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Race, Gender, Higher Education, and Socioeconomic Attainment: Evidence from Baby Boomers at Midlife

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This article investigates White, Black, and Hispanic men's and women's access and midlife labor market returns to college quality. To do so, we use data from the National Longitudinal Survey of Youth-1979 Cohort (NLSY-79), merged with college quality information from the Barron's Admissions Competitiveness Index. Although prior research has investigated similar dynamics in access and returns to higher education, this work typically excludes Hispanics and does not assess enrollments at community colleges and other less competitive colleges where Black and Hispanic enrollments tend to cluster. We find that Black–White and Hispanic–White differences in college quality, to Whites' advantage, were fully explained or reversed once we accounted for differences in students' backgrounds. At midlife, Hispanic and especially Black men had lower rates of labor force participation than White men who attended colleges of the same quality. Including such differences (i.e., years of no or part-time work) in assessing the earnings returns to college quality demonstrated striking disadvantages facing college-educated Black men relative to White men, which were not fully accounted for by background characteristics. Employment and earnings returns to college quality were not as disparate by race for women. Relative to White women, we find earnings advantages for Hispanic women among those who attended community colleges. This article demonstrates the utility of taking an intersectional and life course approach to the study of higher education and the economic returns to schooling.

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Access to higher education has expanded in recent decades. Blacks, Hispanics, and women have increased their representation among those who hold a college degree (DiPrete and Buchmann 2013; Ryan and Bauman 2016)—a key measure of *vertical* stratification, distinguishing those who have and have not attained college degrees. In this context, *horizontal* sorting within the higher education landscape may become increasingly salient to college graduates' socioeconomic experiences and outcomes. Horizontal stratification refers to distinctions among college graduates in institutional quality, or even variations of experience *within* individual institutions (e.g., fields of study), which contribute to disparities among the college-educated on outcomes such as employment and earnings.

The higher education literature remains limited in its understanding of the extent to which the effects of horizontal dimensions of stratification vary according to individuals' ascriptive traits (e.g., race, gender, and their intersections). Gerber and Cheung (2008) have called for additional research and theorizing concerning "whether there is a secular trend in horizontal effects of postsecondary education on labor market outcomes and to better elucidate the role these effects play in shaping labor market inequalities based on gender, race, and class" (309). This oversight is particularly striking because, as noted above, access to higher education has expanded considerably for women and students of color, thus making research into these processes critical.

In this article, we contribute to the literature on horizontal stratification by examining access and labor market returns to *college quality*—a close substitute for terms such as selectivity or prestige—among White, Black, and Hispanic men and women. We use data from the National Longitudinal Study of Youth-1979 Cohort (NLSY-79), a nationally representative dataset that tracks the life experiences and outcomes of trailing-edge Baby Boomers (i.e., those born in the cohort's second half, between 1957 and 1965). This cohort was among the first to initiate greater college attendance among Blacks, Hispanics, and women, and they attended college prior to referenda on affirmative action in a number of states. We supplement the NLSY-79 data with information on college quality from Barron's Admissions Competitiveness Index, taken from the Integrated Postsecondary Education Data System (IPEDS). Our sample includes enrollments ranging from community colleges to the nation's most elite institutions—a breadth of institutions that has been hard to come by in previous research on returns to college quality (e.g., Dale and Krueger 2011), as we will discuss further throughout this article.

This study makes key contributions to the literatures on access and economic returns to college quality. We are not aware of studies in the former research stream that have investigated racial differences in the distribution of college-goers across institutional types by race and gender simultaneously. The latter research stream does include work that has investigated race-gender patterns for both labor force participation and earnings, our two labor market outcomes (e.g., Bowen and Bok 2000). However, this work is based on the College and Beyond data, which covers only a small number of the nation's most elite institutions, such as Princeton University and the University of Michigan. These institutions are not at all representative of the bulk of college enrollments,

particularly for college-goers from historically minoritized racial and ethnic backgrounds. As an illustration of this point, the 1976 cohort of the College and Beyond data covers approximately 2 percent of Blacks' college enrollments at four-year undergraduate institutions (Bowen and Bok 2000, Table A2) and does not include community colleges.

We also advance the literature on racial and gender variation in the returns to college quality toward greater representativeness in two further ways. First, previous work on labor market returns to college quality most similar to ours (Bowen and Bok 2000) has not included Hispanics, who have distinct labor market experiences relative to other minoritized groups in the United States (see Duncan, Hotz, and Trejo 2006). Second, we include years of $0 earnings or part-time work in our earnings analyses, breaking with this literature's common practice of using samples of full-time, full-year workers (Dale and Krueger 2011). In doing so, we incorporate the insight that considering labor force (non-)participation can result in deeper understandings of racial wage inequality trends (Western and Pettit 2005). Previous sociological research that has considered labor force (non-)participation's role in racial wage inequality has focused on labor market exclusion due to incarceration, which disproportionately affects the left tail of the earnings distribution (Western and Pettit 2005). Here, we apply this insight to better understand racial inequality among a more socioeconomically advantaged segment of the population: the college-educated. As we demonstrate below, doing so enriches our understanding of college quality's role in the socioeconomic life course, highlighting, in particular, disadvantages faced by college-educated Black men.

Background

Theoretical Framework: Intersectionality and Education-Labor Market Linkages in Life Course Perspective

We assess racial and gender variation in college quality's role in the socioeconomic life course using an intersectional and life course approach (see Brown et al. 2016). Stemming from critical Black feminism, intersectionality theory posits that characteristics such as race, gender, class, and nativity, among many others, structure individuals' and groups' social experiences and outcomes (Collins 2000; Crenshaw 1991; Hancock 2007; McCall 2005). In our study, combinations of race (Black, Hispanic, and White) and gender (women and men) form the six social locations of analytic interest (Landry 2007). An intersectional perspective holds that these groups' social experiences and outcomes are differentially exposed to multiplicative combinations of structural racism and sexism—unequal hierarchies of status and resources that disadvantage populations of color relative to Whites (Bonilla-Silva 1997) and women relative to men (Homan 2019). For example, Black and Hispanic youth are less likely than White youth to have access to the forms of economic, social, and cultural capital that facilitate educational success, but experiences of these racialized

structures also vary by gender (Quadlin and Conwell 2021). Similarly, women are more likely than men to fully or partially exit the labor force to care for children, but experiences of these gendered structures also vary by race (Florian 2018).

Life course theory posits that individuals' and groups' lives play out in social and historical context (Elder 1994; Elder, Johnson, and Crosnoe 2003). Our study is guided by life course theorists' concept of social pathways: "trajectories of education and work, family and residences that are followed by individuals and groups through society . . . shaped by historical forces and . . . often structured by social institutions" (Elder et al. 2003:8). Our models of the relationship between college quality and midlife earnings focus in particular on the interrelated institutions of schooling and the labor market (e.g., Bol et al. 2019; Du Bois 1932).

Our analyses track intersectional variation in access and labor market returns to college quality, as well as some of their key correlates, including family background characteristics, precollege academic opportunity and skills, and labor force attachment. An intersectional and life course perspective leads us to understand that multiplicative combinations of structural race and gender inequality, experienced as individuals age and progress from education to the labor market, are the "fundamental causes" of observable race-gender differences in access and returns to college quality, as well as race-gender differences in exposure to the correlates of the outcomes (Merolla and Jackson 2019). Next, we discuss how our intersectional and life course approach contributes to and further integrates the respective literatures on inequality in higher education institutional quality and the labor market.

