Trends in Black-White Differences in Educational Expectations: 1980–92

Stephen L. Morgan
Harvard University

This article evaluates changes in social background, resource constraints, and labor market incentives as complementary explanations for differences in the educational expectations of two cohorts of Black and White high school students. Although improvement in social background can account for part of the aggregate between-cohort increase in expectations, relative direct costs and labor market incentives are necessary to explain the remaining increase, why Black students' adjusted expectations were higher than White students', why White students' expectations increased more than did Black students', and why the expectations of Black students of both cohorts were more likely to increase between the sophomore and senior years of high school.

Status-attainment theory (Sewell, Haller, and Ohlendorf 1970; Sewell, Haller, and Portes 1969) predicts that educational attainment varies with the status-specific values and encouragement that significant others transmit to students in the process of socialization. Resource-constraint theory (Kerckhoff 1974, 1976, 1977) predicts that educational attainment varies with perceptions of opportunity structures, evaluated according to relative direct costs. Thus, for status-attainment theory, the formation of an idealistic value orientation toward education—an educational aspiration—is an important intervening process in educational attainment, and for resource-constraint theory, the formation of a realistic educational plan—an educational expectation—is the important intervening process.

Drawing on these complementary theories, Hauser and Anderson (1991) considered whether changes in cohorts' aspirations and expectations explain the decreasing rates of college entry for Blacks from the mid-1970s to the mid-1980s. They found that both Whites' and Blacks' aspirations and expectations increased and thus that neither aspirations nor expectations could account for the relative decline in the entry of Blacks to college during that period.

But why did aspirations and expectations increase? In line with status-attainment theory, Hauser and Anderson argued that increases in the cohorts' aspirations and expectations were a result of improvements in family background. This explanation implies that since the socioeconomic status (SES) of Blacks increased more than that of Whites during that period, Blacks' observed aspirations and expectations should have increased relative to those of Whites. Instead, Hauser and Anderson found that the observed aspirations of Blacks and Whites increased by the same amount, while the observed expectations of Whites increased more than those of Blacks. Thus, when they controlled for improvement in social background, they were able to explain the increase in aspirations and expectations only for Blacks.

In this article, I examine changes in Black-White differences in educational expectations from 1980 to 1992. In combination, status-attainment explanations that emphasize differences in social background and resource-constraint explanations that stress the importance of relative direct costs can account for a

large portion of the variation in educational expectations. However, beyond these explanations remains an unexplained residual that parallels trends in labor market incentives. As a result, I argue that labor market incentives are a necessary component of any complete explanation of these changes and urge further research in this area.

According to human capital theory (Becker 1964; Mincer 1974; Schultz 1961), educational attainment is the outcome of individual choice informed by perceptions of the future wage returns on investments in education. Before they choose, individuals make plans, and their expectations reflect these plans. The theory suggests three hypotheses: (1) students increase their educational expectations when rates of return increase, (2) groups with the highest rates of return have the highest educational expectations, and (3) individuals from groups with the highest rates of return are more likely to increase their expectations as they approach the possibility of entering the labor force. The results of the following analysis are consistent with these hypotheses.

DATA AND VARIABLES

The data for this study were drawn from the High School & Beyond (HS&B) sophomore cohort 1980 base year and 1982 first follow-up surveys (U.S. Department of Education 1984), as well as the National Education Longitudinal Study (NELS) 1990 first follow-up and 1992 second follow-up surveys (U.S. Department of Education 1992a). A risk of combining longitudinal and cohort-comparison research designs is the multiplication of potential sources of systematic error. The HS&B and NELS sampling schemes, although both two-stage stratified frameworks, differ in composition. In the following analysis, only non-Hispanic Whites and Blacks are included, since the sampling of Asians, Hispanic Whites, and native Americans differed substantially in the surveys.[1] The wording of all questions used to define the variables in this analysis was identical in all four surveys, which minimized one important source of measurement error in merged survey data.

The variable, *educational expectations* was drawn from the same question: "As things stand now, how far in school do you think you will get?" The nine response categories were recoded as follows: "less than high school" (11 years); "high school graduation only" (12 years); "vocational, trade, or business school—less than two years" (13 years); "vocational, trade, or business school—two years or more" (14 years); "less than two years of college" (13 years); "two or more years of college (including a two-year degree)" (14 years); "finish college (a 4- or 5-year degree)" (16 years); "master's degree or equivalent" (18 years); "Ph.D., MD, or other advanced professional degree" (20 years).

