberg and Bernstein 2008)

Given the immense pressure placed on coaches to win, it seems selecting and assigning players based on racial stereotypes would have no place in the modern college football era. As any coach will agree, talent wins football games. Indeed, a head coach’s continued employment is predicated on his ability to evaluate and integrate talent. By assigning positions on the basis of race, a coach negatively affects his team’s ability to win games. However, even though considerable progress has been made with respect to racial relations in college football, can we properly conclude that organized college football is free of racial position segregation?

Our study employs data from *Rivals.com* to observe a player's position in high school and college. Estimating a probit model, we examine the impact that a player's race has on the probability of him changing positions when he moves from high school to the collegiate ranks. If a player's race is a significant determinant of whether or not he changes positions, then there is evidence supporting players being stacked along racial lines in college football. Also, given that a player does change positions, we are interested in observing what position he switches to and whether that tends to differ between white and African American players. The remainder of this paper progresses as follows. Relevant literature is reviewed in section 2. Section 3 details the data and our empirical methodology. Section 4 provides an analysis of position changes. Our probit results are reported and discussed in section 5, and section 6 contains our concluding remarks.

### Previous literature

A vast amount of research has been conducted on African American participation in football and discrimination associated with the same. Although several forms of racial discrimination have been investigated, "racial stacking" has received the most analysis (Coakley 1990). Racial stacking "refers to situations in which minority group members are relegated to specific team roles and excluded from competing for others" (Yetman and Eitzen 1972). Even with the increase in participation in college football, African Americans have consistently been over-represented or "stacked" in those positions requiring physical skill, while whites are disproportionately found in "thinking and leadership" positions (Schneider and Eitzen 1979, 1986).

The literature on stacking began with Rosenblatt (1967) who showed that in two major baseball leagues, from a period of 1953 to 1965, African Americans were underrepresented in pitching positions and overrepresented in outfield positions. The opposite was true for white players. It was determined that coaches were "stacking" African American players in outfield positions. Further, African American "sub star players" were subject to a greater risk of receiving discriminatory treatment. Because African Americans were not expected to hold key positions in team sports, they would experience more stress when fulfilling key team roles.

In using professional baseball as an example, Blalock (1962) analyzed occupational discrimination. He asserted 13 theoretical propositions that apply to minority discrimination and suggested that these propositions could apply to other occupations. Two of his propositions served as the underpinnings for the centrality hypothesis developed by Grusky (1963). Namely, (1) to the extent that performance level is relatively independent of skill in interpersonal relations, the lower the degree of discrimination; and (2) the lower the degree of purely social interaction on the job, the lower the degree of discrimination. Utilizing both of these assertions, Grusky (1963) posited that, all else being equal, the more central one's spatial location: (1) the greater the likelihood dependent or coordinative tasks will be performed; and (2) the greater the rate of interaction with the occupants of other positions. The performance of dependent tasks is positively related to frequency of interaction.

Building on Blalock's (1962) two propositions and Grusky's (1963) centrality hypothesis, Loy and McElvogue (1970) conducted the first study on racial stacking.

They investigated the racial make-up of both professional football and baseball teams, concluding that racial segregation in professional team sports is positively related to centrality. Central positions are those positions spatially central during the team's on-field activity, such as quarterback in football and pitcher in baseball. This allows for increased social interaction between central players and teammates and coaches. The central position carries increased leadership responsibility and often requires greater decision-making ability. Additionally, the position generally holds superior status among fans and teammates. Players occupying central positions are more inclined to contribute to the team's overall success. In contrast, peripheral positions require strength, physical superiority, speed, and reaction based attributes (Brower 1972; Worthy and Markle 1970; Eitzen and Tessendorf 1978). These positions are spatially segregated from central positions and do not require frequent interaction with coaches and teammates. Loy and McElvogue (1970) determined that white players commonly held central positions whereas African American players commonly held peripheral positions. Several studies on stacking have subsequently substantiated Loy and McElvogue's (1970) original findings (for example, see Dougherty 1975; Eitzen and Sanford 1975; Madison and Landers 1976; Marsh and Heitman 1981; McGehee and Paul 1986; Jones et al. 1987; Bivens and Leonard 1994; Lewis 1995).

Edwards (1973) contested the centrality theory opining that differing requirements inherent in the central and peripheral positions better explain the stacking of African American players. He argued that the spatial centrality of the position itself is of no consequence. It is the intrinsic leadership responsibility and outcome control associated with the position that account for the position's significance. According to Edwards (1973), the underrepresentation of African Americans in central positions is a direct result of the assignment of positions on the basis of societal norms. That is, African Americans are excluded from positions in which critical decisions must be made. Johnson and Johnson (1995) arrive at a similar conclusion in their analysis of racial position segregation.

Another explanation for racial position segregation in sports is that teams maintain roster quotas in order to appease their fan base (for example, see Smith and Seff 1989). Although this explanation would not seem to carry as much explanatory power as it may have in past years, it may be that some fans prefer to watch teams with players of the same race as them in central positions. Self-segregation is yet another potential explanation for racial stacking in sports. McPherson (1975) concluded that African American youth possess different achievement motivation regarding participation in sport. If successful African American professional athletes preponderate a specific position, African American youth are likely to recognize that role and emulate their behavior. For example, African American high school football players may be more likely to choose to play the running back position rather than the quarterback position given the abundant success African American running backs have had in professional football relative to African American quarterbacks. However, self-segregation might also reflect racial stereotypes. If an African American player believes he has limited opportunity at the quarterback position in collegiate and professional football, he may select a different position more consistent with existing stereotypes. This self-selection process funnels African American players into peripheral positions (Brower 1972; McPherson 1975; Williams and Youssef 1975).