Race, Gender, and College Quality

Relative to White students who have comparable family backgrounds and academic records, Black and Hispanic college-goers attend colleges of higher quality (Bennett and Lutz 2009; Grodsky 2007). These patterns are consistent with practices of race-based affirmative action in college admissions (Alon 2015; Bowen and Bok 2000). They indicate that, all else equal, higher education institutions that practice selective admissions (i.e., are not open-access) appear to give preference to Black and Hispanic students over comparable White students in admissions. Grodsky (2007) finds that, around the time respondents in our sample matriculated to college (the 1970s and 80s), universities had strong "compensatory sponsorship" preferences for Black students over comparable White students, with preferences for Hispanic students emerging a bit later, in the early 1990s.

Gender is also a key consideration for our study, in light of gender inequality in higher education and the labor market. The birth cohort that our data cover, born between 1957 and 1965, contributed to the emergence of the "rise of women" in college enrollment and completion (DiPrete and Buchmann 2013). During this period, women benefitted from increasingly gender-egalitarian norms and social institutions that have, for example, encouraged parental educational investments

in daughters, and no longer held femininity as incompatible with participation in higher education and the labor market (Owens 2016; Quadlin 2019; Raley and Bianchi 2006). For example, Owens (2016) shows that girls' advantage in the development of attention and prosocial skills in early childhood is linked to their advantage in years of education completed by their mid-to-late 20s. As DiPrete and Buchmann (2013) show, starting with the cohort born in 1960, White and Hispanic women's rates of bachelor's degree completion overtook those of same-race men, and subsequent cohorts of White and Hispanic women have continued to grow their advantages over their male counterparts (see also McDaniel et al. 2011). These patterns are distinct among Blacks, as Black women have had higher rates of college completion than Black men since the 1930 birth cohort, and Black women's advantage has grown across subsequent birth cohorts (DiPrete and Buchmann 2013). Less is known about these women's college destinations, particularly in intersectional perspective. We are not aware of any previous studies that have investigated college quality patterns by race and gender simultaneously. Doing so may uncover novel patterns of observed and net distributions of college-goers across the range of institutional quality.

Some notable prior studies of gender inequality in higher education have considered race and gender together. Yet, many of these studies have focused on *vertical* stratification (e.g., college completion), as opposed to horizontal outcomes (e.g., college quality). In an analysis of trends and mechanisms of college completion for Black and White women and men from 1940 to 2000, McDaniel et al. (2011) attribute Black women's large completion advantage relative to Black men to Black men's lack of educational resources and access to high-status occupations, in contrast to Black women's historically high rates of labor force participation. They call for additional research on race-gender patterns for outcomes other than "the *quantity* of college completion," noting that higher education experiences "differ on a variety of dimensions that are in some cases correlated with race and gender" (McDaniel et al. 2011:910, italics added). We do so for college quality; we also link these trends to midlife labor market experiences, consistent with our intersectional and life course framework. Our inclusion of Hispanics also expands on McDaniel et al.'s (2011) line of inquiry.

Race, Gender, and Labor Market Returns to College Quality

A number of studies have found positive effects of college quality on labor market outcomes, such as hiring and wages (Black, Daniel, and Smith 2005; Black and Smith 2004, 2006; Bowen and Bok 2000; Brewer, Eide, and Ehrenberg 1996; Gaddis 2015; Hoekstra 2009; Long 2010; Loury and Garman 1995; Monks 2000; Witteveen and Attewell 2017; Zhang 2005). A subset of this research stream, based on nationally representative data, has pointed to null racial differences in the effects of college quality (Black et al. 2005; Monks 2000; Witteveen and Attewell 2017). In contrast, using the College and Beyond Database of elite colleges (detailed further below), Dale and Krueger (2011) find differences in the returns to college quality to the advantage of a pooled sample

of Blacks and Hispanics relative to Whites, net of background characteristics and an additional adjustment for selection into college quality.

Research on gender differences in returns to college quality has also come to mixed conclusions. At least one study using national data has found null gender differences in the effects of college quality (Monks 2000), but others have found such differences, to men's advantage (Black et al. 2005; Black and Smith 2004; Witteveen and Attewell 2017). Witteveen and Attewell (2017) analyzed the wages of 1992–1993 and 2007–2008 cohorts of the Baccalaureate and Beyond Longitudinal Studies (covering four-year college attendees), ten and four years after graduation, respectively. Measuring institutional selectivity with Barron's data (as we do in this study), they found that, in both cohorts, women who graduated from "Most Selective" or "Highly Selective" institutions earned approximately 18 percent less than men who graduated from institutions of comparable quality.

We are not aware of any studies that have used nationally representative data to investigate returns to college quality in an intersectional manner, considering race and gender simultaneously, as we do here. Bowen and Bok's (2000) influential book *The Shape of the River* is the previous study most similar to ours. They investigated employment and earnings returns to college quality for Black and White men and women, using data from the College and Beyond (C&B) database, covering three cohorts of students who, in 1951, 1976, and 1989, entered thirty-four prestigious public and private institutions. Focusing on the 1976 cohort's economic standing in April 1995, Bowen and Bok (2000) found that the mean earnings of Black men who graduated from C&B colleges was $85,000, compared to $101,900 for White men. This gap was much smaller for women; Black women C&B graduates had mean earnings of $64,700, compared to $66,000 for White women. Accounting for student background characteristics and variation in institutional quality in the C&B sample fully explained the gap in mean earnings among women, but a gap of approximately $8,500 remained among men.

Our use of nationally representative data builds on Bowen and Bok's (2000) race-within-gender approach. The C&B data provide limited variation in college quality and, relatedly, do not cover the bulk of non-White students' college destinations, which are non-elite institutions and community colleges. Here, we assess the employment and earnings returns to college quality in an intersectional manner using nationally representative data, covering college-goers who attended institutions ranging from elite public and private institutions to community colleges. It is an open question whether patterns found in prior work will hold at the types of institutions that represent the overwhelming majority of college enrollments. Further, we include years of $0 and part-time work in our analyses of intersectional variation in earnings returns to college quality. Bowen and Bok (2000) base their results on samples of full-time, full-year workers, following common practice in the literature on returns to college quality (Dale and Krueger 2011). A more inclusive sample may reveal alternative dynamics of race-gender differences in the returns to college quality, particularly because we include those who attended non-elite institutions and, as such, may have

less stable labor force attachment than elite college attendees. Our inclusion of Hispanics also builds on Bowen and Bok's (2000) work, which focuses exclusively on Blacks and Whites.

Data and Methods

Data

We use data from the National Longitudinal Survey of Youth-1979 Cohort (NLSY-79; Center for Human Resource Research 2001). The survey is conducted by the Ohio State University Center for Human Resource Research and NORC at the University of Chicago. In the survey's base year of 1979, data were collected from a sample of 12,686 respondents between the ages of 14 and 22 (i.e., born between 1957 and 1965).[1] Respondents were interviewed annually through 1994, and in even-numbered years since then. We use data up to and including the 2014 survey wave. All analyses are weighted with the NLSY-79's base year sampling weight. We use robust standard errors to account for NLSY-79's complex sampling design.

Variables

College attendance and college quality

In each survey wave from 1984 through 2012, respondents reported the name and location of the college they currently or most recently attended, if applicable. Respondents who had attended more than one college were able to provide information on up to three most recent colleges in each survey wave. In the restricted-use version of the dataset, which we use here, the record for each respondent contains the Federal Intra-agency Committee on Education (FICE) or IPEDS code for all colleges that a respondent attended.

A total of 5,773 respondents reported at least one valid college enrollment. To generate this sample of college-goers, we first organized the data into a person-college record. Each respondent was linked to all colleges they reported attending from 1984 to 2012. Person-college pairs were counted as valid if the FICE or IPEDS code in the data could be linked to the name of a college or university using the IPEDS database. In some cases, we consulted the NLSY-79 addendum to the college codes, which contains other colleges that are identified in the data with specialty codes. An additional 433 invalid person-college pairs contained FICE or IPEDS codes that could not be linked to colleges or universities using the IPEDS database or the NLSY-79 addendum to the college codes. The number of college codes that we were unable to link represents less than 3 percent of all colleges ever reported by NLSY-79 respondents. This figure is comparable to that of other studies that have used the NLSY-79 college codes (e.g., Light and Strayer 2000). Respondents who reported only invalid colleges are not included in the count of college-goers.