The variable, *SES* is a composite measure of the average nonmissing values of five standardized components—father's and mother's educational levels, father's and mother's occupational prestige, and family income.[2] When data from parents' questionnaires were unavailable, students' reports of parental characteristics were substituted. In combining these cohort SES measures into one common variable for this article, I restandardized each of the SES scales for the four surveys. As a result, when the sophomore-year data from both cohorts were merged for analysis (likewise for the senior-year data), the mean and standard deviation (*SD*) of SES were still 0 and 1, respectively. Although this coding is certainly clean, it is a slight distortion of empirical reality; some average cohort differences in SES are not accounted for by this merged SES variable. I would have preferred an SES measure that was standardized across the whole merged sample. However, as I discuss in the Appendix, it would be nearly impossible for me to do so with the available data without losing many more cases to missing data. Since a cohort dummy is present in all the regression models presented later, other coefficients are not be biased by this distortion.

Cognitive skill is a within-survey standardized composite of performance on cognitive tests in reading and mathemat-

ics. This variable is not an IQ measure of innate ability. Instead, it measures the ability to succeed in postsecondary education and, as such, is a composite of unknown portions of innate intelligence and prior academic preparation.

Significant others' influence (SOI) is a within-survey standardized composite measure of respondents' perceptions of what their mothers, fathers, teachers, guidance counselors, friends, and relatives wanted them to do immediately after high school. Since the respondents were asked about each significant other in separate questions, the recoding used here granted them some control over the identification of significant others. Responses to each question were recoded into five dummy variables indicating whether the respondents thought the significant other wanted them to go to college. "I don't know" and nonapplicable responses were coded as missing and thus did not enter the composite raw score that was standardized. Sex, race, and cohort dummy variables were coded 1 for female students, Black students, and students of the class of 1992 (NELS respondents).

RESULTS

Table 1 presents ordinary-least squares (OLS) regression coefficients for two models of educational expectations, each estimated for non-Hispanic White and Black respondents who were in school as sophomores and for those who were still in school as seniors. A substantial portion of the respondents who were included in the sophomore-year sample but not in the senior-year sample were dropouts. The degree to which the senior-year data were thus censored was not analyzed but may have consequences for these findings (see note 5).

With OLS regression, Model 1 fits the unadjusted yearly educational expecta-

Table 1. OLS Estimates of the Determinants of Expected Years of Education of Sophomores and Seniors in the High School Classes of 1982 and 1992[a]

	1		2	
Variables	Sophomores	Seniors	Sophomores	Seniors
Constant	14.819	14.933	14.620	14.666
Class of 1992	.673***	1.162***	.885***	1.091***
	(.040)	(.040)	(.034)	(.035)
Female	.115**	.045	.142***	−.049
	(.035)	(.033)	(.029)	(.027)
By class of 1992	.334***	.238***	.173***	.211***
	(.054)	(.055)	(.044)	(.046)
Black	.280***	.085	1.291***	1.176***
	(.048)	(.046)	(.044)	(.041)
By class of 1992	−.582***	−.036	−.425***	−.158*
	(.077)	(.081)	(.070)	(.074)
SES	—	—	.505***	.501***
			(.017)	(.016)
By class of 1992	—	—	.051	−.030
			(.026)	(.027)
Cognitive Skill	—	—	.738***	.724***
			(.017)	(.017)
By class of 1992	—	—	.042	.053
			(.026)	(.028)
*SES*Cognitive Skill*	—	—	.072***	.132***
			(.014)	(.014)
By class of 1992	—	—	−.042	−.006
			(.023)	(.024)
SOI	—	—	.941***	.937***
			(.016)	(.017)
By class of 1992	—	—	−.324***	−.283***
			(.025)	(.027)
R^2	.026	.064	.416	.457
N	35,830	32,530	32,160	27,542

Sources: U.S. Department of Education (1984, 1992a).

[a] Standard errors in parentheses.

* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed test).

tions of sophomores and seniors to the cohort, race, and sex dummy variables. The average White male sophomore of the first cohort expected to complete slightly fewer than three years of some form of postsecondary education. His average female classmate expected to pursue about three years of postsecondary education, and his average Black classmate expected to pursue slightly more than three years of postsecondary education. However, the average White male sophomore of the second cohort expected to pursue about 3 1/2 years of postsecondary education, and his average female and Black classmates expected to pursue about four years and 3 1/4 years, respectively.

The expectations of seniors were generally higher than those of sophomores, partly because the sophomores who dropped out had lower-than-average educational expectations. Some of the same group differences held. The second cohort had higher expectations than the first cohort. The expectations of the female students in the second cohort were substantially higher, and the expectations of Black students were at least as high as those of White students in both cohorts.

