

Is Higher Education the Great Equalizer? Examining Early Occupational Attainment by Race, Class, and Gender

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Abstract

This study examines early occupational outcomes to evaluate the degree to which higher education acts as an equalizer in status attainment. Using the NELS dataset, this paper examines the effects of education, aspirations, background socioeconomic status, race, class, and gender on early occupational attainment. The results indicate that after controlling for background characteristics, early occupational opportunity still differs by race and gender, suggesting the importance of considering these categories in enrollment management decisions. A college degree especially benefits males and Black females, yet college educated women and Black males still face early occupational status inequities. As expected, aspirations were also found to impact early occupational attainment.

“Education, then, beyond all other devices of human origin, is the great equalizer of the conditions of men,—the balance-wheel of the social machinery.”

— Horace Mann, *Advocate of Public Education*

Introduction

Higher education is often considered the great equalizer in the United States. Early status attainment literature (Blau & Duncan, 1967) indicated that higher education mattered with regard to intergenerational status attainment and social mobility. That is, higher education could help mitigate the potential disadvantages of one's background, potentially linking enrollment management decisions to social equity issues more generally—those who are able to gain access to and persist through college will achieve greater social mobility.

Subsequent studies underscored the importance of higher education in particular as the great equalizer of social inequality and social mobility (Kerckhof, 1995; Knottnerus, 1987; Sewell & Hauser, 1972; Sewell & Haller, 1969). The assumption, therefore, is that if people are provided the opportunity to obtain higher education, the negative effects of race, class, and gender status can be lessened, if not mitigated altogether.

Is higher education the great equalizer, as popular assumptions indicate? Or does inequity along racial, gender, and class lines define early occupational attainment, even after controlling for aspirations and educational attainment? Does a four-year college degree give inequitable advantages to some, or does it mitigate occupational inequality? These research questions guided this study.

Literature Review and Theoretical Framework

Status Attainment and Social Mobility

Why is higher education important? The status attainment literature, initiated in sociology, began in an attempt to understand the relationship between educational and occupational attainment. In the early days of status attainment research, Blau and Duncan (1967) sought to understand intergenerational mobility between fathers and sons. Status attainment research established education as a central aspect of status reproduction; the educational attainment of fathers was a good predictor of the educational attainment of sons (Blau & Duncan, 1967).

Taking a life cycle approach (Warren, Sheridan, & Hauser, 2002), later status attainment literature attempted to understand the role of education in determining occupational status and social mobility through incremental status hierarchies (Buchmann & Hannum, 2001). Other studies in the area of status attainment expanded this line of research to include females, relationships with significant others, and social-psychological variables like aspirations and mental ability (Blau & Kah, 1996; Kerckhoff, 1995; Knottnerus, 1987; Sewell & Hauser, 1972; Warren, Sheridan, & Hauser, 2002).

While some suggest that the status attainment model asserts an image of society that is fluid and stable (Knottnerus, 1987), status attainment models have historically been under fire for being functionalist (Horan, 1978), indicating that social inequality serves a particular function in society. However, the examination of statuses and the way in which one's location in the social strata influence life chances may in fact provide insight into existing inequality in education and society more generally. This examination of statuses does not have to be functionalist. Rather, one's interpretation of findings related to social strata could be an indictment of the social structure itself. In addition, this view of statuses may provide insights into ways that initial inequalities of social background can be mitigated through education.

If the status attainment literature indicates that higher education influences occupational attainment, is higher education *more* influential for some students? That is, could higher education be a *greater* equalizer for some students, providing a rationale for explicitly recruiting particular groups of students in an effort to mitigate social inequality? For example, could higher education be more important to those groups, such as women and people of color, who have been historically disadvantaged?

The Need for Credentials

In sociological theory, Randall Collins (1971) asserted a credentialing theory to explain the perpetuation of social stratification. Collins argued that as those who have been historically disadvantaged gain access to scarce resources (i.e., education), the credentials needed for particular occupations will increase. Ultimately, credentialing is linked to status threat in Collins' theory: those with high status fear the loss of status, and this facilitates a process where the prerequisites for status attainment change.