We determine college quality using the restricted-use Barron's Admissions Competitiveness Index Data Files, which are provided by the National Center for Education Statistics (NCES). College quality rankings are based on the median SAT and ACT scores of students accepted in the previous year; the GPA and class rank required for admission; and the acceptance rate in the previous year (Schmitt 2015). Barron's sorts four-year colleges into six main categories: Most Competitive, Highly Competitive, Very Competitive, Competitive, Less Competitive, and Non-Competitive.[2] These rankings are in line with common notions of prestige. As an illustration, looking at the state of California in 1999, Stanford University was rated Most Competitive; University of California, Berkeley was Highly Competitive; University of California, San Diego was Very Competitive; San Jose State was Competitive; Cal State-Fullerton was Less Competitive; and Humphreys College was Non-Competitive. We combine the "Less" and "Non-Competitive" categories together, and the "Most," "Highly," and "Very Competitive" categories together to maximize cell sizes, which is especially critical for students of color.[3] The Barron's data files contain competitiveness ratings for 1972, 1982, 1992, 2004, 2008, and 2014. For each reported college enrollment, we used the competitiveness category from the data wave closest to when the respondent enrolled in that college. This allows us to capture a college's quality as closely as possible to when a respondent attended the school.

Barron's does not rank two-year (i.e., community or vocational/technical) colleges. We sorted these colleges into a separate category. It is important to include these colleges in analyses because they account for approximately one-fifth of this cohort's college enrollments (see Table 1). Thus, they contribute much to our understanding of the role of higher education in the socioeconomic life course.

For each college-goer, we use the measure of college quality from the last college a respondent attended, regardless of whether the enrollment was as an undergraduate or graduate student. We prefer this measure to other possibilities, such as the first college attended or highest quality college attended, for two reasons. First, this measure captures the end result of any upward and/or downward transfer throughout the college career, both between four-year colleges and on the two-year/four-year margin. Second, it reflects the assumption that the respondent's highest reported year of schooling was completed at the institution from which we are measuring college quality.[4]

Student background

Our models incorporate a standard set of student background variables, namely: mother's and father's years of schooling completed; mother's and father's occupation; parental income (based on any years the respondent lived with parents from 1979 to 1982); whether the respondent lived in a two-parent household at age 14; number of siblings; and age. We also include respondents' Armed Forces Qualifying Test (AFQT) score as a measure of precollege academic achievement.[5] Following Neal and Johnson (1996:887), we view the AFQT as "a test of achievement and learned skill, not of innate ability," wherein AFQT disparities

Table 1. Descriptive Statistics (Means or Proportions) for College Attendees, by Race and Gender

Variable	White Men	White Women		Black Men		Black Women			Hispanic Men		Hispanic Women		
College Quality[a]													
Community	0.34	0.42	††	0.42	**	0.53	***	††	0.49	***	0.59	***	†
Non- or Less Competitive	0.21	0.17	†	0.30	**	0.21		††	0.16	*	0.15		
Competitive	0.29	0.28		0.20	***	0.19	***		0.23		0.19	***	
Very, Highly, or Most Competitive	0.15	0.13		0.08	***	0.07	***		0.12		0.07	**	
Mother's Highest Grade of School Completed													
0–11	0.13	0.17	††	0.38	***	0.43	***		0.50	***	0.63	***	††
12	0.51	0.49		0.36	***	0.37	***		0.29	***	0.25	***	
13–15	0.17	0.17		0.14		0.12	*		0.11	*	0.09	***	
16+	0.19	0.17		0.13	**	0.08	***	†	0.10	**	0.03	***	††
Father's Highest Grade of School Completed													
0–11	0.15	0.21	††	0.39	***	0.46	***	†	0.46	***	0.60	***	††
12	0.32	0.38	††	0.43	***	0.34		††	0.26		0.23	***	
13–15	0.18	0.13	††	0.09	***	0.10			0.08	***	0.06	***	
16+	0.36	0.27	†††	0.09	***	0.10	***		0.20	***	0.11	***	†
Parental Income, 1979–1982, Any Years Youth Lived in Parental Home													
First	0.06	0.07		0.35	***	0.38	***		0.25	***	0.33	***	†
Second	0.13	0.15		0.25	***	0.29	***		0.22	**	0.25	***	

(*Continued*)

Table 1. Continued

Variable	White Men	White Women		Black Men		Black Women			Hispanic Men		Hispanic Women		
Third	0.23	0.21		0.15	**	0.14	***		0.19		0.17		
Fourth	0.24	0.27		0.14	***	0.11	***		0.14	***	0.15	***	
Fifth	0.35	0.30	†	0.11	***	0.08	***		0.21	***	0.10	***	††
Mother's Occupation													
Does Not Work for Pay	0.37	0.33		0.36		0.35			0.39		0.42	**	
Works for Pay, Not Professional/Managerial	0.45	0.50	†	0.49		0.52			0.50		0.51		
Works for Pay, Professional/Managerial	0.18	0.17		0.15		0.13	*		0.11	*	0.08	***	
Father's Occupation													
Does Not Work for Pay	0.10	0.12		0.30	***	0.33	***		0.25	***	0.25	***	
Works for Pay, Not Professional/Managerial	0.46	0.51	†	0.58	***	0.56			0.53		0.61	**	
Works for Pay, Professional/Managerial	0.44	0.37	††	0.12	***	0.11	***		0.22	***	0.14	***	†
Two-Parent Household at Age 14	0.92	0.90		0.71	***	0.68	***		0.77	***	0.80	***	
Number of Siblings	2.62	2.86	††	3.81	***	4.25	***	†	3.91	***	3.92	***	
Age	17.63	17.70		17.49		17.62			17.54		17.69		

(*Continued*)

Table 1. Continued

Variable	White Men	White Women		Black Men		Black Women			Hispanic Men		Hispanic Women	
Armed Forces Qualifying Test Quintile												
First	0.03	0.03		0.26	***	0.30	***		0.13	***	0.23	***††
Second	0.08	0.12	††	0.32	***	0.35	***		0.18	***	0.28	***††
Third	0.16	0.22	†††	0.21	*	0.19			0.29	***	0.23	
Fourth	0.29	0.30		0.14	***	0.12	***		0.24		0.16	***†
Fifth	0.45	0.33	†††	0.08	***	0.04	***	†	0.16	***	0.09	***†
Log of Average Earnings, 2006–2014[c]	11.14	10.32	†††	10.46	***	10.17	*	†††	10.37	***	10.75	
Share of Years Reporting Zero Weeks Worked, 2006–2014	0.04	0.10	†††	0.12	***	0.11			0.09	***	0.09	†††
N	977	1,084		461		629			282		344	

Asterisks indicate significance of comparison with same-gender Whites: $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.
Crosses indicate significance of comparison with same-race men: $^{\dagger}p < .05$; $^{\dagger\dagger}p < .01$; $^{\dagger\dagger\dagger}p < .001$.
[a]Last college enrollment respondent reported to NLSY79.
[b]In 1982 dollars, only years when youth reported living in parental home.
[c]Average income includes years of $0 if respondent also reported at least one year of ≥$1 income during the observation period.

between racial groups index "differences in the cost of acquiring skill" stemming from historical and contemporary discrimination.

Labor force participation

Our analyses of labor force participation and earnings at midlife focus on NLSY survey years 2006–2014. We measure labor force participation based on respondents' reports of weeks worked in the previous calendar year (see, e.g., Chetty et al. 2020). From these variables, we calculate respondents' average share of years reporting zero weeks worked from 2006 to 2014, among those reporting at least one nonzero earnings observation over this time period. This measure captures labor force attachment for those reporting at least some paid work during the time period. The measure is conservative, as it does not capture shorter spells of unemployment.