Finally, Lavoie (1989) and Lavoie and Leonard (1994) argue that it is more difficult to objectively evaluate a player's performance in central positions. Confronted with uncertainty about players' ability to excel in central positions, a coach may be more likely to assign white players to central positions and African American players to peripheral positions. In other words, white players may not have to impress coaches to the same extent as African American players to be awarded a central position. Lavoie (1989) and Lavoie and Leonard's (1994) explanation of racial position segregation is closely related to the idea of statistical discrimination.

Statistical discrimination has emerged as a primary explanation of racial and gender inequalities in labor markets (for example, see Aigner and Cain 1977; Blau and Kahn 1981; Lundberg and Startz 1983; Lang 1986; 1990; Oettinger 1996; Neumark 1999; and Ritter and Taylor 2011). Whereas traditional theories of discrimination argue that personal prejudice against minority groups is responsible for much of the observed labor market inequalities between whites and African Americans such as hiring, promotion, and pay differences (Becker 1957), the theory of statistical discrimination argues that these inequalities largely arise from employers having imperfect information about workers (Arrow 1973). Dickinson and Oaxaca (2006) discuss two different types of statistical discrimination: "first-moment" and "second-moment" statistical discrimination. As it relates to our study, "first-moment" statistical discrimination would imply that coaches are more likely to assign white players to central positions because they are perceived to be more productive at central positions than African American players. Similarly, coaches may be more likely to assign African American players to peripheral positions because they are perceived to be more productive than white players at those positions. "Second-moment" statistical discrimination would imply that coaches are more likely to assign white players to central positions because they are perceived to be less risky, on average, than African American players at those positions. Similarly, coaches may be more likely to assign African American players to peripheral positions than white players because African American players are perceived to be less risky at peripheral positions.

It is important to emphasize that statistical discrimination arises from past observation and not personal prejudice. Often, it may be the case that coaches are uncertain about a player's ability to perform well at a particular position. Faced with uncertainty, coaches may rely on past observations to inform their current decisions. If the perceptions discussed above accurately describe college football coaches, then they may be more likely to allocate white players to central positions and African American players to peripheral positions when confronted with a lack of information about a player's ability at a particular position. This would seem to be particularly applicable when allocating players to central positions because leadership and decision-making ability are hard to measure, especially since coaches can have very limited contact with recruits before they enroll at the university (National Collegiate Athletic Association 2010b).

Although many explanations have been offered to account for the stacking trend, only three studies have addressed a player's shift in position (central to peripheral) from one competitive level to the next. Madison and Landers (1976) conducted one such study. They concluded that African Americans are more likely than whites to change from central to peripheral positions as they transition from the college to professional level. However, their study did not include empirical evidence on shifts

in position from the high school to college level. Williams and Youssef (1979) examined position assignment in high school, college, and professional football. They concluded that a division of labor along racial lines exists on all three levels. Moreover, their results showed that knowing a player's race increases the probability of correctly inferring his position assignment, whether central or peripheral, on all three levels of competition. Although they did include data on high school players, they utilized three separate unrelated samples from each competitive level and did not examine the transition from high school to the college level over the course of an individual playing career.

To date, only one study has been conducted that addresses a player's shift in position from high school to the college level. Eitzen and Sanford (1975) investigated the high school, collegiate, and professional positions of 387 professional football players. Of their sample, African Americans comprised 33.8% of those players in the quarterback position (central position) at the high school level. In moving to the college ranks, that number dropped significantly to 8.7%. Additionally, African Americans comprised 49.2% of those players in the running back position (peripheral position) at the high school level. In moving to college, a marked increase was noted at 69.9%. Their findings revealed a systematic decline of African Americans in central positions when ascending from high school to the college level. Similar to Eitzen and Sanford (1975), but now over 35 years later, the purpose of the current study is to examine the importance of race in determining whether or not a player changes positions when transitioning from high school to the collegiate level.

## Data

The data for this study comes from the *Rivals.com* website. We performed a detailed search of the 2008 and 2009 recruiting classes and included in our dataset the 1,006 players that reported the necessary physical attributes and talent measures used as explanatory variables in our econometric analysis. We also observed the current roster of each player's college to determine if the player changed positions when making the transition from high school to college. Only players that signed with Bowl Championship Series (BCS) universities are included in our dataset.<sup>2</sup> Definitions of the variables employed in the study are given in Table 1.

In order to properly assess the relationship between race and position allocation at BCS universities, our empirical models must also account for other characteristics of players that coaches may use to determine a player's position. Because different positions require different physical attributes, we include measures of a player's height, weight, and speed in our models. Speed is measured by the player's time in the forty-yard dash, which is commonly used to measure player speed at all levels of organized football. For example, other things equal, coaches prefer quarterbacks and

<sup>2</sup> We only include players at BCS universities because some players that received scholarship offers from both BCS and non-BCS universities may accept a scholarship offer to a non-BCS university if they were not given the prospect of playing their desired position at one of the more athletically elite BCS universities. For example, a high school quarterback may choose to play at a non-BCS university that wants to keep him at quarterback rather than playing at a BCS university that wants him to change positions.