Status-attainment theory predicts that group differences in educational expectations result from group differences in social background. If there are still group differences in educational expectations after social background differences are taken into account, then other factors, such as the direct and opportunity costs of further education suggested by the resource-constraint and human capital theories, respectively, may help to explain the remaining differences.

The classic model that is used to control for the effect of social background on educational expectations is the Wisconsin model (Sewell et al. 1969; Sewell et al. 1970). Model 2 is an updated specification of the determinants of educational expectations used in the original Wisconsin model (see S. L. Morgan 1996). The specification is more appropriate for the HS&B and NELS data and takes into account more causal mechanisms than did the original Wisconsin model. It adds a direct effect of SES on educational expectations and a cross- product term between SES and cognitive skill (conceptualized as the ability to succeed in college).

The direct effect of SES on expectations captures the rational appraisals that students make of the availability of family resources to invest in higher education, net of the influence of their significant others. The positive interaction between SES and cognitive skill measures the degree to which educational plans are produced by general status-attainment strategies that recognize the substitutability of family wealth, cognitive skill, and educational certification. Net of other determinants, students with high cognitive skills and/or high family wealth are less dependent on educational training or certification to achieve desired status outcomes.

In line with previous research, Model 2 indicates that SES, cognitive skill, and significant others' influence have positive relationships with educational expectations. Model 2 includes interactions between the class of 1992 dummy variable and all other independent variables. The cohort interactions with SES, cognitive skill, and the SES-by-cognitive skill interaction are nonsignificant, suggesting that these determinants of expectations operate similarly for both cohorts. However, the negative coefficient for the class of 1992 by the SOI interaction term indicates that significant others' influence meant less to members of the class of 1992. Most important, social background does not explain the unadjusted group differences measured by Model 1; instead, it appears to accentuate some of them. In general, the class of 1992 had higher expectations as both sophomores and seniors. The cohort-by-race and cohort-by-sex interactions indicate that the expectations of female students increased more than those of male students and that White students' expectations increased more than did Black students'.

Hout and W. R. Morgan (1975) suggested that the expectations-formation process differs substantially between Black and White students and between male and female students. To allow for this possibility, I estimated Model 2

separately for White male students and White female students in Table 2 and for Black male students and Black female students in Table 3. The constant terms of the regression models of Table 2 suggest that the expectations of the White male and White female members of the class of 1982 were similar.[3] Yet, the cohort dummy variables show that the female students' expectations increased more than the male students', which is in agreement with Model 2 of Table 1. SES, cognitive skill, and SOI seem about equally important for explaining the expectations of the White male and female students of the class of 1982. But for the class of 1992, cognitive skill was more important and the SES-by-cognitive skill interaction was less important for explaining the White female students' expectations than for the White males'.

The constant terms reported in Table 3 clarify the group differences suggested by the models in Table 1. The expectations of Black male students were higher than those of White male and White female students but lower than those of Black female students. The class of 1992 dummy variables indicate that Black male students' expectations increased the least of any group between cohorts, and Black female students' expectations increased more than those of Black male students but less than those of all White students. Although a ceiling effect may explain why the expectations of Black female students increased less than those of White female and male students, no ceiling effect can explain why the expectations of Black male students increased so little, since they were lower than those of Black female students in the first cohort.

SES seems to be of about as much importance for Blacks as for Whites. Such consistency does not exist for the other determinants of expectations. Although cognitive skill was at least as important for Black male students of the class of 1982 as it was for any other group, for the Black male students of the class of 1992 it was significantly less important. For the class of 1982, significant others' influence was the least important for Black male students and about the same for the other three groups. However, for the class of 1992,

Table 2. OLS Estimates of the Determinants of Expected Years of Education of White Sophomores and Seniors in the High School Classes of 1982 and 1992[a]

	White Males		White Females	
Variables	Sophomores	Seniors	Sophomores	Seniors
Constant	14.643	14.699	14.723	14.586
Class of 1992	.853***	1.061***	1.101***	1.343***
	(.035)	(.037)	(.036)	(.038)
SES	.523***	.531***	.441***	.475***
	(.026)	(.025)	(.026)	(.025)
By class of 1992	.067	.001	.098*	.003
	(.039)	(.042)	(.041)	(.042)
Cognitive Skill	.751***	.729***	.697***	.712***
	(.025)	(.026)	(.026)	(.026)
By class of 1992	−.003	.035	.160***	.149**
	(.037)	(.041)	(.041)	(.043)
*SES*Cognitive Skill*	.098**	.130***	.091***	.147***
	(.022)	(.022)	(.023)	(.023)
By class of 1992	−.025	.004	−.121**	−.114**
	(.034)	(.037)	(.037)	(.039)
SOI	.945***	.960***	.955***	.903***
	(.024)	(.024)	(.025)	(.025)
By class of 1992	−.316***	−.331***	−.376***	−.268***
	(.035)	(.039)	(.038)	(.043)
R^2	.466	.505	.412	.456
N	13,692	11,680	14,164	12,040

Sources: U.S. Department of Education (1984, 1992a).
[a] Standard errors in parentheses.
* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed test).