Earnings

We measure earnings based on respondents' average individual earnings in the previous calendar year, across survey years 2006–2014. The NLSY-79 earnings variable includes wages, salary, commissions, or tips from all jobs worked, before taxes or other deductions. It does not include money received for military service. In line with our focus on potential differences in labor force participation among college attendees, we include in this average years in which respondents reported \$0 of earnings, as long as the respondent also reported at least one year of \$1 or more of earnings during the observation period. In 2010, the midpoint of the years we use to measure earnings, respondents were ages 44–53—an age that is old enough for their earnings to proxy their permanent lifetime earnings (Haider and Solon 2006).

Imputation of missing data and working sample

For respondents with complete data on race, gender, college quality, and at least one observation between 2006 and 2014 for labor force participation and earnings, we imputed missing data on other covariates using multiple imputation with chained equations (Royston 2005), generating ten imputed datasets. We generated the imputation model separately for each of our six race-gender groups of interest. Configuring our imputation model in this way allowed relationships between all variables to differ for these six groups, consistent with our intersectional analytic framework. As a result, our imputation model matches our analysis model (White, Royston, and Wood 2010). We imputed missing labor force participation and earnings values, but only analyzed those with complete information in the original data (von Hippel 2007). These procedures result in a working sample of 3,777 college attendees (1,720 men and 2,057 women). Table 1 presents descriptive statistics for this sample, broken down by race and gender.

Analytic Strategy

Our analyses proceed in three stages. First, we descriptively analyze racial differences within gender groups in college quality among those who reported at least one college enrollment. We then assess the extent to which such differences are attributable to race-gender differences in family background and academic credentials among college-goers. We do so with multinomial logistic regression models, comparing, relative to the odds of attending a Community college, the odds of attending Non- and Less Competitive; Competitive; or Very, Highly, or Most Competitive colleges (for related methodological discussion, see Grodsky 2007). We estimate separate models for men and women, following previous research that has used an intersectional and life course approach (Brown et al. 2016).

Second, we assess relationships between race, gender, college quality, and labor force participation at midlife. We compare the shares of years reporting zero weeks worked by combinations of race, gender, and college quality, focusing in particular on racial differences within gender groups. Within each gender group, we predict labor force participation based on a three-way interaction of race, gender, and college quality. We obtain predictions for college-goers who completed 14 years of schooling at a community college and 16 years of schooling at all other levels of college quality. (Note that significant differences we discuss below are even larger in analyses that do not account for years of schooling completed. We account for years of schooling for consistency with the earnings analyses that follow.)

Third, we assess racial and gender differences in the earnings returns to college quality. We use linear regressions where the outcome is the log of average earnings from 2006 to 2014 (including in this average years of $0 in earnings, as long as the respondent also reported at least one year of $1+ in earnings during the observation period). Within each gender group, we again predict average earnings based on a three-way interaction of race, gender, and college quality and obtain predictions, by race, for a college-goer who completed 14 years of schooling at a community college and 16 years of schooling at all other levels of college quality.

Results for earnings returns to college quality come from a series of three nested regression models that build on this specification. Model 1 obtains earnings predictions without any other explanatory variables. For this model, we focus on comparisons within race-gender groups (e.g., To what extent do Black men's earnings vary over the range of college quality?). Model 2 adds controls for family background and precollege academic achievement. From this model, we re-predict earnings as if Blacks and Hispanics had the family backgrounds and academic credentials of *same-gender Whites who attended colleges of the same quality*. This counterfactual accounts for the selection on observables identification strategy common in the literature on returns to college quality (e.g., Black et al. 2005). This is not a strictly causal estimate because we lack information on unobservables, as could be obtained, for example, with information on college attendees' application behavior (Dale and Krueger 2002).

However, predictions from this model leave us better positioned to compare, within gender groups, racial differences in predicted earnings among those who attended colleges of the same quality (e.g., What is the difference in the average earnings of Black and White men who attended Competitive colleges?). Model 3 adds our focal postcollege explanatory variable, labor force participation, in this case measured as share of years in the labor force. We again re-predict average earnings as if Blacks and Hispanics also had the labor force participation rates of same-gender Whites who attended colleges of the same quality. Throughout the results, we test the significance of the contrast between racial differences among men versus those among women (see Brown et al. 2016).

Results

Race, Gender, and College Quality

Men

We begin by discussing the unadjusted college quality data (from Table 1), and then move to discussing the adjusted college quality outcomes obtained from multinomial logistic regressions. As shown in Table 1 earlier, White men were disproportionately concentrated in higher quality institutions relative to Hispanic and, especially, Black men. White men were significantly less likely than Hispanic men to attend community colleges (0.34 for White men vs. 0.49 for Hispanic men; $p < .001$) and significantly more likely to attend Non- or Less Competitive colleges (0.21 for White men vs. 0.16 for Hispanic men; $p < .05$). Also in comparison to White men, Black men were significantly more likely to attend community colleges (0.42; $p < .01$) as well as Non- or Less Competitive colleges (0.30; $p < .01$). In contrast to insignificant Hispanic–White differences, Black men were also significantly less likely than White men to attend Competitive (0.29 for White men vs. 0.20 for Black men; $p < .001$) and Very, Highly, or Most Competitive colleges (0.15 for White men vs. 0.08 for Black men; $p < .001$). Thus, these unadjusted data point to a White male advantage in college quality relative to Hispanic men and (in particular) Black men.

Table 2 presents multinomial logistic regression models of college quality among attendees for men. The base category for comparison is community college. Coefficients for each of the other categories are relative risk ratios that index the odds of attending a college of that quality level, compared to the odds of attending community college. The model includes controls for men's family background and precollege academic achievement. These variables enter the models with the expected direction and magnitude, with a particularly large and significant effect for men's AFQT scores.[6] Black–White differences are larger than Hispanic–White differences on this measure of academic opportunity and preparation (see Table 1). Overall, adjusting for these differences accounts for the significant Black–White and Hispanic–White differences in college quality that we observed in Table 1.

In this adjusted universe, Hispanic men's odds of attending each type of four-year college relative to community college are statistically indistinguishable from that of White men. In contrast, Black men have significant net advantages in

Table 2. Multinomial Logistic Regression Models of College Quality among College Attendees (Relative Risk Ratios versus Community College), with Controls for Family Background and Armed Forces Qualifying Test Score, Men

Variable	Non- or Less Competitive	p	m ≠ w	Competitive	p	m ≠ w	Very, Highly, or Most Competitive	p	m ≠ w
Black	2.00	**		1.75	**		2.07	*	
Hispanic	0.75			1.30			1.60		
Mother's Highest Grade of School Completed									
0–11	0.90			0.62	*		0.86		
13–15	0.79			0.73			1.26		
16+	0.68			0.87			1.60		
Father's Highest Grade of School Completed									
0–11	1.08			0.89			0.95		
13–15	1.26			1.29			0.80		
16+	1.05			1.66	*		2.27	**	
Mother's Occupation									
No Work for Pay	0.79			0.74		††	0.92		
Professional/ Managerial	1.74			1.32			1.55		
Father's Occupation									
No Work for Pay	1.49			0.99			2.15	*	
Professional/ Managerial	1.14			0.87			0.78		

(*Continued*)

Table 2. Continued

Variable	Non- or Less Competitive	p	m ≠ w	Competitive	p	m ≠ w	Very, Highly, or Most Competitive	p	m ≠ w
Parental Income Quintile, 1979–1982, Any Years Youth Lived in Parental Home									
Second	0.87			1.67			1.29		
Third	0.94			1.31			0.97		
Fourth	0.96			1.27			1.17		
Fifth	0.79			1.38			1.54		
Armed Forces Qualifying Test Quintile									
Second	1.44			2.44	*		1.53		
Third	1.86			3.18	**		1.73		
Fourth	2.56	**		6.47	***		5.58	***	
Fifth	3.45	***		9.18	***		17.05	***	
Two-Parent Household at Age 14	1.57			1.44			1.06		
Number of Siblings	0.97			0.94			0.89		
Age	1.02			1.00			0.92		
Constant	0.14	**		0.10	**		0.16		
N	1,720			1,720			1,720		

Note: Robust standard errors in parentheses. Omitted categories for explanatory variables are White, mother/ father completed 12 years of schooling, mother/ father works for pay but occupation is not professional or managerial, first parental income quintile, first Armed Forces Qualifying Test quintile. Significance tests based on robust standard errors (not shown).