**Table 1** Definitions of variables

Variable	Definition
Physical attributes	
Weight	Player's weight measured in pounds
Height	Player's height measured in inches
Forty	Player's time in the forty-yard dash
AFAM	Equals 1 if player is African American; 0 otherwise
Position dummies	
QB	Equals 1 if player's high school position is quarterback; 0 otherwise
RB	Equals 1 if player's high school position is running back; 0 otherwise
WR	Equals 1 if player's high school position is wide receiver; 0 otherwise
TE	Equals 1 if player's high school position is tight end; 0 otherwise
OL	Equals 1 if player's high school position is offensive lineman; 0 otherwise
DL	Equals 1 if player's high school position is defensive lineman; 0 otherwise
LB	Equals 1 if player's high school position is linebacker; 0 otherwise
DB	Equals 1 if player's high school position is defensive back; 0 otherwise
Talent measures	
Pass YDS	Number of passing yards in quarterback's senior season of high school divided by 100
Rush YDS	Number of rushing yards in running back's senior season of high school divided by 100
REC YDS	Number of receiving yards in wide receiver's or tight end's senior season of high school divided by 100
Bench	Maximum bench press in pounds for offensive linemen divided by 10
Tackles	Number of tackles in defensive player's senior season of high school divided by 10
Sacks	Number of sacks in defensive player's senior season of high school
INTS	Number of interceptions in defensive back's senior season of high school
Perform	Indexed by passing yards for quarterbacks; Indexed by rushing yards for running backs; Indexed by receiving yards for wide receivers and tight ends; Indexed by maximum bench press for offensive linemen; Indexed by sacks for defensive linemen; Indexed by tackles for linebackers; Indexed by interceptions for defensive backs
Rating	Player's <i>Rivals.com</i> rating
Dependent variable	
Change	Equals 1 if player changed positions; 0 otherwise

*Rivals.com*

linebackers to be tall so that it is easier for them to see over offensive and defensive linemen. Similarly, coaches may value height at the wide receiver position because taller receivers are bigger targets for quarterbacks and height may give receivers an advantage over shorter defensive backs. Weight is valued at the offensive lineman position where coaches want big players capable of creating a barrier between defensive players and the quarterback and running back. Weight is also likely an important physical attribute among defensive linemen, linebackers, and running backs, other things equal, because these players' bodies are constantly subjected to great physical tolls throughout the course of a game. Speed, on the other hand, is beneficial at all positions. However, it is likely desired the most of those players that possess the football a great deal of the time, such as quarterbacks, running backs, and wide receivers. Speed is also a valuable asset among defensive backs who are expected to maintain pace with fast wide receivers. Thus, weight, height, and speed may all be race-neutral determinants of a player's position.

The talent measures are included because we expect players who had more success in high school to be less likely to change positions in college. Most of the talent measures are straightforward, but two of them may require additional explanation. When estimating our econometric model using the full set of observations, the position specific talent measures cannot be included as explanatory variables. Thus, we use the performance index (PERFORM) created by Pitts and Rezek (2012) in their analysis of scholarships in intercollegiate football. The index normalizes a player's position specific statistics against the top performer at his respective position. Thus, it ranges from 0 to 1 depending on how a player's statistics compare to the most prolific player at his position. Statistics, however, may not always accurately describe a player's talent level. Hence, we also include the *Rivals.com* rating (RATING) given to each player. The rating ranges from 4.9 to 6.1 and is based on the opinions of multiple talent scouts.<sup>3</sup> Once again, a player's talent level and his level of success at his high school position may be additional race-neutral determinants of whether that player changes positions in college.

In addition to physical attributes and talent measures, we also include a dummy variable to identify players as white or African American as well as a dummy variable that identifies the player's primary position in high school. The descriptive statistics listed in Table 2 reveal some information about positional segregation in high school. Column 1 of Table 2 shows that African American players represent 68.3% of the full sample of observations. Hence, if white and African American players were equally distributed across positions, we would expect African American players to be similarly represented at each respective position. However, the other columns reveal African American players to be largely underrepresented at the quarterback, tight end, and offensive lineman positions and largely overrepresented at the running back, wide receiver, and defensive back positions. While African American players may be slightly underrepresented at the linebacker position and slightly overrepresented at the defensive lineman position, these two positions, more so than others, come close

<sup>3</sup> Players with higher ratings are considered to be more talented. For example, players with a rating of 4.9 are considered "sleepers" while players with a rating of 6.1 are considered "one of the elite prospects in the country".

**Table 2** Descriptive statistics

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Full	QB	RB	WR	TE	OL	DL	LB	DB
Weight	216.216 (41.085)	197.832 (20.129)	193.887 (19.393)	187.101 (15.882)	232.208 (13.385)	291.034 (24.048)	255.141 (28.334)	216.100 (13.116)	180.786 (12.559)
Height	73.809 (2.651)	74.273 (2.043)	71.038 (2.101)	73.471 (2.215)	76.453 (1.381)	76.819 (1.751)	75.617 (1.438)	73.727 (1.387)	72.126 (1.683)
Forty	4.661 (0.258)	4.631 (0.157)	4.489 (0.092)	4.506 (0.093)	4.735 (0.133)	5.163 (0.223)	4.827 (0.201)	4.601 (0.106)	4.503 (0.091)
AFAM	0.683 (0.466)	0.487 (0.502)	0.812 (0.392)	0.906 (0.293)	0.264 (0.445)	0.353 (0.480)	0.758 (0.430)	0.600 (0.492)	0.939 (0.240)
QB	0.118 (0.323)								
RB	0.185 (0.388)								
WR	0.137 (0.344)								
TE	0.053 (0.224)								
OL	0.120 (0.325)								
DL	0.127 (0.333)								
LB	0.129 (0.336)								
DB	0.130 (0.337)								
Pass YDS		18.816 (7.934)							
Rush YDS			14.353 (6.384)						
REC YDS				8.051 (3.212)	4.102 (2.771)				
Bench						33.608 (3.965)			
Tackles							7.306 (2.951)	10.669 (3.393)	6.686 (3.013)
Sacks							8.391 (5.483)	4.758 (4.579)	
INTS									3.565 (2.790)
Perform	0.410 (0.222)								
Rating	5.668 (0.214)	5.647 (0.221)	5.688 (0.234)	5.692 (0.204)	5.604 (0.186)	5.654 (0.224)	5.676 (0.209)	5.675 (0.204)	5.658 (0.204)
Change	0.223 (0.416)	0.387 (0.489)	0.382 (0.487)	0.246 (0.432)	0.226 (0.423)	0.043 (0.204)	0.164 (0.372)	0.146 (0.355)	0.122 (0.329)