Thus, while one may have needed a high school diploma for a particular profession at one time, with the credentialing increase, one now needs a college degree or even an advanced degree to do the same jobs (Carey, 2004). Studies over the past few decades have demonstrated this credentialing effect (Cao, Stromsdorfer, & Weeks, 1996; Grubb, 1993; Labaree, 1999). In this way,

stratification continues despite the appearance of a meritocratic process. The credentialing increase is maintained because most will not question what outwardly appears to be fair. This study attempts to ascertain if social stratification is perpetuated in the credentialing process. That is, do educational credentials mean the same thing to all people, or do some benefit more from educational credentials than others?

Aspirations and Occupational Attainment

Studies regarding aspirations indicate different aspirations based on race (Bigler, Averhart, & Liben, 2003; Goyette & Xie, 1999) and gender (Shu & Marini, 1998). For example, some research indicates that African American students in higher education have higher aspirations than White students (Astin, 1990; Weiler, 1993). Goyette and Xie (1999), using the National Educational Longitudinal Study (NELS) data, found that Asian Americans have higher educational expectations than Whites do. Hanson (1994), using the High School and Beyond dataset, found that socioeconomic status had a significant impact on the development of aspirations—the students with higher socioeconomic status had higher aspirations.

Some discrepancies in occupational aspirations can be attributed to perceptions about appropriate social roles. In an interview study of primary school students' occupational aspirations, the findings indicated that students' interests were impacted by racial segregation in jobs. In other words, racial-minority students aspired to lower status jobs due to the influence of racial stereotyping on occupational aspirations (Bigler, Averhart, & Liben, 2003).

Some studies indicate women have lower aspirations than men do or that they lower their aspirations to make them “gender appropriate” (Kenkel & Gage, 1983). Ridgeway (1997), in an exploration of occupational gender inequality, asserted that taken-for-granted interactional processes within the workplace influence aspirations. These interactions result in men and women judging the opportunities available to them differently.

The Outcomes of Higher Education: Differential Rewards for Women and Minorities

Occupational opportunity after higher education is often stratified by race and gender. Laura Perna (2003) found disparities in earnings between women and men and between racial groups in her study using the High School and Beyond dataset. Yet earnings across the board did increase with even some postsecondary education, underscoring the importance of education in socioeconomic mobility (Perna, 2003). In *Faded Dreams* (1995), Martin Carnoy used over fifty years of data on education, income, and jobs in finding that Blacks still faced unequal economic rewards for education. Using the NELS dataset, Laura Perna (2005) found the economic payoffs of education such as higher average incomes, greater likelihood of having health insurance, and lower likelihood of receiving public assistance to be generally greater for women. In addition, she found that Blacks received greater “payoff” from postsecondary education than Whites in terms of health insurance coverage, job satisfaction, and perceived employment benefits.

Women have also experienced differential rewards for education, and they continue to be paid less for the same jobs than their male counterparts (England, 1992; Perna, 2003). Sociologists like Paula England (1992) have studied the “comparable worth” of women, indicating that women on average have been treated as if they were worth less in the occupational structure. Thus, as Collins' (1971) credentialing theory suggests, women often need more education to obtain similar positions to men.

Research Method

The purpose of this study was to explore potential inequities in early occupational attainment. Two specific questions gave focus to the study: First, does inequity along racial, gender, and class lines exist within early occupational attainment, even after controlling for educational attainment? Secondly, does a four-year college degree give inequitable advantages to some, or does it mitigate occupational inequality?

Data and Variables

Data for this study came from the National Educational Longitudinal Study (NELS), available through the National Center for Education Statistics (NCES). NELS surveys followed students from the high school class of 1992 for twelve years, from 1988 to 2000. At the time of the final follow-up survey, most participants were 26 years old and had completed their planned postsecondary education. This was an ideal time to identify early occupational attainment and to explore potential inequities.

During the final NELS survey, participants were asked to report their current occupation. NCES coded the responses into nineteen occupational categories, which we then stratified into three levels: high status, middle status, and low status. Participants identifying as “Homemakers,” “Owners,” “Not Working,” or “Don't Know,” were deleted from the study due to very small or nonexistent sample sizes.