*$p < .05$; **$p < .01$; ***$p < .001$.

Crosses indicate significance of difference of coefficient relative to models for women: $^{\dagger}p < .05$; $^{\dagger\dagger}p < .01$; $^{\dagger\dagger\dagger}p < .001$.

all three categories of four-year colleges relative to community colleges. This advantage is larger in the tails of the distribution of four-year college quality (rrr = 2.00, $p < .01$ for Non- or Less Competitive; rrr = 2.07, $p < .05$ for Very, Highly, or Most Competitive) than in the middle (rrr = 1.75, $p < .01$ for Competitive colleges). We therefore see a clear distinction between the unadjusted and adjusted results for college quality. White men are clearly advantaged when we observe the raw data on college quality. These advantages shift in Black men's favor when we account for sociodemographic controls and precollege achievement—but we would be remiss to oversell the adjusted predictions, considering that patterns of racial disadvantage and discrimination routinely prevent Black men from standing out on these academic measures that are central to the adjusted models.

Women

Table 1 shows a similar pattern of White female advantage in the unadjusted college destinations in this trailing-edge Baby Boomer cohort. Hispanic women (0.59, $p < .001$) and Black women (0.53, $p < .001$) were both significantly more likely than White women (0.48) to attend community colleges. Racial differences in Non- and Less Competitive college attendance were not significant among women. Disadvantages reemerged for both Hispanic and Black women in rates of attending Competitive (0.28 for White women vs. 0.15 for Hispanic women vs. 0.21 for Black women, both $p < .001$) and Very, Highly, or Most Competitive colleges (0.13 for White women vs. 0.07 for Hispanic women, $p < .01$; and 0.07 for Black women, $p < .001$).

Table 3 shows multinomial logistic regression results for women. As was the case for men, we observe large effects of AFQT score in predicting women's college destinations. Chow tests for coefficient differences across models for men and women show that net racial differences do not vary significantly across gender groups. However, we do observe some notable substantive differences. Whereas Black men had significant net advantages relative to White men for each level of four-year college relative to community colleges, Black women's net advantage relative to White women is only significant for Very, Highly, or Most Competitive colleges relative to community colleges (rrr = 1.71, $p < .05$). Thus, after accounting for background variables and academic ability, Black women were more likely than White women to attend colleges of the highest quality. Note, however, that this assumes an equalization in precollege characteristics that is common in the literature on educational inequality, but which erases very real patterns of racial disadvantage in precollege experiences. These patterns have been partially demonstrated in extant research, but prior studies have not investigated trends separately by gender. Most have also not included Hispanics or community college attendees (for exceptions, see Ciocca Eller and DiPrete 2018, Online Appendix A; Grodsky 2007).

Race, Gender, College Quality, and Labor Force Participation

Next, we move forward in the life course to track intersectional variation in the relationship between college quality and labor force participation at

Table 3. Multinomial Logistic Regression Models of College Quality among College Attendees (Relative Risk Ratios versus Community College), with Controls for Family Background and Armed Forces Qualifying Test Score, Women

Variable	Non- or Less Competitive	p w ≠ m	Competitive	p w ≠ m	Very, Highly, or Most Competitive	p w ≠ m
Black	1.35		1.32		1.71	*
Hispanic	0.83		0.98		1.22	
Mother's Highest Grade of School Completed						
0–11	1.17		1.08		0.76	
13–15	0.90		1.08		0.93	
16+	1.14		1.17		1.45	
Father's Highest Grade of School Completed						
0–11	1.04		0.73		0.98	
13–15	1.65	*	0.99		0.86	
16+	1.87	*	1.81	**	1.53	
Mother's Occupation						
No Work for Pay	1.25		1.44	* ††	1.47	
Professional/ Managerial	1.21		1.14		1.43	
Father's Occupation						
No Work for Pay	0.82		1.03		1.45	
Professional/Managerial	1.26		1.02		1.63	

(*Continued*)

Table 3. Continued

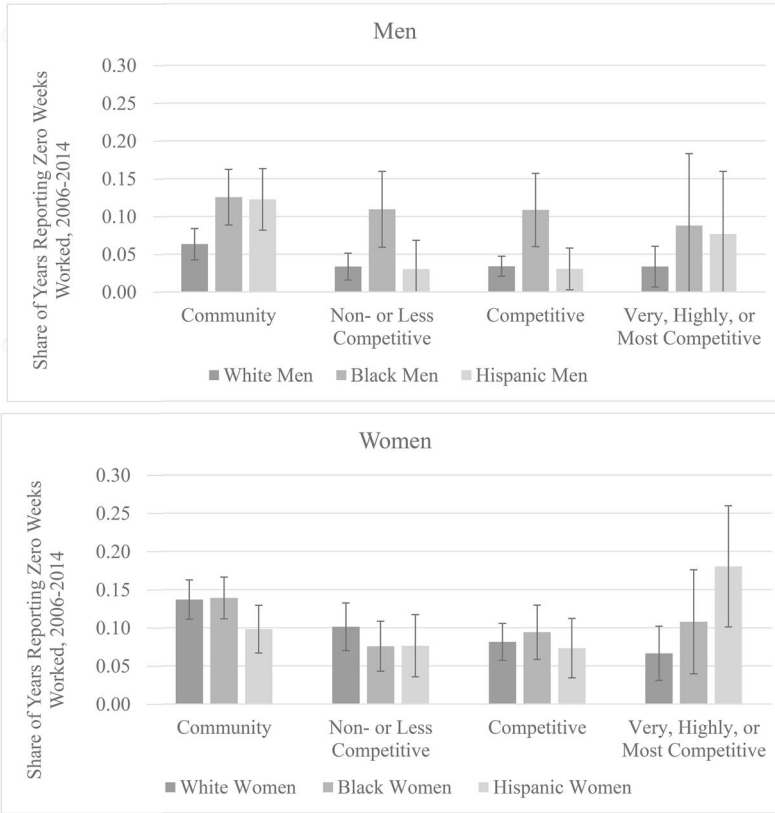
Variable	Non- or Less Competitive	p	w ≠ m	Competitive	p	w ≠ m	Very, Highly, or Most Competitive	p	w ≠ m
Parental Income Quintile, 1979–1982, Any Years Youth Lived in Parental Home									
Second	1.00			1.50			0.62		
Third	0.88			1.40			1.06		
Fourth	1.17			1.36			1.10		
Fifth	1.04			1.92			1.14		
Armed Forces Qualifying Test Quintile									
Second	1.44			1.57			2.3	*	
Third	1.82	*		3.52	***		2.49	*	
Fourth	1.58			3.79	***		5.57	***	
Fifth	1.77			6.24	***		16.87	***	
Two-Parent Household at Age 14	0.80			1.06			0.99		
Number of Siblings	0.98			1.02			0.96		
Age	0.97			0.97			0.9	*	
Constant	0.37			0.14	**		0.18		
N	2,057			2,057			2,057		

Note: Robust standard errors in parentheses. Omitted categories for explanatory variables are White, mother/ father completed 12 years of schooling, mother/ father works for pay but occupation is not professional or managerial, first parental income quintile, first Armed Forces Qualifying Test quintile. Significance tests based on robust standard errors (not shown).