Standard deviations are in parentheses beside the means.

to reflecting African American players' share of the total sample of observations. That is, racial stacking does not appear to be very prominent at the linebacker and defensive linemen positions, but appears to be ubiquitous at the other positions. These data are consistent with previous literature suggesting that white players are grouped into positions requiring relatively more leadership skills (central positions) and African American players are grouped into positions requiring relatively less leadership skills but greater physical ability (peripheral positions).

The data above show that racial position segregation already exists in high school, but do some positions become even more segregated in college? To examine how a player's race is related to his likelihood of changing positions in college, we estimate the following probit model that predicts whether or not a player changes positions when transitioning from high school to college:

$$\Pr(\text{CHANGE}_i = 1) = \beta_0 + \beta_1 \text{Physical}_i + \beta_2 \text{Position}_i + \beta_3 \text{Talent}_i + \beta_4 \text{AFAM}_i + \varepsilon_i \quad (1)$$

where  $\text{CHANGE}_i = 1$  if player  $i$  changed positions and 0 if he did not change positions,  $\text{Physical}$  is a vector of physical attributes,  $\text{Position}$  is a vector of position dummy variables,<sup>4</sup>  $\text{Talent}$  is a vector of talent measures,  $\text{AFAM}_i$  is a dummy variable that identifies African American players, the  $\beta$ 's are parameters to be estimated, and  $\varepsilon_i$  is a random error term.  $\beta_4$  is the most important parameter for our purposes because its sign and statistical significance indicates whether African American players are more or less likely than white players to play a different position in college than they played in high school.

### Analysis of position changes

Table 2 indicates that 22.3% of the players in our sample played a different position in college than they played in high school. However, high school quarterbacks and running backs appear to be much more likely to change positions when arriving on college campuses, whereas offensive linemen almost never change positions. This is not a surprising result. The body type and skill set of an offensive lineman does not lend itself well to other positions. The same may be true for defensive linemen. However, quarterbacks, running backs, wide receivers, and defensive backs often have very similar body types and skill sets, particularly in high school. Yet, it is probably less likely that a player whose primary position in high school was defensive back will change positions when entering college, which is what our data shows.

Tables 3, 4 and 5 provide a more detailed analysis of position changes, showing the percentage of players at a given position that changed positions in college and also the positions to which they changed. Table 3 shows this for the full sample of observations, while Tables 4 and 5 provide these percentages for African American and white players, respectively. The percentages shown in Table 3 suggest that players are most likely to play the same position in college that they played in high

<sup>4</sup> The probit equations for the individual positions do not include the position dummies.

**Table 3** Percentage of Players that Changed Positions – Full Sample

Variable	(1) QB	(2) RB	(3) WR	(4) TE	(5) OL	(6) DL	(7) LB	(8) DB
Change	0.387	0.382	0.246	0.226	0.043	0.164	0.146	0.122
QB	0.613	0	0	0	0	0	0	0
RB	0	0.618	0	0	0	0.008	0.008	0.015
WR	0.143	0.086	0.754	0	0	0	0	0.023
TE	0.034	0.005	0.022	0.774	0	0.047	0	0
OL	0	0	0	0.094	0.957	0.078	0	0
DL	0	0.005	0	0.057	0.043	0.836	0.100	0
LB	0.050	0.118	0.036	0.075	0	0.031	0.854	0.084
DB	0.160	0.167	0.188	0	0	0	0.038	0.878

The sum of the percents may not equal one due to rounding.

school. For example, column 1 of Table 3 shows that 61.3% of the high school quarterbacks in our sample also played quarterback in college. Of those high school quarterbacks that did change positions in college, most ended up as wide receivers or defensive backs. Columns 2 and 3 of Table 3 indicate that the majority of high school running backs and wide receivers that changed positions also made the transition to defensive back in college.

Tables 4 and 5 reveal some similarities and differences in the way white and African American players change positions when moving from high school to college. African American players that played wide receiver in high school are slightly more likely to change positions in college than white players that played wide receiver in high school, but both white and African American wide receivers that change positions most likely make the transition to defensive back in college. A similar percentage of white and African American tight ends change positions, but

**Table 4** Percentage of Players that Changed Positions—African American Players

Variable	(1) QB	(2) RB	(3) WR	(4) TE	(5) OL	(6) DL	(7) LB	(8) DB
Change	0.621	0.331	0.256	0.214	0.073	0.113	0.167	0.114
QB	0.379	0	0	0	0	0	0	0
RB	0	0.669	0	0	0	0	0	0.016
WR	0.241	0.086	0.744	0	0	0	0	0.024
TE	0.052	0	0.024	0.786	0	0.041	0	0
OL	0	0	0	0	0.927	0.051	0	0
DL	0	0.007	0	0.071	0.073	0.887	0.115	0
LB	0.052	0.066	0.040	0.143	0	0.021	0.833	0.073
DB	0.276	0.172	0.192	0	0	0	0.051	0.886

The sum of the percents may not equal one due to rounding.

