



Is a College Degree Still the Great Equalizer? Intergenerational Mobility across Levels of Schooling in the United States

Author(s): Florencia Torche

Reviewed work(s):

Source: *American Journal of Sociology*, Vol. 117, No. 3 (November 2011), pp. 763-807

Published by: [The University of Chicago Press](http://www.press.uchicago.edu)

Stable URL: <http://www.jstor.org/stable/10.1086/661904>

Accessed: 10/11/2011 10:06

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



The University of Chicago Press is collaborating with JSTOR to digitize, preserve and extend access to *American Journal of Sociology*.

Is a College Degree Still the Great Equalizer? Intergenerational Mobility across Levels of Schooling in the United States¹

Florencia Torche
New York University

A quarter century ago, an important finding in stratification research showed that the intergenerational occupational association was much weaker among college graduates than among those with lower levels of education. This article provides a comprehensive assessment of the “meritocratic power” of a college degree. Drawing on five longitudinal data sets, the author analyzes intergenerational mobility in terms of class, occupational status, earnings, and household income for men and women. Findings indicate that the intergenerational association is strong among those with low educational attainment; it weakens or disappears among bachelor’s degree holders but reemerges among those with advanced degrees, leading to a U-shaped pattern of parental influence. Educational and labor market factors explain these differences in mobility: parental resources influence college selectivity, field of study, and earnings more strongly for advanced-degree holders than for those with a bachelor’s degree alone.

INTERGENERATIONAL MOBILITY ACROSS LEVELS OF SCHOOLING AND THE “MERITOCRATIC POWER” OF A COLLEGE DEGREE

A college degree yields substantial economic returns. By the early 21st century, college graduates received earnings about 90% higher than their

¹ This study received support from the National Academy of Education/Spencer Post-doctoral fellowship program and from the Stephen Charney Vladeck Junior Faculty Fellowship of the Wagner School of Public Service, New York University. I would like to thank Richard Arum, Alejandro Corvalán, Paula England, Robert Hauser, Nicole Marwell, Seymour Spilerman, Lawrence Wu, the *AJS* reviewers, and seminar participants at different venues where this work was presented for helpful comments and suggestions; I also thank Liang Zhang for kindly providing the codes to assign

high school graduate counterparts, a premium that has increased dramatically over the last quarter century (Autor, Katz, and Kearney 2008). College attainment is also related to better health, longevity, happiness, and a host of extraeconomic outcomes (Ross and Mirowsky 1999; Pallas 2000; Rowley and Hurtado 2003; Attawell and Levin 2007; Stevens, Armstrong, and Arum 2008). But college attainment is related to more than economic and extraeconomic well-being. An important finding in stratification research shows that **the direct influence of parental resources on the economic position of adult children is much weaker—virtually zero—among college graduates than among those with less schooling (Hout 1984, 1988).** The virtually null intergenerational association among college graduates does not naturally mean the elimination of social inequality. Access to college is strongly dependent on parental resources (Hout, Raftery, and Bell 1993; Ellwood and Kane 2000; Haveman and Smeeding 2008), and the socioeconomic gap in access appears to have increased over time (Kane 2004). **The finding means, however, that for those who attain a college degree, their socioeconomic standing is independent of their socioeconomic background. In other words, a college degree fulfills the promise of meritocracy—it offers equal opportunity for economic success regardless of the advantages of origins.** This finding is not a U.S. anomaly. Research has shown a weaker intergenerational association at higher levels of schooling in other industrialized countries such as France, Sweden, and Germany (Vallet 2004; Breen and Jonsson 2007; Breen and Luijkx 2007). The United States is, however, the clearest case in which the intergenerational socioeconomic association fully disappears among college graduates, providing **“a new answer to the old question about overcoming disadvantaged origins: A college degree can do it”** (Hout 1988, p. 1391).

These findings describe the state of affairs in the 1970s. They were replicated for the 1980s (Hauser and Logan 1992, table 4), but no evaluation exists since then. **The higher education system has undergone substantial change over the last quarter century. College expansion and differentiation, and the increase of postbaccalaureate advanced degrees define a new educational landscape that may have altered mobility patterns of college graduates.** In addition, the original findings refer specifically to the intergenerational occupational association. Recent developments in mobility research show that measures such as class, occupational status, individual earnings, and total family income capture distinct dimensions of economic well-being and suggest that mobility findings may

Barron's selectivity scores to higher education institutions identified in the Baccalaureate and Beyond data set. Emily Rauscher and Robert Taylor provided excellent research assistance. Direct correspondence to Florencia Torche, Department of Sociology, New York University, 295 Lafayette Street, No. 4129, New York, New York 10012. E-mail: florencia.torche@nyu.edu

be contingent on the measure used (Bjorklund and Jantti 2000; Beller and Hout 2006; Erikson and Goldthorpe 2008). A comprehensive test of the meritocratic power of a college degree requires, then, considering distinct indicators of economic well-being.

Furthermore, in spite of its empirical relevance, the factors accounting for the weak intergenerational association among college graduates have not been examined or theorized. Researchers have hypothesized that labor markets for college graduates are highly meritocratic and thus blind to the advantages associated with social origins (Breen and Jonsson 2007). However, no testable definition of meritocracy, embedded in the operation of the educational system and the labor market, has been elaborated or examined.

This article addresses these questions and provides a comprehensive assessment of intergenerational mobility across levels of schooling. First, I evaluate historical changes in the higher education system and discuss their implications for intergenerational association among college graduates. I also formulate a testable theoretical account of the “meritocratic power” of a college degree by drawing on the literatures on educational stratification and labor market inequality. Second, I introduce the variables, data, and analytical strategy. I describe the four measures of economic well-being used in the analysis—social class, occupational status, individual earnings, and total family income—and explain why it is necessary to consider all of them in the study of social mobility. Third, I present the main findings of intergenerational mobility across levels of schooling. I also investigate whether these findings represent change or stability over time and examine educational and labor market mechanisms accounting for variation in mobility across levels of schooling. Finally, I offer the discussion and implications.

BACKGROUND

The U.S. Educational System and the Meritocratic Power of a College Degree

A notable change over the last quarter century is the increase in the proportion of adult Americans with a college degree. Table 1 presents a time series of college attainment for adults ages 30–60 between 1965 and 2005, based on the Current Population Survey (CPS).² It shows that the percentage of men that have graduated college grew from 13% in 1965

² The wording of the educational attainment question was changed in 1992 in the CPS, so I implement procedures to maximize comparability between versions outlined by Jaeger (1997) and Park (1996).