Table 3. OLS Estimates of the Determinants of Expected Years of Education of Black Sophomores and Seniors in the High School Classes of 1982 and 1992[a]

	Black Males		Black Females	
Variables	Sophomores	Seniors	Sophomores	Seniors
Constant	15.806	15.635	16.381	15.987
Class of 1992	.248	.715***	.404**	.809***
	(.127)	(.137)	(.146)	(.149)
SES	.581***	.536***	.542***	.384***
	(.073)	(.068)	(.089)	(.076)
By class of 1992	−.079	−.091	−.030	−.158
	(.119)	(.130)	(.133)	(.131)
Cognitive Skill	.857***	.709***	.797***	.727***
	(.076)	(.073)	(.090)	(.079)
By class of 1992	−.277*	−.310*	−.189	−.107
	(.123)	(.135)	(.136)	(.134)
*SES*Cognitive Skill*	−.006	.085	.005	.024
	(.063)	(.059)	(.077)	(.066)
By class of 1992	.104	.066	−.193	.066
	(.102)	(.111)	(.118)	(.117)
SOI	.782***	.879***	.980***	.989***
	(.065)	(.066)	(.072)	(.068)
By class of 1992	−.209*	−.140	−.179	−.139
	(.104)	(.119)	(.118)	(.138)
R^2	.308	.350	.280	.301
N	1,980	1,748	2,324	2,074

Sources: U.S. Department of Education (1984, 1992a).
[a] Standard errors in parentheses.
* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed test).

significant others' influence was less important for White male and female students. Finally, since Black families on average have less family wealth and tend to send their children to lower-quality schools than do White families, the SES-by-cognitive skill interaction is not significant for Black students of either cohort.

How stable are expectations throughout high school? Of the respondents who remained in school and reported educational expectations in their senior year, the expectations of 29 percent increased and the expectations of 26 percent decreased after the sophomore year. The remaining 45 percent reported the same educational expectations in both years. Table 4 presents the coefficients for an OLS regression of senior-year expectations on sophomore-year expectations and the independent variables of Model 2 from Table 1. This model estimates the changes in educational expectations between the sophomore and senior years for those who did not drop out.

General patterns of change in expectations between the sophomore and senior years are summarized by the constant and the coefficient for sophomore-year expectations. Because a predicted value of 0 from this model indicates no change in expectations between the sophomore and senior years, the ratio of the constant to the sophomore-year expectation coefficient indicates that net of all other factors, the expectations of sophomores who expected to pursue more than about 2 1/2 years of postsecondary education were more likely to decrease by the senior year, and vice versa.[4]

As one would expect, SES, cognitive skill, and significant others' influence were positively related to changes in expectations between the sophomore and senior years. However, net of these determinants, there were significant group differences in the rates of change. On average, the expectations of the members of the class of 1992 increased more than did those of the members of the class of 1982. And within cohorts, the expectations of the Black respondents increased more than did those of the White respondents.[5]

It is not likely that the estimates of group differences in Tables 1-4 are artifacts of data collection or analysis

Table 4. OLS Estimates of the Determinants of Change in Years of Expected Education between the Sophomore and Senior Years for the High School Classes of 1982 and 1992[a]

Variables	Coefficients
Constant	8.663
Class of 1992	.728***
	(.170)
Expected Years when a Sophomore	−.593***
	(.007)
Class of 1992	.002
	(.011)
Female	.036
	(.027)
Class of 1992	.045
	(.043)
Black	.785***
	(.044)
Class of 1992	−.117
	(.071)
SES	.326***
	(.016)
Class of 1992	−.004
	(.026)
Cognitive Skill	.548***
	(.017)
Class of 1992	−.119***
	(.027)
*SES*Cognitive Skill*	.069***
	(.013)
Class of 1992	.041
	(.023)
SOI	.273***
	(.017)
Class of 1992	−.059*
	(.025)
R^2	.316
N	27,679

Sources: U.S. Department of Education (1984, 1992a).

[a] Standard errors in parentheses.

* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed test).

procedures. Convincing arguments for the relevance of differences in the sampling and response rates between the surveys are lacking.[6] Differential measurement error in educational expectations is not possible because the exact same question was used in all four surveys. The only potential contender for substantial measurement distortion in these estimates is the necessary standardization of the Wisconsin model variables within each of the four surveys. In a separate set of analyses, I concluded that such distortion was not substantial enough to warrant serious qualification of these results (see the Appendix).