**Table 5** Percentage of Players that Changed Positions—White Players

Variable	(1) QB	(2) RB	(3) WR	(4) TE	(5) OL	(6) DL	(7) LB	(8) DB
Change	0.164	0.600	0.154	0.231	0.027	0.323	0.115	0.250
QB	0.836	0	0	0	0	0	0	0
RB	0	0.400	0	0	0	0.032	0.019	0
WR	0.049	0.086	0.846	0	0	0	0	0
TE	0.016	0.029	0	0.769	0	0.065	0	0
OL	0	0	0	0.128	0.973	0.161	0	0
DL	0	0	0	0.051	0.027	0.677	0.077	0
LB	0.049	0.343	0	0.051	0	0.065	0.885	0.250
DB	0.049	0.143	0.154	0	0	0	0.019	0.750

The sum of the percents may not equal one due to rounding.

African American high school tight ends appear likely to be moved to linebacker if they change positions while white high school tight ends appear likely to be moved to offensive lineman if they change positions. The distribution of position changes does not appear to vary a great deal between white and African American players that played offensive lineman or linebacker in high school.

White players that played defensive lineman or defensive back in high school are more likely to change positions in college than their African American counterparts. However, the positions that those players move to in college does not seem to vary by race. Perhaps most notably, white high school running backs are much more likely to change positions in college than African American high school running backs while white high school quarterbacks are much less likely to change positions in college than African American high school quarterbacks. African American high school quarterbacks are much more likely to be moved to wide receiver or defensive back in college than white high school quarterbacks. Also, among those high school running backs that change positions, African American players are more likely to be moved to defensive back in college while white players are more likely to be moved to linebacker.

These statistics are revealing, but they do not tell the whole story because the *ceteris paribus* condition does not hold. Perhaps there are reasons, explainable by our model, that the likelihood of a player changing positions seems dependent on his race in some cases. For example, white high school quarterbacks and African American high school running backs may be more likely to possess physical attributes desired at those positions by college coaches, or they may have been more productive in high school. By accounting for physical attributes and talent measures in our empirical models, we can discount these explanations and more accurately estimate the relationship between race and position allocation. The next section of this paper provides the estimates of our probit models and attempts to determine the true role of race in determining whether or not a player changes positions when transitioning from high school to college.

## Probit results and discussion

The estimated coefficients for the probit model are shown in Table 6. Column 1 reports the results of the full sample of observations while the remaining columns display our results by position. In order to determine the impact of a one unit change in the independent variables on the probability of changing positions, we calculate the marginal effects for each model. These marginal effects are reported in Table 7 for the full sample and each of the position subgroups.<sup>5</sup>

The results in column 1 of Table 7 show that high school running backs are significantly more likely than offensive linemen, the comparison group, to change positions in college. According to our estimates, a player that played running back in high school has about a 26.6% greater probability of changing positions in college than a similar player that played offensive lineman in high school. However, other things equal, the probability of players at other positions in high school changing positions in college is not significantly different than that of offensive linemen. The quarterback (QB) and defensive back (DB) dummy variables are nearly significant at the ten percent level, suggesting that quarterbacks may be somewhat more likely and defensive backs may be somewhat less likely to change positions than offensive linemen, other things equal. Perhaps surprisingly, the results in column 1 of Table 7 do not provide any evidence that wide receivers are significantly more likely to change positions than offensive linemen, all else equal. The results for the full model also suggest that taller players are more likely to change positions than shorter players and that more talented players, as measured by PERFORM and RATING, are less likely to change positions when joining a BCS college football team. Also, the results for the full model do not provide any evidence that African American players are significantly more or less likely to change positions than similar white players.

Turning our attention to the individual positions, we find that a player's weight is a significant determinant of whether or not he changes positions for those that played running back, wide receiver, tight end, and defensive back in high school. All else equal, heavier high school running backs and tight ends are less likely to change positions in college while smaller running backs are likely moved to wide receiver or defensive back and smaller tight ends are likely moved to linebacker. Meanwhile, heavier high school wide receivers are likely to change positions to linebacker or tight end in college while heavier high school defensive backs are likely to change positions to linebacker or wide receiver in college, other things equal. Similarly, we find that height matters at a number of positions. For quarterbacks and wide receivers, taller players are less likely to change positions when entering college, other things equal. Shorter quarterbacks, however, might be moved to wide receiver or defensive back while shorter wide receivers may also be moved to defensive back. As for running backs, defensive linemen, and linebackers, taller players at those positions are more likely to change positions in college, other things equal. Relatively tall players that played running back in high school might find themselves playing wide receiver, linebacker, or defensive back in college, while a tall high school defensive

<sup>5</sup> The marginal effects reported in Table 7 are evaluated at the means of the independent variables.

lineman might be moved to tight end or offensive lineman and a tall high school linebacker might be moved to defensive lineman in college.

Perhaps surprisingly, speed, as measured by FORTY, is a significant position determinant for only quarterbacks and tight ends after holding other factors constant. The results in column 5 of Table 7 indicate that faster high school tight ends are less likely to change positions while slower tight ends may be moved to offensive or defensive lineman in college. Also, the results in column 2 of Table 7 indicate that faster high school quarterbacks are more likely to change positions in college.<sup>6</sup> These relatively fast high school quarterbacks are likely to be moved to wide receiver or defensive back in college. Given that multiple college coaches have embraced a quarterback with significant running ability as part of their offensive scheme, it is not entirely obvious why faster quarterbacks would be more likely to change positions, other things equal. That is, with measures of passing ability included in the model, one would think that many college coaches would prefer a quarterback that had demonstrated the ability to both run and pass well. In fact, four of the last six Heisman Trophy winners would likely fall into this category of dual threat quarterbacks.<sup>7</sup> One possible explanation is that coaches simply do not value speed at the quarterback position as much as they value it at the wide receiver or defensive back positions. Thus, given a marginally talented high school quarterback, coaches may believe the team is better served by adding speed to the wide receiver or defensive back positions. It is also possible that speed is a signal for coaches when deciding what position a high school quarterback should play in college. Given that passing ability is positively correlated with quarterback productivity and winning, a negative correlation between passing ability and running ability would provide coaches with a reason to believe that faster high school quarterbacks are less likely to be successful at the quarterback position in college. In our dataset, there is a significant negative correlation between passing yards and rushing yards for quarterbacks, which would support such an argument and may help to explain our result.