TABLE 1
 PERCENTAGE OF ADULTS 30-60 WITH A COLLEGE DEGREE BY GENDER AND YEAR: UNITED STATES, 1965-2005

	1965	1970	1975	1980	1985	1990	1995	2000	2005
Men:									
Total college graduates ...	13.44	15.10	18.68	23.63	26.70	27.59	28.98	29.82	30.40
Bachelor's	9.10	10.10	12.08	14.83	16.65	17.42	18.14	18.92	19.18
Advanced degree	4.34	5.00	6.60	8.80	10.05	10.17	10.84	10.90	11.22
Women:									
Total college graduates ...	7.86	8.27	10.50	14.38	18.31	21.26	23.42	26.04	29.35
Bachelor's	6.76	7.03	8.44	11.04	13.25	15.11	15.67	18.29	19.67
Advanced degree	1.10	1.24	2.06	3.34	5.06	6.15	7.75	7.75	9.68

NOTE.—Data from Current Population Survey, 1965-2005, March annual demographic file data. The wording of the educational attainment question was changed in 1992. The earlier version asks, "What is the highest grade . . . ever attended/completed," whereas the new version distinguishes specific levels of education, starting with "high school graduate-high school diploma or the equivalent" and ending with "doctorate degree." I follow procedures to maximize comparability between versions outlined by Park (1996) and Jaeger (1997).

to 30% in 2005, while for women there is an even more impressive increase from 8% to 29%.

The aggregate trends presented in table 1 are a mixture of the educational attainment of different birth cohorts, which experienced distinct opportunity structures. Figure 1 presents cohort trends in age-adjusted college graduation rates for cohorts born between 1905 and 1965, using pooled 1965–2005 CPS data. College graduation is evaluated at age 35 for all cohorts.³ The cohort trends reported in figure 1 explain the sources of period expansion in college graduation. For men, a substantial increase in college attainment for those born between the late 1910s and the late 1940s is followed by a decline for those born in the 1950s, and recovery thereafter, favoring those born in the late 1960s. The reason for the substantial expansion includes growing earnings returns to schooling, federal responses to compensate war veterans, and for those born in the 1940s, college draft deferments (Goldin and Katz 2008, chap. 7). The increase in college access among those born in the 1940s and the subsequent slowdown were so substantial that the graduation rate for males born in the 1970s was not higher than for those born around 1950 (Day and Bauman 2000, p. 23; Carneiro and Heckman 2005). The story is somewhat different for women. The increase during the 1940s was less sharp and the decline in the 1950s–60s less pronounced than for men. Furthermore, women's graduation rates have substantially increased for the younger cohorts born since 1965, resulting in a reversal of the gender gap in college attainment (Buchmann and DiPrete 2006; DiPrete and Buchmann 2006). Two important findings emerge from this assessment of trends. There is a substantial period increase in the proportion of adults with a college degree, largely driven by the sharp expansion favoring the 1940s cohort. Expansion did not resume until the mid-1980s, benefiting those born in the late 1960s.

In parallel with expansion, the college level has undergone substantial differentiation in terms of institutional characteristics and college experience (Gerber and Cheung 2008; Stevens et al. 2008). Differentiation has implications for the intergenerational reproduction of inequality to the extent that the individual placement in the higher education system—the type of college education received—depends on socioeconomic origins and shapes, in turn, the economic outcomes of college graduates. A long tradition of status attainment research documents the strong association be-

³ For earlier and younger cohorts not observed at age 35, graduation rates are inferred by means of a regression approach based on the typical life cycle evolution of educational attainment of a cohort. Data are collapsed into birth cohort–year cells, and logit regressions of college graduation on a full set of birth cohort dummies and a quartic in age are run. The age coefficients from these regressions are then used to create age-adjusted measures of college graduation (DeLong, Goldin, and Katz 2003).

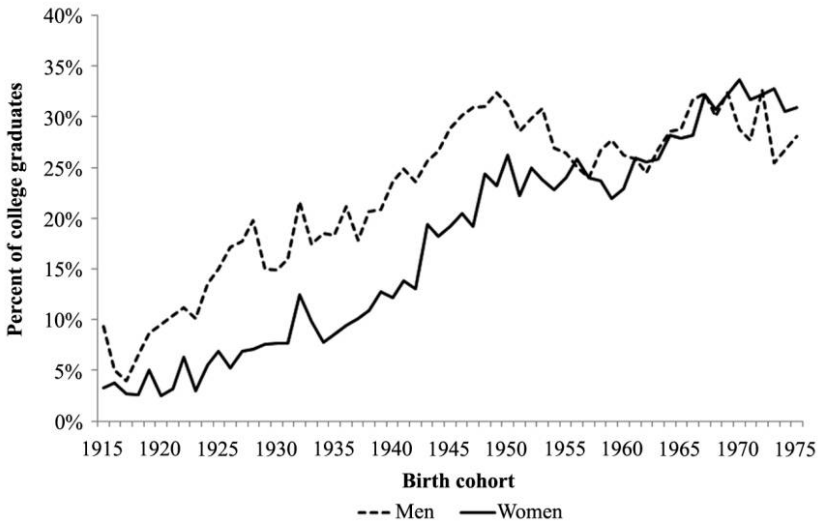


FIG. 1.—Age-adjusted percentage of college graduates by birth cohort, men and women born 1915–75 (data are from CPS, March demographic data set, 1965–2005)

tween social origins and educational attainment (Blau and Duncan 1967; Hauser and Featherman 1976; Shavit and Blossfeld 1993). More recently this concern has been extended from the “quantitative” dimension—the association between social background and years of schooling completed or educational transitions made—to the “qualitative” dimension of stratification—the type of schooling attained at any particular level. Although horizontal stratification at the postsecondary level is not a new phenomenon, its relative importance in generating and reproducing inequality may have increased as access to college expands (Gerber and Cheung 2008). As systematized by the “effectively maintained inequality” (EMI) approach, horizontal stratification within a particular educational level will intensify as more students gain access, insofar as economically advantaged families will mobilize their resources to secure quantitatively similar but qualitatively superior educational credentials, that is, a credential that ensures more lucrative and prestigious outcomes (Lucas 2001).

Horizontal stratification at the college level involves diverse domains, but the literature has highlighted two of them as particularly consequential—institutional selectivity and field of study. Studies show a substantial association between social origins and college selectivity (Persell, Catsambis, and Cookson 1992; Davies and Guppy 1997; Karen 2002). This association is largely, but not only, mediated by academic achievement (Bowen, Kurzweil, and Tobin 2005; Grodsky 2007) and may have grown

over time (Astin and Oseguera 2004). Evidence about the stratification of field of study is limited and less conclusive. While the association between social origins and a lucrative major appears to be weak (Davies and Guppy 1997), an indirect influence is likely to exist—upper-class students are more likely to major in the arts and sciences, which in turn increases their chances of pursuing an advanced degree resulting in higher earnings (Goyette and Mullen 2006).

The association between social origins and college differentiation shapes inequality to the extent that college locations accessed by the upper class yield higher economic returns. Evidence consistently suggests that graduates of more selective institutions earn more (Brewer and Ehrenberg 1996; Karen 2002; Thomas 2003; Thomas and Zhang 2005), although the “selective college” effect may be at least partially driven by academic performance and ability of recruits (Loury and Garman 1995; Brewer, Eide, and Ehrenberg 1999; Monks 2000; Dale and Krueger 2002), and it may vary depending on the outcome considered (Karabel and McClelland 1987; Brand and Halaby 2006). As for field of study, research shows substantial variation in returns across fields, with business-related, math, engineering, and more recently health majors receiving higher earnings, and education-related fields receiving lower returns (Berger 1988; Grogger and Eide 1995; Loury 1997).