We stratified early occupational attainment into three levels. Our rationale for this stratification was as follows: First, the trilevel class status emulates social norms, assuming that there is a low, middle, and upper class. While there are arguably sublevels between these classes/statuses, there is still a predominant perception that three classes exist in the U.S. and many research studies are modeled after a triclass structure (see Bell, 2003; Brantlinger, 2003). Secondly, other status attainment models have used this trilevel model (for examples, see Blau & Kah, 1996; Kerckhoff, 1995; Knottnerus, 1987; Sewell & Hauser, 1972).

In accordance with a three-class structure, we categorized early occupational attainment as follows:

1. Low Status: craftsman, operative, laborer, clerical, service, farmer
2. Middle Status: manager, school teacher, protective service, military, sales/purchasing, and other
3. High Status: professional PhD., professional non-PhD., M.D., J.D., and technical/computer

Status was determined relative to the annual income available in the profession and the level of schooling required to gain entry into the profession. In addition, the social networks and potential for cultural capital¹ within particular jobs was considered. The three levels for early occupational status (low, middle, and high) represent this study's outcome variable.

Independent variables for race, gender, background income, occupational aspirations, and educational attainment were included in the model. We chose these variables because of their significance in existing status attainment (see Kerckhoff, 1995; Knottnerus, 1987; Sewell & Haller, 1969) and social mobility literature (see Buchmann & Hannum, 2001):

1. Race: Students self-identified their race and ethnicity. We created dichotomous variables for those identifying as “Black,” “Hispanic,” or “Asian.” Caucasian students represented the comparison group, and Native American and Alaskan Native respondents were deleted due to small sample size.
2. Gender: A gender-dichotomous variable was created with a value of “1” when the respondent identified as a female, otherwise the value of “0” was assigned.
3. Background Income: A continuous variable identifying income in thousands of dollars was created based on parental reporting from the NELS parent survey.
4. Occupational Aspirations: Respondents identified their specific occupational aspirations in the baseline and first three follow-up surveys. We coded aspirations like the outcome variable, stratifying the aspirations into “high,” “mid,” and “low” status categories. We used occupational aspirations only from the second and third follow-up surveys (when the respondents were approximately 18 and 20 years old) because we deemed these the most reliable. We hypothesize that at 18 and 20 years of age, occupational hopes and plans are more salient in an individual's life and shaped more directly by perceived constraints and opportunities.

¹Cultural capital is defined here as a set of preferences, tastes, or values that work as a form of “capital” in social settings such as education or the workplace. Bourdieu (1987) first developed this concept.

5. Educational Attainment: A continuous variable was created to designate how much education an individual had attained by the last follow-up survey (most respondents were 26 years old). NCES coded respondents' education level as "No Postsecondary Education," "Some College," "2-yr. Degree," etc. We recoded these categories to reflect approximate years of schooling. The following years of schooling were assigned to the NCES categories:

NCES Categories	Years of Schooling
No PSE	12
Some College	13
License/Certificate	13
2-yr. Degree	14
4-yr. Degree	16
Master's Degree	18
Doctoral Degree	20

Cases with missing values in the race, gender, background income, education, and/or outcome variables were excluded from the analysis. The exclusions reduced the sample from 12,144 to 9,866 cases. The aspiration variables also contained a number of missing values. Because aspiration variables were only used in one multinomial logit model, cases with missing aspirations values were included in the general study and excluded only for the aforementioned model. When deleting cases with missing aspirations values, the sample decreased from 9,866 to 7,788. Tables 1 (including the full sample) and 2 (including only college graduates) report the descriptive statistics for this study.

TABLE 1 | Statistics for Early Occupational Attainment at Age 26

Variable	Mean	Standard Deviation	Description
Outcome	1.961	0.849	1 = low status; 2 = mid status; 3 = high status
Asian	6.8%	0.252	1 = Asian, otherwise 0
Hispanic	12.4%	0.330	1 = Hispanic, otherwise 0
Black	9.1%	0.288	1 = Black, otherwise 0
Female	52.5%	0.499	1 = Female, otherwise 0
Income	\$41,014	35.886	Income in thousands of dollars
Mid-status aspirations, 18	35.4%	0.478	1 = Mid-status aspirations at age 18
High-status aspirations, 18	53.2%	0.499	1 = High-status aspirations at age 18
Mid-status aspirations, 20	33.6%	0.472	1 = Mid-status aspirations at age 20
Mid-status aspirations, 20	48.2%	0.500	1 = High-status aspirations at age 20
Education	14.035	1.784	Years of education

Source: NELS 88:2000. N = 9866.