Talent measures are significant in the quarterback, running back, and tight end models, but are not a significant determinant of whether players at other positions in high school move to another position in college. For the most part, we find an inverse relationship between talent or productivity and the likelihood of changing positions. The more passing yards a quarterback has in high school, the more likely he is to play quarterback in college. Similarly, the more rushing yards a running back gains or the more receiving yards a tight end gains in high school, the less likely they are to change positions in college. Further, more talented quarterbacks, as measured by RATING, are more likely to play quarterback in college. However, higher rated tight

<sup>6</sup> We estimated a probit model for the quarterback subsample that included rushing yards, but significant multicollinearity was found between rushing yards and forty-yard dash time. With both variables included, neither of the marginal effects of those variables was significant. However, when only rushing yards is included in the model, the marginal effect of rushing yards is positive and significant. Thus, both models suggest the same result that high school quarterbacks with greater rushing ability are more likely to change positions in college.

<sup>7</sup> The Heisman Trophy is awarded annually to the best player in college football. Troy Smith (2006 winner), Tim Tebow (2007 winner), Cam Newton (2010 winner), and Robert Griffin III (2011 winner) were all considered significant passing and rushing threats during their collegiate careers.

ends are less likely to play tight end and more likely to change positions in college, other things equal.

Moving on to the focus of this paper, we do not find any evidence that African American players who played wide receiver, tight end, offensive lineman, defensive lineman, linebacker, or defensive back in high school are more or less likely to change positions in college than white players at these positions. As we have already discussed, there is already a great degree of racial segregation at many of these positions in high school, but the problem does not appear to grow when these players transition from high school to college. However, the quarterback and running back positions do appear to become more racially segregated when players move from high school to college. We find that African American high school quarterbacks are significantly more likely to change positions than white high school quarterbacks, other things equal. Also, white high school running backs are significantly more likely to change positions than African American high school running backs, all else equal. Holding other factors constant, our estimates suggest that the probability of an African American high school quarterback being moved away from the quarterback position in college is 38.5% greater than that of a white quarterback. Similarly, the probability of a white high school running back changing positions in college is 31.7% greater than that of an African American high school running back.<sup>8</sup>

These two results are consistent with the findings of Eitzen and Sanford (1975) and various theories on racial position segregation. Perhaps college coaches engage in discrimination and systematically allocate white players to quarterback (a central position) over African American players and African American players to running back (a peripheral position) over white players. However, as previously mentioned, given the importance of winning in major college football and the frequency with which college football coaches are fired, it does not seem likely that a coach would risk his job and income in order to satisfy some discriminatory tastes that he may have. Another potential explanation is the self-segregation hypothesis. It may be that African American players would prefer to play a position like wide receiver or defensive back rather than quarterback or that white players would prefer to play a position like linebacker rather than running back because players of their race that they idolized in their youth were more likely to have played these positions, or perhaps players self-segregate for other reasons. However, the self segregation hypothesis probably has more explanatory power in explaining racial position segregation in high school than it does for our purposes here. These African American quarterbacks and white running backs were already accustomed to playing those positions in high school, and it is unlikely that they would make the decision to move away from the positions when entering college. In addition, the quarterback and

<sup>8</sup> Our analysis assumes that a player's high school position is the position that *Rivals.com* lists as his primary high school position. However, many players play multiple positions in high school. Including these multiple position players in our analysis may cause our results to overstate the relationship between race and position allocation. For example, we interpret a high school QB that only played QB in high school changing positions to WR in college the same as a high school QB that primarily played QB but also played some WR in high school changing positions to WR in college. Yet, these two examples may indicate varying degrees of racial stacking. In anticipation of this concern, we excluded players that played multiple positions in high school from our analysis and estimated each of our models using the remaining observations. The results from these models are not substantially different from those presented in Table 7. Hence, we do not report them in the paper, but they are available upon request.

running back positions are two of the most prestigious positions on the team, and players at those positions receive a great deal of attention from the media and fans which also makes it less likely that a player would choose to move away from one of these positions.<sup>9</sup>

Similar to Lavoie (1989) and Lavoie and Leonard (1994), we put forward that the most likely explanation for our result is statistical discrimination. If college football coaches incorporate past observations into their current decisions, then this may help to explain why they would be more likely to switch an African American high school quarterback or a white high school running back to a position other than quarterback or running back, respectively. During their years of coaching, many coaches may have observed that white players tend to be more productive at quarterback than African American players and African American players tend to be more productive at running back than white players. If this is true, then a player's race could act as a signal of productivity to coaches at those two positions. Our data is not ideal for this purpose but does provide some support for the statistical discrimination hypothesis. We find that white quarterbacks throw for more passing yards than African American quarterbacks and that African American running backs rush for more rushing yards than white running backs, on average. Further, there is less variance in the rushing yards of African American high school running backs, implying that they may be less risky than white running backs, on average. However, there is more variance in the passing yards of white quarterbacks than that of African American quarterbacks, implying that white quarterbacks are more risky than African American quarterbacks, on average. Thus, our result for running backs satisfies the conditions for first and second moment statistical discrimination, while our result for quarterbacks only satisfies the condition for first moment statistical discrimination. Once again, we emphasize that statistical discrimination arises from imperfect information and past observation and not personal prejudice. As time progresses and African American quarterbacks and white running backs have more success in major college football, this statistical discrimination may subside. Thus, it will be interesting to revisit this issue down the road and see how things have changed.