In sum, the evidence on horizontal stratification at the college level indicates a substantial association between social origins and access to selective institutions, which could provide a pathway for the influence of social origins on socioeconomic attainment. Evidence is less univocal for field of study, and perhaps the clearest avenue for intergenerational reproduction is the propensity of advantaged students to major in fields that facilitate access to graduate school. To the extent that horizontal stratification at the college level increases, providing new avenues for the intergenerational reproduction of advantage, a decline in the meritocratic power of a college degree is expected.

Virtually all stratification research treats college graduates as a single, homogeneous category. However, this group comprises two distinct levels of attainment: bachelor’s degree and advanced degree. As table 1 shows, in 1970 only 5% of adult men and 1% of women held a degree beyond a bachelor’s, including master’s, first-professional, and doctoral degrees. By 2005 this percentage reaches 11% and 10% for men and women, respectively. The substantial increase in the proportion of advanced-degree holders renders them an increasingly important group that should be studied separately from those whose education is limited to a bachelor’s degree.

Several factors suggest that the intergenerational association could be

even weaker among advanced-degree than among BA holders.⁴ Research shows that the association between social origins and enrollment in a graduate program conditional on college graduation is weaker than at earlier educational levels (Mare 1980) and virtually null for at least some programs such as master's degrees and MBAs (Stolzenberg 1994; Mullen, Goyette, and Soares 2003). As a result, lower-class individuals who remain in the educational system after completing a BA may be highly selected on attributes such as motivation and ability, which may have substantial returns in the labor market. In addition, attending graduate school involves spending additional time in the educational system, undergoing not only formal training but also professional socialization, as well as building social connections. This extended exposure may contribute to the development of networks of professional referral among lower-background students, providing an expanded opportunity to detach themselves from their disadvantaged origins. Furthermore, advanced degrees typically provide more specific and technically sophisticated skills than those acquired through a BA, which could rule out the use of social-origins-based cultural capital or social networks as determinants for occupational placement and rewards (Jackson 2007).

Questioning the hypothesis of higher mobility among advanced-degree holders, horizontal stratification may also be pronounced at the graduate level. To the extent that individuals with advantaged backgrounds are successful at accessing more selective institutions and more lucrative fields and types of programs, the intergenerational association may be pronounced at this level. To date, virtually no research examines horizontal stratification at the advanced-degree level, but the sharp earning gradient across type of program—with first professional degrees such as medicine and law at the top, followed by doctoral degrees, and masters' at a far distance (Day and Newburger 2002; College Board 2005)—suggests that differential allocation by social origins into a particular type of advanced-degree program may provide an avenue for the intergenerational reproduction of advantage.

In sum, these factors suggest that the regular practice in stratification research of collapsing BA holders and advanced-degree holders into a single aggregate "college graduate" category provides a biased picture of the influence of social background for either group and calls for a separate assessment, a task that I undertake in this study. Given that all previous analyses collapse these two groups, separate assessments of BA holders and graduate degree holders in the past are required as well, in order to

⁴ I use the shorthand "BA" to refer to all general four-year college degrees, including those labeled AB, BS, BFA, BMus, etc.

determine whether the patterns found in this article identify change or stability over time. I provide this analysis as part of the present study.

Labor Market Meritocracy and Intergenerational Mobility among College Graduates

As important as it was for stratification research, the finding of weak intergenerational association among college graduates was not accompanied by an examination of its mechanisms. Researchers have hypothesized that college graduates are allocated to segments of the labor market in which meritocratic selection is more prevalent and origin characteristics count for less, insofar as higher qualifications are a powerful signal for employers leaving little leeway for social network effects (Breen and Jonsen 2007, p. 1778). This hypothesis is certainly plausible. Organizational research shows that the highly bureaucratized contexts in which college graduates are likely to be employed may limit discretion that results in ascriptive allocation or rewards. Bureaucratic organizations could operate as “great levelers” (Baron et al. 2007) because formally established practices reduce subjectivity in personnel decisions, ensuring that opportunity and rewards reflect role-specific qualifications and performance (Tomasovic-Devey 1993; Cook and Waters 1998; Bielby 2000; Reskin 2000; Elvira and Graham 2002).

But if a theory of labor market meritocracy is to be tested, the specific factors leading to equal opportunity among college graduates of different social origins should be specified. By drawing on the literature on labor market discrimination based on race and gender, I focus on two processes leading to ascription-based discrepancies: allocative inequality and within-occupation differences in economic rewards (Treiman and Hartmann 1981; England 1992; Petersen and Morgan 1995; Padavic and Reskin 2002; Petersen and Saporta 2004). *Allocative inequality* refers to differences in occupational allocation, so that members of groups defined by ascription are concentrated in relatively low-paying occupations. *Within-occupation rewards inequality* emerges when members of disadvantaged ascriptive groups receive lower economic returns than their advantaged peers even if placed in the same occupations.⁵ To date, assessment of these processes has focused on gender and race/ethnicity as ascriptive sources of disparities, but the theoretical framework can be

⁵ A third process highlighted by the labor market literature is “valuative inequality,” whereby occupations held primarily by an ascriptive group are paid less than others with similar requirements, because of the devaluation of the ascriptive group—e.g., women or people of color (England 1992). Its examination requires detailed assessment of occupation characteristics and skill requirements, which is beyond the scope of this study.

extended to class background. As mobility researchers have suspected, it is plausible that the bureaucratic organizations that employ college graduates disregard the “advantages of birth” in allocation and rewards, resulting in a weak intergenerational association.

I combine, then, the literatures on horizontal stratification and ascriptive labor market inequality to examine the “meritocratic power” of a college degree. Specifically, I examine the extent to which college graduates of different social backgrounds are allocated to different occupations (allocative inequality) and receive different levels of earnings within the same occupations (within-occupation inequality). Given that the type of human capital that individuals acquire in their postsecondary education severely constrains their occupational placement and earnings (England 1992, chap. 2; Shauman 2006), understanding differential allocation and rewards requires examining educational horizontal stratification processes that precede labor market entry, a task that I also undertake here.

VARIABLES, DATA, AND ANALYTICAL STRATEGY

Measuring Mobility: Alternative Measures of Socioeconomic Standing

Hout’s (1984, 1988) finding of a weak intergenerational association among college graduates was very specific: a college degree erases the influence of parental occupational position on the occupation that adult children occupy.⁶ Occupational position is one among several indicators of socioeconomic standing, and, as any operational measure, it has weaknesses and strengths. A comprehensive analysis of mobility requires considering diverse measures of socioeconomic well-being used by the sociological and economic literature, including social class, occupational status, individual earnings, and total family income.