$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Crosses indicate significance of difference of coefficient relative to models for men: $^{\dagger}p < .05$; $^{\dagger\dagger}p < .01$; $^{\dagger\dagger\dagger}p < .001$.

Figure 1. Share of Years Reporting Zero Weeks Worked, by Race and College Quality.



Note to Figure 1: Predictions are based on a model, run separately by gender, including three-way interaction of race, college quality, and years of schooling completed. Figure shows predictions for a college-goer who completed 14 years of schooling at a community college or 16 years of schooling at all other college types. Samples include all college-goers who reported at least one year of nonzero earnings from 2006 to 2014. Error bars represent 95 percent confidence intervals (some lower bounds cut off at zero in panel for men)

midlife. Figure 1 depicts the average share of years from 2006 to 2014 in which college-goers reported zero weeks worked, by race, gender, and college quality. Predictions are for a college-goer who completed 14 years of schooling at a community college or 16 years of schooling at all other college types.

Men

The top panel shows results for men. Among community college attendees, Black and Hispanic men both reported zero weeks worked in approximately 12 percent of the survey waves between 2006 and 2014—figures significantly higher than community college White men, whose figure is around 6 percent (both $p < .01$). From this relatively low point to begin with, White men's rates of reporting

zero hours worked further decrease by half across the range of college quality, down to 3 percent among those who attended Very, Highly, or Most Competitive colleges. College-educated White men, in other words, experience very high labor force participation regardless of the quality of the college they attended.

We call particular attention to Black men in this figure. Black men's rates of labor force nonparticipation decrease only slightly across the two-year/four-year margin, and remain high at over 10 percent among those who attended Non- or Less Competitive colleges ($p < .01$ vs. Whites) as well as Competitive colleges ($p < .01$ vs. Whites). Black men's rate then decreases slightly to about 9 percent among those who attended Very, Highly, or Most Competitive colleges. This is the only tier of college quality where Black men's rates of labor force nonparticipation are not significantly higher than White men's, but the large confidence intervals for Black men indicate that this is largely an issue of small cell sizes. At all other levels of college quality, especially those where Black men are most concentrated, Black men are far more likely to experience labor force nonparticipation than their White peers. Black men's rates of labor force nonparticipation are remarkably high, considering that these men had already beat the odds by completing a college degree in an era when such attainment was becoming more common, but much less prevalent than what we see today.

Women

The bottom panel shows results for women. Among women who attended community colleges, Hispanic women have the lowest rates of reporting zero weeks worked over the observation period, at around 10 percent, compared to approximately 14 percent for both Black and White women (difference *NS*). Hispanic women's rates of nonparticipation decrease only slightly across the margin of Non- or Less Competitive colleges (8 percent) and Competitive colleges (7 percent), and then increase markedly among those who attended Very, Highly, or Most Competitive colleges (18 percent), where their figure is three times that of White women ($p < .01$). Black women's rates decrease across the two-year/four-year college margin, at approximately 8 percent among those who attended Non- or Less Competitive colleges. This rate increases slightly throughout the remainder of the quality distribution, standing at just under 11 percent among those who attended Very, Highly, or Most Competitive colleges. Meanwhile, White women's nonparticipation rate decreases linearly and by approximately half across the quality distribution, ranging from 14 percent among those who attended community colleges to just under 7 percent among those who attended Very, Highly, or Most Competitive colleges. White women's rates of labor force nonparticipation are higher than White men's at all levels of college quality, and the same pattern holds among Hispanics at all quality levels except community colleges. Gender differences are smallest among Blacks, with Black women having lower nonparticipation rates than Black men in the middle of the college quality distribution. Thus, although many patterns are evident in this figure, rates of labor force nonparticipation are particularly adept at demonstrating the unique disadvantages of *Black men* college graduates.

Race, Gender, College Quality, and Earnings

As a final component of the analysis, we investigate intersectional variation in the midlife earnings returns to college quality. Tables 4 and 5 show predictions of average earnings from 2006 to 2014, by race and college quality, for men and women, respectively. These results are based on the nested regression models shown in Online Appendix Tables 1 (men) and 2 (women). The models include a three-way interaction of race, college quality, and years of schooling completed. Predictions are again based on 14 years of schooling completed for community college attendees and 16 years completed for the other college quality levels.

Men

Model 1 in Table 4 gives predictions for men, based on a regression that does not include other covariates. The key comparison is within-race variations in earnings across the range of college quality. By this measure of returns, Black and Hispanic men often receive comparable or higher returns to college quality than White men. Black men's predicted earnings increase from about $30,000 for a community college attendee to about $63,000 for someone who attended a Very, Highly, or Most Competitive college. We observe a comparable percentage increase across the range of college quality for Hispanic men, whose predicted earnings ranged from about $36,000 to about $73,000. White men saw an 86 percent increase in predicted earnings across the range of college quality, from approximately $51,000 for community college to nearly $96,000 for Very, Highly, or Most Competitive colleges.

Aside from assessing these returns to college quality within racial groups, we also compare the earnings of Black, Hispanic, and White men who attended colleges of the same quality. We do so with the predicted earnings from Model 2. The model predicts earnings as if Black, Hispanic, and White men had the same family background and AFQT scores *as White men who attended colleges of the same quality*. The model accounts for racial differences in observable background characteristics among those who attended same-quality colleges brought about by the net Black and Hispanic advantages we discussed earlier (see Table 2). White men's predictions are similar across Models 1 and 2, as expected. For Black men, predicted earnings increase between 24 and 35 percent, with the largest increase coming in the Very, Highly, or Most Competitive category (to nearly $86,000). This is also the place in the college quality distribution where Black men's net advantage relative to White men was the largest. Further, it is the only level of quality at which adjusting for background characteristics reduces earnings gaps with same-quality White men to the point of non-significance. At all three lower levels of quality, Black men have significantly lower predicted earnings than White men, even after modeling Black men's sociodemographic characteristics to be consistent with their White comparators (all $p < .05$). We do not observe Hispanic–White earnings gaps in this counterfactual exercise. Net of background characteristics, Hispanic men have higher point estimates than White men at most levels of college quality, but these contrasts are not statistically significant.

Table 4. Predictions of Average Earnings from 2006 to 2014, by Race and College Quality, Men

	Model 1 (Unconditional)			Model 2 (+ Family Background and Armed Forces Qualifying Test Score)			Model 3 (+ Share of Years Reporting Zero Weeks Worked)		
	$	*p*	m ≠ w	$	*p*	m ≠ w	$	*p*	m ≠ w
Whites									
Community	51,258.15		†††	50,420.85		†††	45,842.18		†††
Non- or Less Competitive	64,916.69		†††	65,848.37		†††	66,996.79		†††
Competitive	78,077.72		†††	79,049.54		†††	77,780.03		†††
Very, Highly, or Most Competitive	95,568.64		†††	96,980.96		†††	92,694.09		†††
Blacks									
Community	30,350.55	***	†††	38,840.55	*	††	38,620.94		†††
Non- or Less Competitive	35,799.89	***		46,757.03	*		54,380.99		†††
Competitive	47,317.24	***	††	58,859.00	*	††	65,649.15		†††
Very, Highly, or Most Competitive	63,308.82	*		85,598.24		†	89,009.64		†††

(*Continued*)

Table 4. Continued

	Model 1 (Unconditional)			Model 2 (+ Family Background and Armed Forces Qualifying Test Score)			Model 3 (+ Share of Years Reporting Zero Weeks Worked)		
	$	*p*	m ≠ w	$	*p*	m ≠ w	$	*p*	m ≠ w
Hispanics									
Community	35,548.38	**		42,459.25			42,990.74		†††
Non- or Less Competitive	65,515.37		††	80,881.47		††	77,708.51		†††
Competitive	71,119.72		††	88,354.29		††	80,148.79		†††
Very, Highly, or Most Competitive	73,380.24		†††	81,829.25		†††	85,969.68		†††