DISCUSSION

Taken together, the findings just presented document a complex pattern of increasing educational expectations. In general, the educational expectations of high school students increased between 1980 and 1992, more so for Whites than for Blacks and more so for girls than for boys. In addition, over the same period, there were increases in expectations between the 10th and 12th grades for students who did not drop out.

Status-attainment theory, resource-constraint theory, and human capital theory suggest three potential explanations for increases in educational expectations: (1) an underlying natural rate of inflation in expectations tied to improvements in family background, (2) decreasing direct costs of higher education, and (3) increasing labor market benefits of educational preparation. Consistent with the status-attainment tradition, the demand for education could be increasing because of an ideology popularly expressed as the American Dream. Given a historically grounded one-way trend in educational attainment, if students are more likely to be convinced by their significant others that they should obtain more education than their parents did, educational expectations should increase steadily over time, fluctuating only narrowly around a natural rate of inflation in expectations. Accordingly, educational expectations were higher for the class of 1992 simply because the parents of these students had higher levels of education than did the parents of the class of 1982.

This explanation is too simple to account for all the contours of empirical reality. It suggests that real increases in educational expectations can be explained by increases in social background, rendering no change in net educational expectations. Because of the within-cohort standardization of SES in this study, I could not decisively reject this explanation in the preceding analysis. However, the results of Hauser and Anderson (1991) and the analysis de-

scribed in the Appendix reduce its tenability.

Without further qualification, an explanation based on a natural rate of inflation in expectations suggests that net racial differences should be constant. Although the observed expectations of Black students should have been lower than those of White students and should have risen faster as the Blacks' family background improved relative to the Whites' family background, there should have been no change over time in racial differences in educational expectations adjusted for family background. Nothing in this simple explanation can explain why the net expectations of Black students were higher than those of the White students or why the observed and net expectations of the White students increased more than those of the Black students.

Resource-constraint theory suggests that a measure of the direct costs of education as a proportion of available family resources is central to an explanation of these trends. If the cost of a college education decreased in the 1980s, it could have contributed to increasing educational expectations among forward-looking high school students. In reality, the direct costs of a college education increased dramatically in the 1980s. Thus, direct costs cannot explain why there were any increases in educational expectations at all.

Nonetheless, given that there were average increases, the relative nature of resource-constraint theory can explain differences in the rates of increase among the subgroups. Hauser and Anderson (1991) and Hauser (1993) argued that the shift in financial aid away from grants and toward loans made a college education relatively less attractive to Blacks in the 1980s because at every income level, Black families have less wealth than do White families. Such reasoning can explain why the expectations of White students increased more than those of Black students in the 1980s. However, since there cannot possibly be substantial sex differences in the direct costs of education, the relative increase in female students' expectations remains unexplained.

Labor market incentives provide another source of explanation for these trends. The increasing labor market value of education in the 1980s increased the earnings benefits of educational pursuits (Bound and Johnson 1992; Burtless 1990; Katz and Murphy 1992; Levy and Murnane 1992; Murphy and Welch 1992). The findings presented here are consistent with the prediction of human-capital theory that high school students should have increased their educational expectations throughout the 1980s. Furthermore, as individual calculations of the labor market value of education became more important in constructing educational plans, the views of significant others became less important, at least for White students.

Changes in expectations between the sophomore and senior years can also be explained by the same labor market trends. As students approach endpoints in phases of their educational careers, they consider more carefully the returns on educational investments that the labor market offers. Since the returns on education were higher for the class of 1992 and were still increasing, the expectations of these students were more likely to increase between the sophomore and senior years.

Further research is needed to address more fully the effect of labor market incentives on educational expectations. It may be that the educational expectations of Black and female students, net of differences in social background, were higher in both the early 1980s and the early 1990s because returns on education were the highest for these groups in both periods (Goldin 1990; Minter 1990; Neal and Johnson 1994; O'Neill and Polachek 1993; Smith and Welch 1986). For the same reason, the expectations of Black students in both cohorts may have been more likely to increase between the sophomore and senior years. And if net expectations are responsive to rates of return in this manner, then the relative increase in White students' expectations reported here may have been the result of a greater increase in the rate of return for White workers. There is some evidence that such a relative increase occurred in the 1980s (Blank 1994; S. L.

Morgan 1995). A similar explanation for the higher rate of increase in expectations for female students in the 1980s may also be supported by labor market trends.