We end our discussion by noting the importance of our finding that African American high school quarterbacks are seemingly funneled out of that position in college. At the simplest level, competition for peripheral positions is relegated to only African American players (Yetman and Eitzen 1972; Lewis 1995). This prevents otherwise qualified African American players from obtaining roster spots and limits the possibilities in terms of playing positions (Smith and Seff 1989). Also, as previously mentioned, players in central positions generally receive higher salaries and obtain more endorsement opportunities (Yetman and Eitzen 1972; Eitzen and Yetman 1977). Furthermore, because peripheral positions depend more on physicality than central positions, playing careers are lessened for those players in peripheral positions. This translates to lesser career earnings and limited pension benefits for professional players (Yetman and Eitzen 1972). An additional consequence related to career earnings is that occupants of peripheral positions are less likely to be chosen for most valuable player awards (Loy and Sage 1970). Similarly, head coaches,

<sup>9</sup> Of the previous Heisman Trophy winners, 72 of 77 or about 94% played either quarterback or running back.

**Table 6** Probit Model Coefficients

Variable	(1) Full	(2) QB	(3) RB	(4) WR	(5) TE	(6) OL	(7) DL	(8) LB	(9) DB
Constant	0.134 (2.876)	40.353 <sup>c</sup> (9.471)	-15.524 <sup>a</sup> (8.924)	7.298 (7.212)	-30.133 (20.948)	-3.550 (15.272)	-21.093 <sup>b</sup> (10.633)	-14.481 (10.397)	-15.227 (10.304)
Weight	-0.003 (0.003)	0.007 (0.010)	-0.043 <sup>c</sup> (0.009)	0.028 <sup>c</sup> (0.010)	-0.045 (0.029)	0.035 <sup>b</sup> (0.016)	-0.005 (0.007)	-0.004 (0.011)	0.041 <sup>c</sup> (0.016)
Height	0.068 <sup>b</sup> (0.028)	-0.223 <sup>a</sup> (0.116)	0.406 <sup>c</sup> (0.077)	-0.259 <sup>c</sup> (0.082)	-0.290 (0.192)	0.010 (0.176)	0.288 <sup>b</sup> (0.117)	0.224 <sup>b</sup> (0.110)	-0.012 (0.103)
Forty	-0.547 (0.407)	-2.717 <sup>b</sup> (1.245)	-0.856 (1.525)	1.911 (1.421)	6.638 <sup>b</sup> (3.066)	-2.248 (1.455)	0.636 (1.037)	0.513 (1.363)	1.923 (1.719)
AFAM	0.134 (0.119)	1.147 <sup>c</sup> (0.347)	-0.830 <sup>c</sup> (0.304)	0.138 (0.515)	-0.001 (0.652)	-0.180 (0.675)	-0.420 (0.332)	0.441 (0.326)	-0.484 (0.588)
QB	0.639 <sup>a</sup> (0.364)								
RB	0.820 <sup>b</sup> (0.378)								
WR	0.230 (0.387)								
TE	0.095 (0.354)								
DL	-0.142 (0.309)								
LB	0.103 (0.342)								
DB	-0.507 (0.421)								
Pass YDS		-0.077 <sup>c</sup> (0.026)							
Rush YDS			-0.080 <sup>c</sup> (0.020)						
REC YDS				-0.043 (0.042)	-0.337 <sup>a</sup> (0.179)				
Bench						-0.095 (0.078)			
Tackles							-0.042 (0.057)	0.021 (0.046)	0.008 (0.052)
Sacks							-0.013 (0.036)	-0.004 (0.031)	
INITS									0.032 (0.058)
Perform	-1.459 (0.407)								
Rating	-0.448 <sup>b</sup> (0.227)	-2.204 <sup>c</sup> (0.763)	0.050 (0.484)	-0.469 (0.678)	5.589 <sup>b</sup> (2.482)	0.949 (1.164)	-0.489 (0.761)	-0.907 (0.745)	-0.184 (0.789)

**Table 6** (continued)

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Full	QB	RB	WR	TE	OL	DL	LB	DB
Model statistics									
McFadden R <sup>2</sup>	0.123	0.438	0.310	0.095	0.310	0.243	0.152	0.060	0.153
Observations	1,006	119	186	138	53	116	128	130	131

Standard errors are in parentheses beside the coefficients.