Note: Asterisks indicate significance of difference in earnings relative to same-quality Whites: $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$. Crosses indicate significance of difference in earnings relative to same-quality, same-race women (see Table 5): $^{\dagger}p < .05$; $^{\dagger\dagger}p < .01$; $^{\dagger\dagger\dagger}p < .001$. Average earnings includes years of $0 if respondent also reported at least one year of ≥$1 earnings during the observation period. Model 1 predictions are for a college-goer who has completed 14 years at community college or 16 years at four-year colleges. Model 2 adds to Model 1 control variables for background characteristics and re-predicts earnings as if college-goers had the means on those variables of same-gender Whites who attended colleges of that quality. Model 3 adds to Model 2 a control variable for share of years during the observation period that the respondent reported zero weeks worked and again re-predicts earnings at the means of same-gender Whites who attended colleges of that quality. See Online Appendix Table 3 for regression coefficients.

Table 5. Predictions of Average Earnings from 2006 to 2014, by Race, Gender, and College Quality, Women

	Model 1 (Unconditional)			Model 2 (+ Family Background and Armed Forces Qualifying Test Score)			Model 3 (+ Share of Years Reporting Zero Weeks Worked)		
	$	*p*	w ≠ m	$	*p*	w ≠ m	$	*p*	w ≠ m
Whites									
Community	22,785.51		†††	22,570.30		†††	16,847.37		†††
Non- or Less Competitive	31,472.83		†††	32,230.55		†††	24,502.73		†††
Competitive	38,405.27		†††	38,762.56		†††	34,839.60		†††
Very, Highly, or Most Competitive	33,027.31		†††	32,708.16		†††	22,646.03		†††
Blacks									
Community	20,955.78		†††	26,027.53		††	18,027.87		†††
Non- or Less Competitive	32,175.80			38,988.42			25,409.79		†††
Competitive	31,441.69		††	34,802.00		††	31,327.45		†††
Very, Highly, or Most Competitive	41,313.72			46,159.59		†	34,599.69		†††
Hispanics									
Community	28,693.90	*		32,546.98	***		20,332.50	*	†††
Non- or Less Competitive	38,847.15		††	46,635.16	*	††	30,425.31		†††

(*Continued*)

Table 5. Continued

	Model 1 (Unconditional)			Model 2 (+ Family Background and Armed Forces Qualifying Test Score)			Model 3 (+ Share of Years Reporting Zero Weeks Worked)		
	$	*p*	w ≠ m	$	*p*	w ≠ m	$	*p*	w ≠ m
Competitive	40,771.97		††	45,921.56		††	37,567.70		†††
Very, Highly, or Most Competitive	25,482.06		†††	29,155.82		†††	27,980.69		†††

Note: Asterisks indicate significance of difference in earnings relative to same-quality Whites: $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$. Crosses indicate significance of difference in earnings relative to same-quality, same-race men (see Table 4): $^{\dagger}p < .05$; $^{\dagger\dagger}p < .01$; $^{\dagger\dagger\dagger}p < .001$. Average earnings includes years of $0 if respondent also reported at least one year of ≥$1 earnings during the observation period. Model 1 predictions are for a college-goer who has completed 14 years at community college or 16 years at four-year colleges. Model 2 adds to Model 1 control variables for background characteristics and re-predicts earnings as if college-goers had the means on those variables of same-gender Whites who attended colleges of that quality. Model 3 adds to Model 2 a control variable for share of years during the observation period that the respondent reported zero weeks worked and again re-predicts earnings at the means of same-gender Whites who attended colleges of that quality. See Online Appendix Table 4 for regression coefficients.

In Model 3, we run this counterfactual exercise once more, this time additionally controlling for racial differences within quality levels in labor force participation from 2006 to 2014. We add to Model 2 a control for the share of years a respondent reported zero weeks worked (see Figure 1). We then re-predict earnings at White men's values for background characteristics and labor force participation, at a given level of quality. Adjusting for differential labor force participation reduces Black–White earnings gaps to non-significance, and Hispanic–White earnings gaps remain nonsignificant as well. As such, only by controlling for family background, academic ability, *and* labor force participation (all of which heavily advantage White men) can we produce an estimate for Black men that is comparable to that of White men.

Women

Table 5 shows parallel results for women. Based on the focal comparison in Model 1, Black women saw the largest returns to college quality. Black women's predicted earnings increased by almost 100 percent across the range of college quality, from less than $21,000 among community college attendees to about $41,000 among those who attended Very, Highly, or Most Competitive colleges. In contrast, Hispanic women's predicted earnings decrease slightly across the range of college quality, from about $29,000 among community college attendees to about $25,000 among those who attended Very, Highly, or Most Competitive colleges. However, this decrease masks an increase of over one-third across the two-year/four-year college margin and another slight increase among Competitive college-goers, where Hispanic women's predicted earnings peak at nearly $41,000. For White women, earnings increase by approximately 45 percent across the range of college quality, peaking at about $38,000 among women who attended Competitive colleges before decreasing by approximately 15 percent among those who attended Very, Highly, or Most Competitive colleges. These decreases at the highest levels of college quality may be surprising, considering that women's earnings should theoretically be highest among those who attended the highest quality colleges; we return to this important observation in the Discussion.

Model 2 again predicts earnings as if Black, Hispanic, and White women had the same family background and AFQT scores *as White women who attended colleges at that level of quality*, effectively recovering earnings predictions for White women and facilitating between-race comparisons. With background characteristics equal, Hispanic women have significantly higher predicted earnings than White women in the lower portions of the quality distribution: approximately $33,000 vs. $23,000 for community colleges ($p < .001$) and approximately $47,000 vs. $32,000 for Non- or Less Competitive colleges ($p < .05$). None of the Black–White earnings differentials are significant, although the point estimates indicate that Black women who attended Very, Highly, or Most Competitive colleges have 40 percent higher predicted earnings than White women who attended comparable colleges. Black women remain the only group of women whose predicted earnings increase across the margin of Competitive and Very, Highly, or Most Competitive colleges.

Model 3 again adjusts for labor force participation from 2006 to 2014. Recall from Figure 1 that these patterns indicate racial parity or Black and Hispanic women's advantages for all levels of college quality except the very highest. The results in this model indicate that Hispanic women's significant advantages in the lower portion of the quality distribution are partly attributable to their high rates of labor force participation. The net advantages are both reduced between 20 and 25 percent, and the advantage among Non- or Less Competitive college attendees is reduced to non-significance. Yet, racial differences are otherwise null for women, both unconditionally and after controlling for an array of sociodemographic characteristics.

Tables 4 and 5 also provide tests of gender differences within race-quality groups. Looking at these comparisons in Model 1, White men's predicted earnings are higher than White women's at all quality levels, and the same is the case among Hispanics with the exception of community colleges. Blacks' patterns of gender differences within quality levels are more dissimilar: Black men's predicted earnings are only significantly higher than Black women's among community college-goers (about $30,000 for men vs. about $21,000 for women, $p < .001$) and Competitive colleges (about $47,000 for men vs. about $31,000 for women, $p < .01$). We attribute these trends to distinct disadvantages that college-educated Black men face in the labor market, in conjunction with Black women's relative successes, both of which we return to in the Discussion next.

Discussion and Conclusion

This article has investigated the relationships between race, gender, and college quality in shaping labor force participation and earnings. We used data from the NLSY-79 Cohort, covering those born in the second half of the Baby Boom, as well as college quality data from Barron's Admissions Competitiveness Index. The findings from this study have multiple implications for research on access and economic returns to higher education in the United States.