These findings suggest that responsiveness to labor market incentives is a necessary component of any complete explanation of group differences and trends in educational expectations. There may still be some underlying tendency toward ever-increasing educational expectations, as status-attainment theory supposes, but varying about this general trend, in accordance with resource-constraint theory and human capital theory, is an observed level of expectations that is responsive to the cost-benefit analyses of educational consumers.

APPENDIX

Here, I explain why socioeconomic status, cognitive skill, and significant others' influence were standardized for each cohort and assess the impact of this coding on the results reported earlier. SES had to be standardized because measures of its various components differed in the surveys. Unfortunately, returning to metric scales to construct an overall SES measure for the combined samples would have decreased the precision of within-cohort rankings and sacrificed additional cases because of missing data. Although the SES measure used in this analysis accurately captures changes in relative group differences in SES between cohorts, it assumes that the grand mean of SES is the same for both cohorts. This assumption is not realistic. Thus, the higher educational expectations of the second cohort can be explained, at least in part, by an unobserved cohort increase in SES.

By how much is the cohort increase overestimated? Instead of constructing an ill-fated cross-cohort standardized SES measure with the HS&B and NELS data, I estimated the cohort increase in family SES by constructing a common standardized SES measure for two cohorts of adults who were similar to the parents in the HS&B and NELS with data from the General Social Survey (GSS) (Davis and Smith 1992). In this analysis, I concluded that the average family SES level of the second cohort was only .179 *SDs* greater than that of the first cohort.

To compute this estimate, I selected two groups of GSS respondents who resembled the parents in the HS&B and NELS. To decrease the prominence of relatively unimportant year-to-year fluctuations in SES, to increase the absolute number of respondents from minority racial groups in the analytic sample, and to create two distinct cohorts, I selected GSS respondents who were interviewed in 1976, 1977, 1978, and 1980, as well as those interviewed in 1986, 1987, 1988, 1989, and 1990. (There were no interviews in 1979. Also, because the 1987 GSS oversampled Blacks, I weighted the data to achieve equal balance between years in cohort averages.) Because 98 percent of the parents of NELS respondents were aged 31-60 in 1990, I limited the sample to GSS respondents who were in this age range when interviewed. (Certainly there were more HS&B and NELS parents in their 40s than in their 30s or 50s. However, I assumed that the overrepresentation of those in their 30s and 50s would balance each other.) I then standardized variables measuring respondent's education, respondent's occupational prestige, and real family income; averaged these measures; restandardized the resulting composite SES measure; and calculated cohort mean SES estimates of $-.101$ for the first cohort and .078 for the second cohort.

I added .179 to the SES values of all NELS respondents and reestimated the models of Tables 1–3. The results indicated that the cohort increase was overestimated, on average, by only about 10 percent.

Certainly, the estimated cohort increase in SES of .179 is only a rough approximation to the true increase in SES between HS&B and NELS families. This approximation is based on a national sample of individuals. HS&B and NELS families are not perfectly matched national samples of men and women. Although I used real family income, rather than the respondent's real income, there is still much potential for

bias in this estimate. For example, it is likely that there are more single-parent families in the second cohort, probably headed by women. If so, the families of the second cohort would be slightly "more female" than those of the first cohort, suggesting that the cohort difference of .179 is overestimated. In total, it is not clear in which direction this estimate is biased. Fortunately, given the small size of the estimate, it is not likely that the bias is great enough to warrant inflating the estimated distortion in the cohort increase in expectations by more than 10 percent.

Measures of cognitive skill from each survey had to be standardized because the cognitive tests differed by survey. Although the tests were designed by the Department of Education and were intended to be similar, only standardized results from each year can be compared. If the class of 1992 was smarter than the class of 1982, as could be determined by an IQ test, they would also have had higher educational expectations. Alternatively, if the U.S. educational system was preparing students better in the early 1990s than in the early 1980s, students from the class of 1992 would also have had higher educational expectations. Neither of these possibilities seems likely. Thus, a significant unobserved cohort increase in cognitive skill that could contribute to an overestimation of the cohort increase in expectations does not seem possible.

Although the SOI variable used here is also a within-cohort standardized measure, SOI could easily have been standardized across the entire merged sample (or simply preserved as a raw metric), since the questions were exactly the same in each of the four surveys. However, I determined in a separate analysis that there was no net aggregate cohort difference in SOI and thus chose to standardize SOI within cohort to ensure parallel construction of all Wisconsin-model variables. Thus, the construction of SOI did not contribute to an overestimation of the cohort increase in educational expectations.

Although more research is needed on the issue, the findings presented earlier, when taken together with those of Hauser and Anderson (1991), have convinced me that educational expectations increased in the 1980s. The cohort increase is overstated in Tables 1–3, but only by approximately 10 percent, not enough, in my judgment, to justify presenting the models in a more complex form.