Social classes are occupational groupings based on the labor market resources controlled by individuals and on their working conditions. Although the class approach has been used to explain a broad set of phenomena including collective identity, political participation, and social conflict (Wright 2005; Goldthorpe 2007, chap. 6), stratification research focuses on the consequences of class position for economic well-being and life chances, as expressed in outcomes such as income, health, and wealth (Grusky and Weeden 2006). The class perspective offers a multidimensional approach to stratification, accounting for different sources of in-

⁶ More precisely, Hout found that a college degree erased the vertical dimension of the intergenerational occupational association, in which occupation is measured by 17 aggregate groups (used by Blau and Duncan [1967] and Featherman and Hauser [1978]) and the vertical dimension is assessed by the mean socioeconomic status of each group.

equality, such as property ownership, workplace authority, and industrial sector. For instance, a class-analytic approach will establish a distinction between manual operatives, clerical workers, and farm owners even if these occupational groups have identical levels of earnings, under the assumption that, given the different assets they control, they will be differently affected by economic and institutional factors such as technological innovation or labor market and welfare policies (Breen and Whelan 1996). Consequently, the analysis of class mobility is not restricted to movements up and down a socioeconomic ladder, but it includes structural barriers emerging from the ownership of specific labor-market assets—for example, the direct inheritance of property among business owners and sector barriers between agricultural and nonagricultural occupations.

Occupational status (*socioeconomic status* [*SES*]) scales rank detailed occupational categories on the basis of the educational attainment and earnings of their incumbents. The concept was introduced by Duncan (1961), who regressed the prestige score of 45 well-known 1950 census occupational titles on the level of education and income of occupational incumbents. The coefficients obtained for each partial predictor were then used as weights to rank all census occupations. Updated indexes recalibrate the weights attached to education and income, and account for the upgrading of the American occupational structure and for gender differences in occupational participation (Stevens and Featherman 1981; Nakao and Treas 1994; Hauser and Warren 1997).

Measures of occupational status share with social class important advantages for the analysis of mobility. The class and status position of individuals appears to stabilize early in their life course, and little variation is observed after the mid-thirties, a stage consequently called “occupational maturity” (Goldthorpe 1980, pp. 51–52, 69–71; Breen 1994). As a result, measures of class and status are less volatile and less subject to measurement error than alternative economic measures such as earnings and income. In contrast to class, occupational status provides a one-dimensional socioeconomic hierarchy, claimed to be an excellent proxy for long-term economic well-being or “permanent income,” even better than one-time measures of income themselves (Goldberger 1989; Zimmerman 1992; Hauser and Warren 1997).

However, classes and occupational status categories are aggregated occupational groups. Not surprisingly, a large part of economic inequality occurs within them (Weeden et al. 2007; Kim and Sakamoto 2008). Depending on the question at hand, this may be a serious limitation. Consider, for instance, the widening economic inequality in the United States since the 1980s, which has been mostly driven by disparities at the top of the economic distribution (Autor, Katz, and Kearney 2006). This substantial change would be largely missed by accounts of stratification based

on aggregate classes. In contrast, measures of earnings capture inequality at the most disaggregate individual level, and they therefore account for hierarchical differences within occupational categories.

Like class and status, earnings provide a measure of well-being strictly based on the labor market. As a result, they do not include those who are not working or extraoccupational resources, such as financial assets and public and private transfers. These extraoccupational resources are central at either extreme of the economic distribution—among the “underclass” poorly attached to the labor market (Grusky and Weeden 2008) and among the “overclass,” whose income largely depends on returns to capital. By focusing on the family rather than the individual or the occupational group as a unit of analysis, measures of total family income assess the economic position of those not in the labor force and include occupational and extraoccupational sources of well-being. Furthermore, this measure accounts for family-level dynamics, such as spousal selection (assortative mating) and intrahousehold division of labor, and for institutional arrangements that may mediate the consequences of economic factors on the household’s well-being. These factors have been shown to play a crucial role in the transmission of advantage across generations and over the life course (Chadwick and Solon 2002; Ermisch, Francesconi, and Siedler 2006), rendering total family income as perhaps the best measure of economic well-being.

This stylized review suggests that social class, occupational status, individual earnings, and total family income capture different dimensions of economic prospects, and they therefore provide distinct, complementary information about the mobility process (Hauser 1998; Bjorklund and Jantti 2000; DiPrete 2002; Beller and Hout 2006). Different measures of economic standing will provide a dissimilar evaluation of intergenerational mobility to the extent that the distributions of these measures are only weakly correlated with each other, and, crucially, to the extent that the deviations across distributions are strongly correlated across generations (for a simple and illuminating formal model, see Bjorklund and Jantti [2000, pp. 24–26]). Furthermore, family income mobility may provide the strongest test of the meritocratic power of a college degree, insofar as it includes extraoccupational resources and family strategies—such as direct parental transfers of wealth and assortative mating (McGarry and Schoeni 1995; Chadwick and Solon 2002)—that can alter, or even offset, labor market mobility. In order to provide a comprehensive assessment of the meritocratic power of a college degree I evaluate intergenerational mobility using all four indicators of economic well-being.

Data

Data for this study are drawn from five sources. These include the General Social Survey (GSS), the National Longitudinal Survey of Youth (NLSY79), the Panel Study of Income Dynamics (PSID), a merged sample based on the National Longitudinal Surveys Original Cohorts (NLS), and the Baccalaureate and Beyond Longitudinal Study (B&B), 1993–2003. The first four surveys are used to analyze intergenerational mobility across levels of schooling. The GSS is a cross-sectional survey representative of the U.S. population, conducted annually between 1972 and 1994, except for 1979 and 1981, and biannually thereafter. I pool surveys from 1996 to 2006 to study contemporary mobility patterns. A pooled earlier GSS sample from 1972–83 is also used to examine intergenerational mobility of BA holders and advanced-degree holders separately in the past. Male and female respondents ages 25–64 are selected in each survey.

The NLS Original Cohorts surveys, initiated in the late 1960s, consist of four surveys: mature and young women, and older and young men. The mature women survey started in 1967 with 5,083 women ages 20–44, and the young women survey started in 1968 with a cohort of 5,159 women ages 14–24. Both surveys ceased in 2003. The older and young men surveys started in 1966 and included 5,020 men ages 45–59 and 5,225 men ages 14–24, respectively. Both concluded in 1981. A unique aspect of the NLS Original Cohort surveys is that at their inception, half of the mature women, one-third of the older men, and three-quarters of both young men and women cohorts shared a household with another cohort member. I exploit this feature to merge them, creating an intergenerational data set to complement the earlier GSS sample in the study of mobility among BA holders and advanced-degree holders in the past. These data will be used as baseline for comparison with the current findings. Creating this baseline is necessary because no prior study analyzes BA holders and advanced-degree holders separately.

The NLSY79 is a nationally representative sample of 12,686 youths born between 1957 and 1964, who were 14–22 years old when they were first surveyed in 1979. These individuals have been interviewed annually through 1994 and biennially thereafter. I evaluate intergenerational processes by combining parental information obtained in the first wave with adult children's information obtained from recent waves between 1996 and 2006. The analysis considers all NLSY79 respondents (born between 1957 and 1965), except for the analysis of income mobility, which is restricted to respondents born between 1960 and 1964, as explained in detail below.