Models and Methods

Because our dependent variable, early occupational status, consisted of three values (high-, middle-, and low-status occupations), this study specified a multinomial logistic regression model. Multinomial logistic regression is appropriate when the dependent variable takes on more than two outcomes and the outcomes have no natural ordering (Kennedy, 1998; Long, 1997).

As indicated previously, our analysis focused on two key research questions that were evaluated using two distinct models. In the first model, we explored whether race and gender inequities related to early occupational status existed, even after controlling for traditional status attainment predictors. The first multinomial logistic regression model regressed early occupational status on race, gender, income, aspirations, and educational attainment.

$$Y (\text{Occ. Outcomes}) = \beta_0 + \beta_1 (\text{Black}) + \beta_2 (\text{Hispanic}) + \beta_3 (\text{Asian}) + \beta_4 (\text{Female}) + \beta_5 (\text{Income}) + \beta_6 (\text{MidAsp18}) + \beta_7 (\text{HighAsp18}) + \beta_8 (\text{MidAsp20}) + \beta_9 (\text{HighAsp20}) + \beta_{10} (\text{Educ}) + E$$

In our second model, we explored the question of whether a four-year postsecondary degree mitigated early occupational inequities. The second multinomial regression model regressed early occupational status on race and gender variables and their interactive effects. For this second model, the sample was limited to only those who had earned a four-year degree by the time of the final follow-up survey.

$$Y (\text{Occ. Outcomes}) = \beta_0 + \beta_1 (\text{Black}) + \beta_2 (\text{Hispanic}) + \beta_3 (\text{Asian}) + \beta_4 (\text{Female}) + \beta_5 (\text{Income}) + \beta_6 (\text{Black X Female}) + \beta_7 (\text{Hispanic X Female}) + \beta_8 (\text{Asian X Female}) + E$$

Descriptive statistics for the second model are included in Table 2.

TABLE 2 | Descriptive Statistics for Early Occupational Attainment of College Graduates

Variable	Mean	Standard Deviation	Description
Outcome	2.425	0.681	1 = low status; 2 = mid status; 3 = high status
Black	6.3%	0.243	1 = Black, otherwise 0
Hispanic	6.4%	0.245	1 = Hispanic, otherwise 0
Asian	11.1%	0.314	1 = Asian, otherwise 0
Female	55.2%	0.497	1 = Female, otherwise 0
Income	\$58,800	45.05	Income in thousands of dollars
Black female	3.9%	0.194	1 = Black female, otherwise 0
Hispanic female	3.8%	0.191	1 = Hispanic female, otherwise 0
Asian female	6.1%	0.239	1 = Asian female, otherwise 0

Source: NELS 88:2000. N = 3490.

Limitations

We cannot emphasize strongly enough that the results of this study regard *early* occupational attainment. The respondents were approximately 26 years old at the time of the survey. Occupational status could change significantly as these respondents work into their thirties, forties, and fifties.

Another limitation of this study is that the models did not account for intergenerational wealth. For example, two people may have the same occupational status, but one may have more inherited or privately owned wealth. Taking an intergenerational wealth perspective, for instance, Oliver and Shapiro (1997) compared the private wealth accumulation of African American and White people in the United States, finding that private wealth accumulation directly affected future-generational status. Further research needs to account for the impact of inherited and intergenerational wealth in considerations of occupational and socioeconomic status.

While additional research on mid- and late-career status is merited, this study illuminates important aspects of early occupational attainment. Of particular interest is the effect of a college degree on early occupational attainment.

Findings

Education and Greater Opportunity

If education, aspirations, and family income, as important predictors of status attainment, really mitigate social inequity, we would expect those predictors to explain the variance in occupational attainment between race–gender groups. At the outset, we introduced a multinomial logit model that regressed early occupational status on controls for race, gender, family income, aspirations, and educational attainment (see Table 3).

Expectedly, the family income, aspirations, and education variables were all statistically significant predictors of early occupational status; however, variance remained between some of the race–gender groups. Females and Asians (of both genders) were more likely to attain a high-status rather than a low-status position, at least early in their careers. On the other hand, African

Americans were more likely than White individuals were to hold low-status positions, compared to middle-status occupations (significant at the .10 level).