NOTES

1. Unfortunately, other sampling inconsistencies were unavoidable. Because the 1980 HS&B data were from the base-year survey, they are based on a national probability sample of high schools, but since the 1990 NELS data were from the first follow-up, they were not. Although the sample was freshened with individuals in 1990 to ensure a representative sample of the national population of sophomore students in 1990, it was not freshened with schools to ensure similar national representativeness. In addition, the within-school samples of the NELS were smaller, more variable, and less representative than those of the HS&B. Also of concern is the possibility of serious missing data bias, which could result from variable-item nonresponse between the four surveys and from selective nonrandom sample attrition within cohorts. For example, response rates were higher for the NELS than for the HS&B, with 94 percent versus 84 percent completing the student questionnaire and 90 percent versus 77 percent completing the cognitive tests (U.S. Department of Education 1992b, Appendix D). I will not attempt to account rigorously for missing data bias in this article but note its potential impact, when appropriate, in the Results.

2. Data on parents of NELS sophomores were taken from the 1988 base-year parent survey.

3. SES, cognitive skill, and SOI were *not* rescaled in Tables 2 and 3, so the constants among the four groups can be compared (but separately for sophomores and seniors). The constants are modeled predictions of the educational expectations for individuals in each group who have the full sample mean value for each of these variables. Equivalent estimates could be obtained from an expanded version of Model 2 in Table 1 that would include a full set of group dummy interactions (including black*female) with these variables.

4. 8.663 − .593 (expected years when a sophomore) = 0 when expected years when a sophomore = 14.609.

5. The estimates reported in Table 4 do

not take into account group differences in dropout rates. If groups with the highest rates of increased expectations also had the highest dropout rates and those students who dropped out tended to have the lowest expectations, then the group differences in the rates of increase in expectations reported in Table 4 reflect unmeasured group-specific sample-selection effects on expectations.

Kominski (1990) reported that unadjusted dropout rates between the 10th and 12th grades declined for both Whites and Blacks in the 1980s. Over the same period, the dropout rate for Blacks remained higher than that for Whites. However, when these rates are adjusted by social background, as in Hauser and Phang's (1993) study, Whites had higher net dropout rates. And though the net dropout rates still declined for both Whites and Blacks, so did the differential between the two. These adjusted trends suggest that differential dropout rates cannot explain a substantial portion of group differences in rates of increases in expectations.

6. For example, one could argue that the lower 1980 response rate produced the observed differences because respondents with higher educational expectations were disproportionately among the 1980 group of nonresponders. However, it seems more likely that if such nonresponse factors are important, then cohort differences in educational expectations are actually *underestimated* here, since it seems more reasonable to surmise that individuals with low educational expectations were more likely to be nonrespondents.

REFERENCES

Becker, Gary. 1964. *Human Capital.* New York: Columbia University Press.

Blank, Rebecca M. 1994. "The Employment Strategy: Public Policies to Increase Work and Earnings." Pp. 168–204 in *Confronting Poverty: Prescriptions for Change,* edited by Sheldon H. Danziger, Gary D. Sandefur, and Daniel H. Weinberg. Cambridge, MA: Harvard University Press.

Bound, John and George Johnson. 1992. "Changes in the Structure of Wages in the 1980s: An Evaluation of Alternative Explanations." *American Economic Review* 82: 371–92.

Burtless, Gary. 1990. *A Future of Lousy Jobs? The Changing Structure of U.S. Wages.* Washington, DC: Brookings Institution.

Davis, James Allan and Tom W. Smith. 1992. *General Social Surveys, 1972–1991* [machine readable data file]. Chicago: National Opinion Research Center [producer]. Storrs, CT: Roper Center for Public Opinion Research, University of Connecticut [distributor].

Goldin, Claudia. 1990. *Understanding the Gender Gap: An Economic History of American Women.* New York: Oxford University Press.

Hauser, Robert M. 1993. "The Decline in College Entry among African Americans: Findings in Search of Explanations." Pp. 271–306 in *Prejudice, Politics, and the American Dilemma,* edited by Paul M. Sniderman, Philip E. Tetlock, and Edward G. Carmines. Stanford, CA: Stanford University Press.

Hauser, Robert M. and Douglas K. Anderson. 1991. "Post-High School Plans and Aspirations of Black and White High School Seniors: 1976–86." *Sociology of Education* 64:263–77.

Hauser, Robert M. and Hanam Samuel Phang. 1993. "Trends in High School Dropout Among White, Black, and Hispanic Youth, 1973 to 1989" (Discussion Paper No. 1007–93). Madison: Institute for Research on Poverty. University of Wisconsin.