The PSID began in 1968 with a national probability sample of about 4,800 families. The sample has been reinterviewed every year through

1997 and biennially since then. The survey follows children from the original PSID families as they transition to adulthood and form their own households. The PSID includes two components: the Survey Research Center (SRC) component is a nationally representative sample of families in 1967; the Survey of Economic Opportunity (SEO) component oversamples low-income families in 1967. I use both components and select children born between 1951 and 1966 who were observed as children in an original PSID household and later as adult heads, or spouses/partners of heads.⁷

The B&B is a nationally representative sample of about 11,000 graduating college seniors in 1993, who were reinterviewed in 1994, 1997, and 2003. The B&B examines students' education and work experiences as they complete a bachelor's degree and includes information on students' social background. I exploit the restricted-access version of this survey—which contains the name of the higher education institution from which individuals graduated—to examine educational horizontal stratification among BA and graduate degree holders.

All surveys are weighted to represent the national population of interest. In all cases, parental measures refer to the male head of the household. If no adult male was present, female-head measures were used. In some instances “parents” are not the child's biological parents, an acceptable choice given that the objective of this analysis is not to evaluate genetic inheritance but to assess the association of the economic conditions when growing up with current economic circumstances (Solon 1992). The integration of five data sets addresses specific weaknesses of each one and allows for a comprehensive analysis of intergenerational mobility. First, no single survey includes information about all measures of economic standing necessary for this analysis. I therefore use the GSS to examine class and occupational status mobility, the NLSY79 to study occupational status and income mobility, and the PSID to analyze mobility in earnings and total family income. While the GSS describes the entire adult population over the years considered, the NSLY79 describes younger baby boomers born 1957–65, and the PSID captures baby boomers born during the 1950s and early 1960s. The NLS Original Cohorts merged sample allows the analysis of occupational status and total family income mobility, separately for BA holders and advanced-degree holders in the past, complementing the use of the earlier GSS surveys used to analyze social class

⁷ Children born before 1951 are excluded because they were age 18 or older in the first wave of the survey, and their inclusion would overrepresent children who leave home after the normative age. Children born after 1966 were excluded to allow for multiple annual observations of income and earnings (as explained in detail in the variable description section).

and occupational status mobility. Finally, none of the nationally representative surveys contains either a sufficient number of cases or information on institutional characteristics at the college level needed to examine the role of educational horizontal stratification on mobility outcomes. I thus resort to the B&B, which contains detailed information on the higher education institution attended among a cohort of college graduates.

Variable Operationalization

The analysis considers intergenerational mobility in terms of social class, occupational status, earnings, and family income across levels of educational attainment. Five categories of educational attainment are distinguished: less than high school, high school graduate, some college (including associate degree), college graduate, and advanced degree. Construction of the socioeconomic standing measures is computationally intensive because codes vary across data set, adjustments are implemented to reduce bias, and alternative measures of each indicator are used to assess their validity. Social class is measured by an adjusted version of the widely used EGP class schema (Erikson and Goldthorpe 1992, pp. 35–44), with the following classes: professionals and managers, higher level (typical occupations: medical doctor, accountant, architect), professionals and managers, lower level (typical occupations: teacher, science technician, appraiser), clerical workers (secretary, cashier, shop salesperson), self-employed, skilled manual workers (industrial mechanic, cook, plumber), and unskilled manual workers and farmers (farmhand and laborer, construction laborer, personal care assistant). Construction of class categories from detailed occupational information uses two alternative algorithms, devised by Ganzeboom and Treiman (2003) and Morgan and Tang (2007, app. S).⁸ Class position is measured at the individual level for both men and women, a strategy that departs from the classical “dominance” approach in which women’s class position is determined by the family member with higher employment status and level of employment, usually the male partner (Erikson and Goldthorpe 1992, chap. 7). Parental class, and all other measures of socioeconomic standing, correspond to the male (or female if no male was present) head of the household when the respondent was growing up.

⁸ The former uses the International Labour Organisation’s 1998 International Standard Classification of Occupations (ISCO-88), whereas the latter utilizes the 1980/90 Census Occupation Classification (COC). Findings are nearly identical across operationalizations, and therefore only those based on Ganzeboom and Treiman (2003) are presented (alternative results available from the author upon request).

Occupational status scores are obtained using three formulations—the original Socioeconomic Index (Duncan 1961), a revised version by Stevens and Featherman (1981), and Hauser and Warren's (1997) occupational education formulation. Upon ascertaining that results are similar across formulations, only those based on status scores by Stevens and Featherman (1981) are presented (alternative results available from the author upon request). Occupational status mobility is analyzed using the NLS Original Cohorts, NLSY79, and GSS. The construction of status scores utilizes detailed occupational information and implements different procedures in each survey. In the NLSY79, parental status is retrospectively reported for the year when the respondent was 14 years old, and the children's measure averages the status scores between 1996 and 2006. The NLSY79 codes parental and children's occupation using the 1970 census codes until 2000, and the 2000 census codes thereafter. I back-coded children's occupational titles from 2000 into the 1990 codes, and from 1980 into 1970 values (recoding from 1990 to 1980 is trivial) using the algorithms provided by Weeden (2005*a*, 2005*b*). I then constructed measures of status based on the 1970 codes. In the GSS, measures of parental status correspond to the year when the respondent was 14 years old, as retrospectively reported by the respondent, and children's status scores are current measures. Parental and children's occupational measures are back-coded from the 1980 to 1970 census codes to create measures of status by Duncan (1961) and Stevens and Featherman (1981); and forward-coded from 1980 to 1990 census codes to create measures produced by Hauser and Warren (1997).⁹ In the NLS Original Cohort merged data sets, Duncan's parental occupational status measures were averaged over 1967, 1969, and 1971.

I construct a measure of hourly earnings as the ratio of annual earnings to annual hours of work, in order to adjust for differences in labor supply (Altonji and Dunn 2000). Whereas single-year measures of class position and occupational status are adequate indicators of long-term standing provided that individuals have reached "occupational maturity," this is not the case for earnings and income. As the economic literature shows, single-year measures may result in underestimation of the intergenerational association due to transitory fluctuations. It may also suffer from life-cycle bias associated with the changing variance in the transitory component of earnings and from age-related bias emerging from systematic variation in the age-earnings slopes (Solon 1992; Mazumder 2005; Haider and Solon 2006). Empirical analysis suggests that measures at around age 40 are the best proxies for lifetime standing. I therefore im-

⁹ The algorithm for forward-coding 1980 census occupation codes into 1990 census occupation codes was written by the author, and it is available upon request.

plement two methods to reduce biases. First, I produce the average of earnings and income measures over several years. Second, I impose age restrictions in the definition of parental and children's samples, centering measurements around age 40.