TABLE 3 | The Impact of Background Characteristics, Four-year Degrees, and Aspirations on Occupational Outcomes

	High v. Low Status		Mid v. Low Status	
	<i>B</i> (St. Dev.)		<i>B</i> (St. Dev.)	
Black	-0.143 (0.108)		-0.205 0.112	+
Hispanic	0.130 (0.094)		0.018 0.096	
Asian	0.473 (0.129)	***	0.068 0.139	
Female	0.204 (0.061)	***	0.012 0.062	
Income	0.004 (0.001)	***	0.004 0.001	***
MS Asp 18	0.122 (0.109)		0.360 0.107	***
HS Asp 18	0.528 (0.106)	***	0.327 0.108	**
MS Asp 20	0.442 (0.098)	***	1.049 0.096	***
HS Asp 20	0.822 (0.094)	***	0.590 0.098	***
Education	0.595 (0.022)	***	0.480	***
Constant	-9.422 (0.300)	***	-7.892 0.303	***

Source: NELS 88:2000. N = 7,788

*** p < .001, ** p < .01, * p < .05, + p < .10

The perpetuation of variance in early occupational opportunity, notwithstanding the inclusion of important occupational controls, suggested the presence of other social forces that privileged some while disadvantaging others. Importantly, higher levels of education were associated with a greater

likelihood of high- and middle-status occupations. Such a finding begins to justify the claim that education mitigates inequity while equalizing opportunity. To further explore the impact of postsecondary education on early occupational status, we ran another multinomial logit model, but limited the sample to only those with a four-year college degree.

Higher Education as an Equalizer

College graduates represent an important population for analyzing status attainment. In aggregate, these are the most prepared to take middle- and high-status positions, and the latent social contract assumes they will receive occupational privilege as a premium for their collegiate efforts. One might expect minimal variance within this population regarding occupational opportunity. The results from the second model, however, suggested that even among college graduates, early occupational attainment was scarred with inequality (Table 4).

Female graduates were less likely than males to hold a high-status, compared to a middle-status, position. Since model 1 indicated a female advantage in early occupational status, this finding of disadvantage was interesting. Indeed, this study suggests the female privilege associated with early occupational status exists for those with little or no postsecondary education. Among the college educated, males continue to be privileged.

Like the previous model, Asian Americans were again advantaged in the likelihood of attaining a high-status occupation, while Black graduates were less likely to hold a high-status position (significant at the .10 level).

The noteworthy exception to these findings was the accomplishment of African American women. Black female graduates did not appear to experience the same disadvantage as their White female peers, nor did they experience the disadvantage associated with being African American. That higher education plays a significant role in the life chances and early occupational attainment of Black females is a phenomenon requiring future discussion and research.

TABLE 4 | Early Occupational Attainment of Four-year Graduates—
High- v. Mid-Status Attainment

	<i>B</i> (St. Dev.)	e^{Ab} or $e^{Ab} \text{ stdX}$
Black	-0.459+ (.241)	0.632
Hispanic	-0.028 (.233)	0.973
Asian	0.666*** (.194)	1.946
Female	-0.295*** (.085)	0.744
Income	0.000 (.000)	1.005
Black x Female	0.845** (.315)	2.329
Hispanic x Female	-0.070 (.303)	0.933
Asian x Female	-0.192 (.252)	0.825
Constant	0.509*** (.082)	
LR Chi sq	58.91***	

Source: NELS 88:2000. N = 3,490

Note: *** p < .001, ** p < .01, * p < .05, + p < .10;

e^{Ab} and $e^{Ab} \text{ stdX}$ refer to the factor change in the odds for a unit or standard deviation increase

Discussion and Implications

Two findings of this study merit further discussion:

1. While women in general appeared to enjoy advantages in early occupational opportunity, college-educated women were disadvantaged compared to similarly educated male peers.
2. College-educated Black women appear advantaged in terms of early occupational opportunity compared to Black men and other women.