<sup>a</sup> p-value < 0.10

<sup>b</sup> p-value < 0.05

<sup>c</sup> p-value < 0.01

**Table 7** Probit Model Marginal Effects

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Full	QB	RB	WR	TE	OL	DL	LB	DB
Constant	0.034 (0.691)	0.297 <sup>c</sup> (0.057)	-0.671 <sup>c</sup> (0.413)	2.176 (2.149)	-0.910 <sup>c</sup> (0.066)	-0.901 (2.369)	-4.369 <sup>b</sup> (2.162)	-0.869 <sup>c</sup> (0.031)	-2.467 (1.670)
Weight	-0.001 (0.001)	0.002 (0.004)	-0.016 <sup>c</sup> (0.003)	0.008 <sup>c</sup> (0.003)	-0.007 <sup>a</sup> (0.004)	0.001 (0.001)	-0.001 (0.001)	-0.001 (0.002)	0.007 <sup>c</sup> (0.003)
Height	0.018 <sup>b</sup> (0.008)	-0.077 <sup>a</sup> (0.041)	0.147 <sup>c</sup> (0.028)	-0.077 <sup>c</sup> (0.024)	-0.047 (0.030)	0.0004 (0.007)	0.060 <sup>b</sup> (0.024)	0.048 <sup>b</sup> (0.029)	-0.002 (0.017)
Forty	-0.149 (0.111)	-0.940 <sup>b</sup> (0.419)	-0.310 (0.551)	0.570 (0.422)	1.076 <sup>b</sup> (0.537)	-0.084 (0.063)	0.132 (0.214)	0.109 (0.290)	0.312 (0.277)
AFAM	0.036 (0.031)	0.385 <sup>c</sup> (0.107)	-0.317 <sup>c</sup> (0.114)	0.039 (0.140)	-0.0002 (0.106)	-0.006 (0.022)	-0.098 (0.086)	0.090 (0.063)	-0.102 (0.154)
QB	0.207 (0.132)								
RB	0.266 <sup>b</sup> (0.136)								
WR	0.067 (0.120)								
TE	0.027 (0.103)								
DL	-0.037 (0.076)								
LB	0.029 (0.099)								
DB	-0.115 (0.078)								
Pass YDS		-0.027 <sup>c</sup> (0.009)							
Rush YDS			-0.029 <sup>c</sup> (0.007)						
REC YDS				-0.013 (0.012)	-0.055 <sup>b</sup> (0.024)	-0.004 (0.003)			
Bench									
Tackles							-0.009 (0.011)	0.004 (0.010)	0.001 (0.009)
Sacks							-0.003 (0.007)	-0.001 (0.007)	
INTS									0.005 (0.009)
Perform	-0.397 <sup>c</sup> (0.078)								
Rating	-0.122 <sup>b</sup> (0.062)	-0.763 <sup>c</sup> (0.257)	0.018 (0.175)	-0.140 (0.202)	0.905 <sup>b</sup> (0.366)	0.036 (0.046)	-0.101 (0.157)	-0.193 (0.157)	-0.030 (0.128)

Standard errors are in parentheses beside the coefficients

<sup>a</sup> p-value < 0.10

<sup>b</sup> p-value < 0.05

<sup>c</sup> p-value < 0.01

assistant coaches, officials, and football executives are most often recruited from players who previously held central positions (Curtis and Loy 1978; Loy et al. 1978; Frey and Eitzen 1991). Thus, indeed, our finding is not without consequence for African American players.

Football is the most popular sport in America, and the quarterback position is the most popular position in the sport. Thus, it is not a stretch to argue that the quarterback position is the most popular position in American sports. Generally, even casual fans of a football team, at any level, know who the starting quarterback for their team is. It is a respected position among players, coaches, and fans alike. These are the “field generals” and leaders of their respective teams. Thus, stacking African American players in peripheral positions and funneling them out of the quarterback position as they progress through their playing careers contributes to negative African American societal stereotypes by strengthening the idea that African Americans are poor leaders. The biological explanation for positional segregation, the notion that African Americans are physically superior to whites and that as a consequence, whites are naturally intellectually superior to African Americans, is also being promoted.

In the introduction, we noted the commonly held belief that the successes of athletes like Jackie Robinson served as a catalyst towards equal opportunity and improved race relations in America. These aspects of sport are seen as having positively influenced African American labor market outcomes. If the social institution of sports can have this positive impact, then it is not inconceivable that what transpires in sport can also have a negative impact on perceptions of African Americans in the labor market. Thus, the racial stacking process may very well contribute to racial ideologies that negatively impact sport and American culture as a whole.

## Summary and conclusion

This study examines racial position segregation in college football. Descriptive statistics of our data indicate that racial position segregation is already prevalent at the high school level. The purpose of this research is to determine how position segregation changes when players move from high school to college. More directly, is a player's race a significant determinant of whether or not he changes positions in college? In order to analyze the issue, we estimate a probit model that predicts whether or not a player changes positions when transitioning from high school to college. Most notably, our analysis reveals that African American high school quarterbacks are significantly more likely to change positions in college than white school quarterbacks and that white high school running backs are significantly more likely to change positions in college than African American high school running backs. Hence, African American players are already underrepresented at the quarterback position and white players are already underrepresented at the running back position in high school, but each becomes significantly more underrepresented at those two positions when they make the move from high school to college. We put forth that personal prejudice and self-segregation are unlikely causes of these results, but that statistical discrimination may be at the root of these findings. To the extent that college coaches base decisions today on past observations, then they may be more likely to keep white high school quarterbacks at quarterback and African

American high school running backs at running back but move African American high school quarterbacks and white high school running backs to other positions on the team because they have observed white quarterbacks and African American running backs to be more productive or less risky, on average, than African American quarterbacks and white running backs, respectively. Future research in this area may yield different results if African American quarterbacks and white running backs make more headway in college football and race ceases to function as a signal of productivity at those two positions.

We also warn of the negative effects of racial position segregation in sports, particularly of stacking African American players in peripheral positions. Not only does this have direct consequences for those players subjected to the stacking process, but there may also be an indirect impact on perceptions of African Americans' leadership ability outside of the sports labor market. Hartmann (2003) states that sport is a "social space where racial images, ideologies and inequalities are constantly and very prominently constructed, transformed, and struggled over". Much evidence suggests that racial strides made in the sports labor market precede similar strides made in the general labor market. Perhaps, this will again be the case and African Americans will be increasingly entrusted with the quarterback position. Following Hartmann (2003), this may trickle down to the general labor market and help to change perceptions of African Americans' ability to lead firms. It may seem like a stretch, but is hard to overstate the importance and impact of sport on a society in which it is so ingrained.

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