Intergenerational earnings mobility analysis is based on the PSID. The measure of parental hourly earnings averages annual figures over children's ages 14–22, for a maximum of nine measures. I exclude cases in which fewer than four annual measures are observed and those in which parental median age over the period considered is less than 30 and more than 65. Ideally, parental earnings for all years since the child was born would be used to reduce error associated with the transient component of earnings (Mayer and Lopoo 2005). However, the earliest age cohort included in the sample, born in 1951, starts being observed at age 16. I therefore restrict observations of parental income to age 14 or older in order to obtain several annual parental earnings observations for all children. Children's hourly earnings are averages over the ages of 38 and 42. Earnings measures are transformed into constant dollars, averaged across years, and logged.

Income measures include all sources of monetary income for all household members. The analysis of intergenerational income mobility utilizes the PSID, NLSY79, and NLS Original Cohorts. In the PSID a similar strategy to that described for earnings was implemented. In the NLSY79 the parental income variable pertains to total family income during 1978, as reported in the first interview wave. Information on family income was collected only for respondents living with parents in 1979. Given that many youths leave the parental household upon completing high school, those who remain with their parents after age 18 may be a selected sample. To avoid selectivity bias, I restrict the analysis of intergenerational income mobility to respondents 18 years old or younger in 1979. The measure of adult children's income is their total family income averaged over the 1996–2002 period (corresponding to the children's current ages 31–45).¹⁰ In the NLS Original Cohorts merged data set, the paternal income measure is the average over 1965–70. As in the case of the NLSY79, parental income information is available only for children coresiding with parents, so children 19 or younger were selected to avoid selectivity bias. Children's income is measured as the average of years 1980, 1982, and 1983 for women and 1978, 1980, and 1981 for men, so they were in their mid-

¹⁰ Ideally, measures for 2004 and 2006 would also be included. Unfortunately, at the time of this writing, the publicly available NLSY79 data set does not include information about respondent's partner's income if the respondent was in a cohabitation for these years.

30s.¹¹ All income measures are converted into constant dollars, averaged across pertinent years, and logged.

Methods

The analysis of class mobility across levels of schooling uses the log-multiplicative layer effect model, also known as uniform-difference (*unidiff*) model (Erikson and Goldthorpe 1992; Xie 1992) for the three-way table of class of origin by class of destination by education. The unidiff model postulates a similar pattern of intergenerational association across levels of schooling and captures variation in the strength of the association through a level of schooling-specific multiplicative parameter, with the coefficient for the lowest level of schooling (less than high school) normalized to unity and used as a reference category. I model the baseline pattern of association using different specifications and select the one that achieves the best fit on the basis of standard fit statistics, including the likelihood-ratio test (L^2) and the Bayesian information criterion (BIC).

The analysis of occupational status, earnings, and income mobility utilizes a regression formulation in which children's outcome is regressed on the parental attribute and a cubic-formulation of age to control for life-cycle effects on socioeconomic attainment. In order to evaluate variation across educational levels, I pool samples across levels of schooling and add indicator variables for each educational level and a full set of interactions between level of schooling and the predictors. The model is formulated as follows:

$$y_{ij} = \beta_{0j} + \beta_{1j} \times x_{ij} + A_{2j} \times x_{ij} + A_{3j}^2 \times x_{ij} + A_{4j}^3 \times x_{ij} + \varepsilon_{ij},$$

where i identifies individuals, j identifies educational levels ($J = 1, \dots, 5$), y identifies the socioeconomic outcome of interest, x identifies parental socioeconomic predictors, the A terms adjust for age, and ε is a stochastic component. The parameter estimates obtained from the model are identical to those that would be obtained in separate regressions for each educational level. Note that the coefficients describing the overall intergenerational association across all educational groups are not weighted averages of educational level-specific coefficients because they include information on both within-group and between-group variation (as described by the literature on hierarchical and panel models; e.g., Raudenbush and Bryk 1992, pp. 135–42; Kennedy 2008, pp. 281–86). In the case of earnings and total family income mobility, given the double-log for-

¹¹ As discussed, income measures from this early stage of the occupational career are not ideal, but later measures are unfortunately unavailable given that the surveys were discontinued. Given this limitation, parameter estimates capturing overall association may be biased downward.

mulation of the variables, the regression coefficients are elasticities, which represent the fraction of economic advantage that is on average transmitted across the generations.¹² In both the PSID and NLSY79, I allow families to contribute as many parent-child pairs to each data set as meet screening rules. Cluster-robust standard errors account for the clustering of children within households.

FINDINGS: IS A COLLEGE DEGREE STILL THE GREAT EQUALIZER?

Social Class Mobility

Analysis of class mobility examines the three-way table cross-classifying class of origin by education by class of destination. Table 2 compares the fit of several models separately for men and women. Model 1 assumes that class of destination is independent of class of origin, after controlling for the marginal distributions. As expected, it fits the data poorly, and it is only used as baseline for comparison. Model 2 flexibly captures the intergenerational association using a full-interaction formulation, but it constrains it to be constant across educational levels. Model 3 addresses the main question of this analysis: is the intergenerational association weaker among college graduates than among those with lower levels of education? It relaxes the equality constraint and models variation in strength of the association across levels of schooling by a set of unidiff parameters. The model explains a large amount of additional association when compared to model 3. The unidiff parameters reveal a U-shaped pattern of association across levels of schooling for both men and women. The association is strongest among those with less than a college degree; it substantially weakens among college graduates and then regains strength among advanced-degree holders. Since unidiff coefficients can be interpreted as proportional changes with respect to the reference category, it can be concluded that the intergenerational association among male college graduates is only 12% as large as the association among men with less than high school, and it is only 14% among women.

Full interaction is a flexible but not very parsimonious formulation to capture the portion of the association that is common across levels of schooling. Not surprisingly, the full interaction model (model 2) fits worse than the independence model (model 1) according to BIC, a fit statistic

¹² Correlation coefficients—which adjust the measure of intergenerational association for changes in the distribution of the variables across generations—were also obtained for all analyses. Substantial results are identical when correlation coefficient is used, indicating that distributional changes across generations (in particular, the increase in economic inequality since the late 1970s) do not affect the patterns found.