In terms of early occupational opportunity, a college education seems to provide mixed returns. One key finding from this study is that different rewards for education are distributed based on race and gender (Table 4). This type of educational inequity may be rooted in issues of college access, college choice, retention, and/or choice of college major—all issues that are often related to enrollment management issues and decision making by administrators working in the area of enrollment management. Alternatively, the inequality in early occupational attainment might be linked to historical gender and racial inequalities in society (Jackman, 1994; Omi & Winant, 1994).

Clearly, our findings raise additional questions: To what degree do minority college graduates “choose” their early occupations and what motivates their choices? To what degree are obstacles to high-status jobs perceived? What impact does college major choice have on early occupational status? Does college advising or career counseling exacerbate or mitigate the inequity? These questions could provide a charge for future studies.

While women in general appear to be somewhat advantaged in terms of early occupational opportunity, college educated women actually appear disadvantaged when compared to their similarly educated male peers. This apparent contradiction could indicate that in fact there is much more work to be done regarding gender parity in the workplace, especially in high-status occupations. This finding also corroborates the “credentialing” effect outlined by Collins (1971). That is, women may need more education to maintain or enjoy upward mobility in their status than men. Perhaps females with a college degree are less likely to obtain high-status occupations because of choice of major, home demands, or the existence of a glass ceiling for women (Maume, 1999; Reskin & Padavic, 1994).

In addition, in the first multinomial logit model, aspirations were significant and positive indicators of occupational attainment for females. This could be an important indicator that the way women are treated during earlier levels of education matters. Indeed, if a female student is discouraged, tracked, or encounters a chilly educational climate related to gender, this could impact her aspirations. According to these findings, this could then in turn influence her occupational attainment.

College educated Black females were the one group of females that did not appear to face disadvantages in early occupational opportunity. In other words, according to these findings, education did mitigate the potential disadvantage of race for Black women. One potential reason for this finding could be the attachment to the labor market for black females. Because there are significant numbers of Black female heads-of-household, black females are potentially more invested in the labor market than females from other racial groups. Further research regarding attachment to the labor market for females needs to be conducted to continue to better understand occupational differences between females based on race (Tienda & Glass, 1985).

Another possible explanation for this Black female opportunity is that affirmative action policies may help to mitigate racial inequalities. Perhaps more than other traditionally disadvantaged groups, Black women have aligned their educational and occupational choices with the opportunities available through affirmative action policies. Further research is also needed to explore this possibility.

Conclusion

These findings indicate the importance of facilitating access and success for students of color and women. The finding that women and Blacks in particular will achieve lower status occupational opportunity for an equal level of education suggests that higher education is that much more important for these groups to achieve parity in the workplace and in society generally. As administrators make enrollment management decisions, these findings suggest that women and Blacks still face inequities that need to be remedied. This poses a particular challenge for those in enrollment management given the recent trend toward banning affirmative action (Royce, 2008) and other policies aimed at achieving parity (Sackett, Schmitt, Ellingson, & Kabin, 2001).²

Is higher education the great equalizer? Clearly, a college education generally leads to greater employment opportunities and a greater quality of life; yet differential rewards for the same educational attainment still exist. The fact that college education for Black males translates into lower status occupational

²For further information on recent affirmative action debates, see: Gasman & Vultaggio, 2008.

opportunities than for their White colleagues suggests deep-seeded social inequity at some level of our society.

Because of the obstacles they encounter in pursuit of a college degree, one could argue that many African American men who complete a four-year degree are extraordinary in a number of latent characteristics. The fact that they have persisted into the pool of college graduates, against difficult odds, suggests a variety of undetermined traits. For example, they may be highly motivated, hard-working, and/or exceptionally talented individuals. That these extraordinary students are still less likely than their White and Asian colleagues to obtain high-status jobs is especially troubling. It is imperative we continue to probe how social-structural issues impact differential outcomes from education or educational premiums.

Is higher education the great equalizer? Clearly, a college education generally leads to greater employment opportunities and a greater quality of life; yet differential rewards for the same educational attainment still exist.

While this research indicates that education does in fact aid in the fight for equality, not everyone reaps equal rewards from postsecondary attainment. The effects of a college degree still provide more privilege to some. Most troubling is the indication that these unequal rewards are linked to racialized and gendered categories. While education may work as an equalizer in some ways, we must identify why occupational inequities persist even after college.

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