Hout, Michael and William R. Morgan. 1975. "Race and Sex Variations in the Causes of Educational Expectations of High School Seniors." *American Journal of Sociology* 81:364–94.

Katz, Lawrence F. and Kevin M. Murphy. 1992. "Changes in Relative Wages, 1963–1987: Supply and Demand Factors." *Quarterly Journal of Economics* 107:35–78.

Kerckhoff, Alan C. 1974. *Ambition and Attainment: A Study of Four Samples of American Boys.* Washington, DC: American Sociological Association.

———. 1976. "The Status Attainment Process: Socialization or Allocation?" *Social Forces* 55:368–81.

———. 1977. "The Realism of Educational Ambitions in England and the United States." *American Sociological Review* 42: 563–71.

Kominski, Robert. 1990. "Estimating the National High School Dropout Rate." *Demography* 2:303–11.

Levy, Frank and Richard J. Murnane. 1992. "U.S. Earnings Levels and Earnings Inequality: A Review of Recent Trends and Proposed Explanations." *Journal of Economic Literature* 30:1333–81.

Mincer, Jacob. 1974. *Schooling, Experience and Earnings.* New York: National Bureau of Economic Research.

Minter, Caroline M. 1990. "Explaining the Positive Black-White Differential in the Rate of Return to College, the U.S. 1965–86:

The Role of Uncertainty." Unpublished M.Phil. thesis, Oxford University.

Morgan, Stephen L. 1995. "Looking Beyond the Wisconsin Model: Educational Expectations of U.S. High School Sophomores in 1980 and 1990." Unpublished M.Phil. thesis, Oxford University.

_____. 1996. "A Reconstruction of the Wisconsin Model of Educational Expectations." Unpublished manuscript, Harvard University.

Murphy, Kevin M. and Finis Welch. 1992. "The Structure of Wages." *Quarterly Journal of Economics* 107:285–325.

Neal, Derek A. and William R. Johnson. 1994. "The Role of Pre-Market Factors in Black-White Wage Differences." Unpublished manuscript, University of Chicago.

O'Neill, June and S. Polachek. 1993. "Why the Gender Gap in Wages Narrowed in the 1980s." *Journal of Labor Economics* 11:205–28.

Schultz, Theodore W. 1961. "Investment in Human Capital." *American Economic Review* 51:1–17.

Sewell, William H., Archibald O. Haller, and George W. Ohlendorf. 1970. "The Educational and Early Occupational Attainment Process: Replication and Revision." *American Sociological Review* 35:1014–27.

Sewell, William H., Archibald O. Haller, and Alejandro Portes. 1969. "The Educational and Early Occupational Attainment Process." *American Sociological Review* 34:82–92.

Smith, Joseph P. and Finis R. Welch. 1986. *Closing the Gap: Forty Years of Economic Progress for Blacks.* Santa Monica, CA: Rand Corp.

U.S. Department of Education, National Center for Education Statistics. 1984. *High School and Beyond: A Longitudinal Study of Students in the United States (1980)* [sophomore data from merged base-year and first follow-up computer file]. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement [producer]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor].

_____. 1992a. *National Education Longitudinal Study, 1988: First Follow-Up (1990)* [student data, computer file]. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement [producer]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor].

_____. 1992b. *National Education Longitudinal Study of 1988, First Follow-Up: Student Component Data File User's Manual.* Washington, DC: Author.

Stephen L. Morgan, M.Phil., *is a Ph.D. candidate, Department of Sociology, Harvard University, Cambridge, Massachusetts. His main fields of interest are sociology of education, labor markets, and development. He is currently conducting research on self-esteem and educational achievement, testing Claude Steele's theory of educational disidentification with data from the National Educational Longitudinal Study. He is also working with William R. Morgan on theories of the labor market in West African societies, with Chris Winship on historic changes in the racial composition of the prison population, and with Aage Sørensen on James Coleman's theories of private school effects on educational attainment.*

The research reported in this article was first supported by the Rhodes Trust while the author was studying for an M.Phil. in comparative social research at Oxford University. The subsequent revision was supported by the National Science Foundation through a fellowship to support the author's candidacy for a Ph.D. from the Department of Sociology, Harvard University. The author thanks Anthony Heath and Aage Sørensen for their guidance, and John Goldthorpe, Robert Hauser, and William Morgan for their helpful comments. Address all correspondence to Stephen L. Morgan, Department of Sociology, Harvard University, William James Hall, 5th floor, Cambridge, MA 02138, or by E-mail at smorgan@wjh.harvard.edu.