TABLE 2
UNIDIFF MODEL FOR THE VARIATION OF INTERGENERATIONAL CLASS MOBILITY ACROSS LEVELS OF SCHOOLING, 1996-2006

Model	G^2	df	BIC	Association Explained
Men 25-64 years old:				
1. Independence (OE DE)	205.37	125	-864.04	.00
2. Constant FI (OE DE OD)	103.92	100	-751.60	.49
3. Unidiff FI (OE DE OD _{FI,U})	86.27	96	-735.03	.58
4. Constant crossing (OE DE OD _{CR})	122.94	120	-903.26	.40
5. Unidiff crossing (OE DE OD _{CR,U})	106.40	116	-885.60	.48
6. Unidiff crossing-constrained (OE DE OD _{CR,C}) ...	107.20	118	-901.86	.48
7. Scaled association (OE DE OD _{Scal,U})	134.69	120	-891.31	.34
		High School Graduate	Some College	College Graduate
		Less than High School		Advanced Degree
Unidiff parameters model 3	1.00	.50	.44	.12
Unidiff parameters model 5	1.00	.51	.41	.17
Unidiff parameters model 6	1.00	.45	.45	.19
Scaled association parameters model 7 .....	.124***	.060***	.046***	.032
	(.026)	(.012)	(.009)	(.012)
				(.024)

Women 25–64 years old:

	G^2	df	BIC	Association Explained
1. Independence (OE DE)	218.10	125	-871.90	.00
2. Constant FI (OE DE OD)	123.70	100	-748.60	.43
3. Unidiff FI (OE DE OD _{FLV})	108.50	96	-728.90	.50
4. Constant crossing (OE DE OD _{CR})	157.40	120	-892.60	.28
5. Unidiff crossing (OE DE OD _{CR,V})	143.20	116	-868.70	.34
6. Unidiff crossing-constrained (OE DE OD _{CR,C})	145.25	118	-884.02	.33
7. Scaled association (OE DE OD _{LbyL})	156.48	120	-889.92	.28

	Less than High School	High School Graduate	Some College	College Graduate	Advanced Degree
Unidiff parameters model 3	1.00	.31	.28	.14	.44
Unidiff parameters model 5	1.00	.55	.37	.17	.29
Unidiff parameters model 6	1.00	.44	.44	.19	.19
Scaled association parameters model 7	.140*** (.032)	.049*** (.011)	.042*** (.009)	.013 (.012)	.035 (.027)

NOTE.—Data from GSS (General Social Survey) 1996–2006 cumulative file. O = class origin, D = class destination, E = education, FI = full interaction model, CR = crossing model, CR-C = crossing model imposing equality constraint to parameter estimates capturing association among college graduates and advanced-degree holders, LbyL = linear by linear association model ranking classes by mean occupational status. Class measured using sixfold version of EGP class schema; see text for details. Numbers in parentheses are SEs.

* $P < .05$.

* $P < .01$.

* $P < .001$.

well known to favor parsimony (Weakliem 1999). Therefore, I use the more parsimonious crossing model to account for the origin-destination association (model 4). The crossing model implies that mobility is a process of crossing barriers of different heights and that each barrier's height is determined by which classes it separates, using only $j - 1$ parameters in addition to independence, where j is the number of classes (e.g., Mare 1991). The crossing model provides a better fit on the basis of BIC. Model 5 allows the strength of the crossing parameters to vary across levels of schooling, substantially improving the fit on the basis of the likelihood-ratio test ($P = .002$ among men, $P = .006$ among women). The results from model 5 are nearly identical to model 3. For both men and women, the intergenerational association is substantial among those with less than a college degree; it weakens considerably among college graduates, to partially reemerge among advanced-degree holders.

Finally, model 7 is a scaled association formulation in which origin and destination classes are ranked by their mean occupational status and the association is captured by a single parameter akin to a regression coefficient (Goodman 1979). This parameter is allowed to vary across levels of schooling. The scaled association model focuses on hierarchical distances across classes. It therefore provides an evaluation of the vertical dimension of mobility closer to the one implemented by Hout (1984, 1988) in the original finding about the meritocratic power of a college degree. The educational level-specific coefficients are extremely consistent with those from the full interaction and crossing specifications. They indicate that, for both men and women, the association is substantial among those without a high school diploma; it weakens as education increases to become not significantly different from zero among college graduates and then regains strength among advanced-degree holders, although the latter coefficient fails to reach significance.

Based on these findings, a college degree appears to erase advantages of origins in the competition for socioeconomic success, at least when success is measured as class position. Unexpectedly, the intergenerational association appears to regain strength among advanced-degree holders. It should be noted, however, that the difference between college graduates and advanced-degree holders is not significant. The fit of model 6, which constrains the association to be the same across the two groups, is not worse than model 5 among both men ($P = .75$) and women ($P = .72$); and parameter estimates for college graduates and advanced-degree holders are not significantly different from each other in the scaled association model. However, the substantial increase in the magnitude of the intergenerational association among advanced-degree holders is consistent across specifications, and it calls for further examination of other types of mobility.

Occupational status mobility.—Table 3 presents the analysis of intergenerational status mobility across levels of schooling for men and women, based on the GSS and the NLSY79. Note that these surveys represent different populations. While the GSS represents the entire adult population over the years 1996–2006, the NLSY79 describes the young baby-boomer cohort. The analysis is based on regression of adult children's status on parental status across levels of schooling.

Among men, the intergenerational status association is substantial among those with less than a college degree, but it fully disappears among college graduates, as indicated by a regression coefficient not significantly different from zero. As in the case of class mobility, the influence of social origins on sons' economic attainment regains strength among those who hold an advanced degree. This U-shaped pattern emerges in both surveys, although the coefficient for advanced-degree holders is significantly different from zero only in the NLSY79. A gender comparison offers interesting differences. The overall intergenerational status association is weaker for women than for men: the coefficient is about .35 for men, whereas it reaches only .26 and .29 among women in the GSS and NLSY79, respectively. This is expected. Given that parental status refers to the father or male head unless the household was headed by a female, women's mobility typically involves a "double transition" across generations and across gender (Hout 1988). In the case of the GSS, a U-shaped pattern across levels of schooling emerges for women, whereas in the NLSY79 the intergenerational transmission is equally weak for college graduates and advanced-degree holders.

The results from the occupational status mobility analysis are important in three respects. First, they closely resemble findings for class mobility. Second, they are very similar across surveys—particularly for men. This suggests that the "meritocratic power" of a college degree is not exclusive to the young baby boomers, who experienced a decline in college graduation rates (see fig. 1). Third, even if in some instances the coefficients for the intergenerational association fail to reach significance among advanced-degree holders, they are usually larger in magnitude than the coefficients for college graduates. These results are still tentative, however. Both social class and occupational status hierarchies are insensitive to individual-level variation within occupations and to extraoccupational determinants of economic standing. To the extent that these determinants are weakly correlated with the distribution of occupational advantage, and highly correlated across generations, a different picture could emerge when earnings or family income are analyzed. I now turn to these indicators.

Earnings mobility.—Table 4 presents the analysis of intergenerational hourly earnings mobility for men and women, based on the PSID. Among

TABLE 3
 INTERGENERATIONAL OCCUPATIONAL STATUS ASSOCIATION, MEN AND WOMEN 25-64 YEARS OLD, 1996-2006 (GSS),
 MEN AND WOMEN BORN 1957-64, 1996-2006 (NLSY79)

	MEN			WOMEN			
	NLSY79		GSS	NLSY79		GSS	
	<i>b</i>	<i>N</i>	<i>b</i>	<i>b</i>	<i>N</i>	<i>b</i>	
Less than high school ...	.128** (.044)	795	.163** (.042)	.067 (.047)	581	.241*** (.084)	510
High school graduate ...	.130** (.028)	1,381	.150** (.036)	.088** (.033)	1,424	.116*** (.025)	1,803
Some college .....	.144** (.033)	756	.139** (.024)	.081** (.029)	1,575	.086*** (.022)	2,006
College graduate	-.010 (.033)	544	.008 (.028)	.038 (.028)	1,030	.024 (.024)	1,248
Advanced degree .....	.116** (.032)	221	.032 (.033)	.039 (.041)	563	.053 ⁺ (.032)	574
All .....	.350** (.018)	3,697	.334** (.015)	.258*** (.016)	5,173	.289*** (.014)	6,141

NOTE.—Data taken from GSS (General Social Survey), and NLSY79 (National Longitudinal Survey of Youth). Socioeconomic status measured by Stevens and Featherman's (1981) revised socioeconomic index of occupational status. Children's status is average 1996-2006 score in NLSY79. Numbers in parentheses are SEs.