We found that Black and Hispanic college-goers in this cohort attended colleges of significantly lower quality than same-gender Whites. These differences generally were larger across the distribution of college quality for Blacks than for Hispanics. However, adjusting for college-goers' family backgrounds and AFQT scores (a proxy measure of educational opportunity and preparation; Neal and Johnson 1996) reduced Hispanic–White differences to insignificance and uncovered significant net Black advantages, particularly among men. These patterns are consistent with "compensatory sponsorship" practices that universities used around the time our respondents entered college. These practices were more likely to favor Blacks over comparable Whites in this time period, before also favoring Hispanics in later decades (Grodsky 2007). Building on this work, our intersectional findings suggest that Black men benefitted from such preferences across the distribution of college quality, whereas Black women benefitted only at the highest quality institutions. Yet, we should also underscore the unconditional models for these outcomes, which demonstrate the large and

persistent advantages that Whites—and especially White men—enjoyed relative to their Black and Hispanic peers.

Our intersectional focus also led us to consider the relationships between race, gender, college quality, and labor force participation. Here, we found that Black men often had substantially higher rates of labor force nonparticipation than White and Hispanic men who attended colleges of the same quality. Research on race and men's exposure to labor market exclusion often investigates the economic and psychological consequences of such patterns for men with low education and skills (Wilson 1987; Young 2004). Future research should consider labor force nonparticipation among college-educated men—a group that has received perhaps less attention in the literature. Among women, labor force attachment by college quality was less consistently patterned by race, which may also warrant further research.

We advanced an intricate set of results for race and gender differences in the returns to college quality. Assessed within race-gender groups (i.e., Black men who attended community colleges vs. Black men who attended Very, Highly, or Most Competitive colleges), Black and Hispanic men experienced greater returns to college quality than White men, and Black women experienced greater returns than both White and Hispanic women.

However, Hispanic and (particularly) Black men often reported significantly lower earnings than White men who attended colleges of the same quality. Black–White differences of this type often persisted in analyses that assigned Black men the same family background and AFQT scores of White men who attended same-quality colleges. Notably, we found these significant net Black disadvantages in the non-elite tiers of college quality that previous research has tended to overlook. Adjusting for differences in labor force participation largely accounted for these differences. We stress, however, that this full model represents a "societal counterfactual" (Merolla 2018; Merolla and Jackson 2019) that is a far cry from observed trends in the unconditional model.

For Hispanic women, we found net advantages in these comparisons in the lower part of the college quality distribution, and their advantage among community college attendees persisted across all model specifications. Future research should further assess intersectional variation among community colleges, which are important for understanding higher education inequality in comparison to other types of institutions, as well as in their own right (Rosenbaum 2001).

Many previous studies that have used an intersectional and life course framework have focused on a single outcome (e.g., self-rated health). These studies have assessed how intersectional disparities on this outcome vary with age, and the extent to which these disparities persist net of controls for racial and gender variation in access to key predictors (e.g., Brown et al. 2016). Considering intersectional patterns across two closely related life course institutions—in our case, education and the labor market (e.g., Du Bois 1932; Bol et al. 2019)—has revealed unconditional and net intersectional disparities that vary substantially across these two institutions. Net comparisons of Black and White men are

particularly striking, as they fully reversed directions across institutions—to Black men's advantage in education, but to White men's advantage in the labor market. The labor market patterns we have uncovered are perhaps more consequential, as they demonstrate that "compensatory sponsorship" and similar practices only go so far in advancing the status of Black and Hispanic college graduates.

An intersectional and life course framework also spurs us to consider implications for inequality across what life course theorists refer to as the "linked lives" of multiple generations (Elder 1994). As they compile year over year, Black–White earnings gaps among men who attended colleges of the same quality may form part of the explanation for Black–White differences in wealth accumulation between those with comparable educational credentials (Addo, Houle, and Simon 2016; Meschede et al. 2017), if, in each year, they leave college-educated Black men with less money to save and invest compared to their White men counterparts.

Although our study focused primarily on Black–White and Hispanic–White differences within gender groups, our intersectional analyses of the earnings returns to college quality also revealed particularly striking differences between men and women. We find, for example, that White and Hispanic women's earnings tended to decrease markedly at the highest level of college quality. These patterns are deserving of future research. We speculate that they are due to racial differences in assortative mating among the college-educated (Schwartz and Mare 2005), brought about by gendered patterning of educational attainment among Whites, Blacks, and Hispanics (DiPrete and Buchmann 2013). Assuming, for the sake of example, perfect sorting by race, highly educated White and Hispanic women may be partnering with highly educated (and high-earning) White and Hispanic men, whereas the same types of pairings have less additional economic benefit for Black women, due to the marginalization faced by Black men. Future research can assess whether this is the case, using data on household earnings, rather than just individual earnings, to gain a better understanding of how women's college quality is associated with earnings within (heterosexual) couples.

This study's contributions to the literature should also be considered in light of its limitations. We have focused on college quality at the expense of a detailed analysis of other aspects of the higher education experiences, some of which constitute dimensions of horizontal stratification in higher education. For one, we have not considered the role of college major (Davies and Guppy 1997; Quadlin 2017). Representation in lucrative majors, such as STEM fields, remains stratified by race, gender, and their intersections (Riegle-Crumb and King 2010), and college major likely influences labor force participation and earnings. Future research also can investigate race and gender differences in returns to college quality for other social goods, such as health (Fletcher and Frisvold 2014). We have also not considered experiences with race-gender inequality, discrimination, and stereotyping on campus (e.g., Winkle-Wagner 2009) and in the labor market (e.g., Gaddis 2015; Quadlin 2018). Future research should investigate these factors and the extent to which they contribute to the racialized and gendered educational and labor market inequalities we have demonstrated here.

Notes

1. The original sample was comprised of three subsamples: a representative sample of the noninstitutionalized civilian youth population ($n = 6{,}111$); an oversample of Blacks, Hispanics, and economically disadvantaged non-Blacks/non-Hispanics ($n = 5{,}295$); and youth enlisted in the military as of September 1978 ($n = 1{,}280$).
2. A seventh category of competitiveness is "Special" colleges, which primarily comprises colleges that offer specialized programs in music and fine arts. It is more difficult to determine the quality of Special colleges because admission is often determined by an audition or portfolio in addition to the grades and test scores that are used to classify other colleges in the sample (see also Smith, Pender, and Howell 2013). This category includes institutions that range from local art and music schools, to world-renowned institutions such as Juilliard. We sorted these colleges, which make up a very small share of enrollments, in the Non-Competitive category.
3. When we analyze these categories of college quality separately, results are consistent with those shown, but with smaller cell sizes.
4. Results are substantively unchanged if we use the first college attended or highest quality college attended as the measure of college quality.
5. In 1980, 94 percent of NLSY-79 base year respondents ($N = 11{,}914$) took the *Armed Services Vocational Aptitude Battery* (ASVAB), which yields the AFQT score. The ASVAB measured knowledge and ability in: general science, arithmetic reasoning, word knowledge, paragraph comprehension, numerical operations, coding speed, auto and shop information, mathematics knowledge, mechanical comprehension, and electronics information (US Department of Defense 1982). The NLSY-79 contains percentile ranks, controlling for age, of respondents' AFQT scores, which we use in our models.
6. As a robustness check, we reran results presented in Tables 2 and 3 on samples of only those who were 17 years or younger in the NLSY79's base year of 1979. This ensures that any racial differences in college quality, net of AFQT score and other covariates, are not driven by those who had completed one or more years of college prior to taking the AFQT. Results are substantively similar to those in the main text and can be found in Online Appendix Tables 1 (men) and 2 (women).

Supplementary Material

Supplementary material is available at *Social Forces* online, http://sf.oxfordjournals.org/.

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