⁺ $P < .10$.

* $P < .05$.

** $P < .01$.

*** $P < .001$.

College Degree the Great Equalizer?

TABLE 4
INTERGENERATIONAL HOURLY EARNINGS ASSOCIATION: MEN AND WOMEN
BORN 1951-66

	MEN		WOMEN	
	<i>b</i>	<i>N</i>	<i>b</i>	<i>N</i>
Less than high school ...	.353* (.142)	65	.351 (.283)	27
High school graduate ...	.206* (.088)	284	.191+ (.109)	212
Some college .....	.221+ (.113)	188	.180+ (.102)	180
College graduate .....	.141 (.123)	177	.095 (.129)	134
Graduate degree .....	.468*** (.131)	31	.042 (.164)	45
All .....	.361*** (.060)	745	.306*** (.071)	598

NOTE.—Data taken from PSID (Panel Study of Income Dynamics). Parental earnings are averaged over years when a child was ages 14–22. A case is excluded if less than four annual earnings measures are available for parents. Children’s earnings are averages over ages 38–42. Numbers in parentheses are SEs.

+ $P < .10$.

* $P < .05$.

** $P < .01$.

*** $P < .001$.

men, a striking U-shaped pattern emerges. The intergenerational earnings association is strongest in the two extremes of the educational distribution—those with less than a high school degree and advanced-degree holders—and it is not significantly different from zero among college graduates. This finding indicates that the pronounced mobility among college graduates is not an artifact of measuring it at the aggregate occupational level. As found for class and status mobility, a college degree appears to still be a great equalizer among BA holders but not among advanced-degree holders (sample sizes for advanced-degree holders are, however, very small, so results should be seen as preliminary).

The story is less clear among women. Not surprisingly, the overall intergenerational association is weaker than for men. Given that parental earnings pertain to male heads, this finding is probably related to the pronounced occupational sex segregation in the U.S. labor market, which gives rise to earnings disparities (e.g., Petersen and Morgan 1995). Also, a clear U-shaped pattern across levels of schooling fails to emerge. Even if the intergenerational association is weaker among college graduates than among women with lower levels of educational attainment, these differences are not statistically significant. Furthermore, the influence of social origins fails to regain strength among advanced-degree holders.

Thus, in the case of women, we cannot reject the hypothesis of similar levels of intergenerational association across levels of educational attainment.

Family income mobility.—The analysis of class, occupational status, and earnings mobility restricts measurement of economic well-being to the labor market, excluding nonoccupational resources and family-level processes. Total family income considers these dimensions, providing a stronger test of null influence of advantages of origin among college graduates. As mentioned, family dynamics such as parental transfers and assortative mating may induce intergenerational reproduction in the context of—or precisely as a reaction to—occupational mobility. The putative “meritocratic power” of a college degree found for occupation-based indicators of socioeconomic standing may be an artifact of the narrow focus on the labor market. Table 5 presents the analysis of intergenerational income mobility based on the NLSY79 and the PSID to address this question.

Before moving to the core of the analysis, it is interesting to note that the intergenerational income association is substantially stronger than the earnings association. Using the PSID and identical strategies to code the variables, the intergenerational income association is .448 for men, which compares with an earnings association of .361. For women, the respective figures are .528 and .306. This substantial gap is consistent with other studies and suggests that income captures extraoccupational sources of economic well-being that are directly transmitted across generations (Mazumder 2005). Furthermore, in contrast to occupation-based measures of standing, the overall intergenerational association is equally strong among men and women. Gender similarity highlights the contribution of assortative mating and other family-level processes in the intergenerational transmission of advantage (Chadwick and Solon 2002; Ermish et al. 2006).

As for the main question of this analysis, a striking U-shaped pattern of association across levels of schooling emerges among men. The influence of parental income on sons' income level is substantial among those without a college degree, it declines to insignificance among college graduates, and then it regains strength among advanced-degree holders, to levels even higher than for those with less than high school (again, PSID sample sizes are small, so a note of caution is warranted). Remarkably, this pattern is similar across data sets, providing reassurance against sample idiosyncrasies. Among women, the U-shaped pattern is less pronounced but still visible in the NLSY79, whereas there appears not to be substantial variation in mobility across levels of schooling according to the PSID. Together with the weak intergenerational earnings correlation among women (also obtained from the PSID), this is the only instance in which findings depart from a U-shaped pattern across levels of schooling. The overall

TABLE 5
 INTERGENERATIONAL FAMILY INCOME ASSOCIATION: MEN AND WOMEN BORN 1957-61 (NLSY) AND
 MEN AND WOMEN BORN 1951-66 (PSID)

	MEN				WOMEN			
	NLSY79		PSID		NLSY79		PSID	
	<i>b</i>	<i>N</i>	<i>b</i>	<i>N</i>	<i>b</i>	<i>N</i>	<i>b</i>	<i>N</i>
Less than high school ...	.312*** (.065)	541	.387*** (.145)	118	.200* (.086)	348	.489* (.192)	124
High school graduate ...	.198*** (.041)	783	.331*** (.090)	435	.338** (.044)	770	.404*** (.065)	580
Some college .....	.193** (.064)	432	.382*** (.083)	286	.151*** (.046)	557	.348*** (.066)	488
College graduate .....	.122 (.088)	298	.198+ (.110)	195	.137 (.075)	289	.380*** (.098)	233
Graduate degree .....	.401*** (.152)	117	.699** (.237)	31	.292*** (.091)	129	.401 (.312)	51
All .....	.411*** (.030)	2171	.448** (.051)	1,065	.371*** (.029)	2,093	.528*** (.041)	1,476

NOTE.—Data taken from NLSY79 (National Longitudinal Survey of Youth); parental income measured in 1978 when respondents were 13-17 years of age. Children's income averages 1996-2002 values. PSID (Panel Study of Income Dynamics): parental income is average across children's ages 14-22, excluding cases with fewer than four parental income observations. Children's income is average across ages 38-42. Numbers in parentheses are SEs.

+ $P < .10$.
 * $P < .05$.
 ** $P < .01$.
 *** $P < .001$.

findings are, however, clear: they indicate that intergenerational reproduction is pronounced among those with less than a college degree, that a bachelor's degree erases the influence of social origins, but that intergenerational reproduction reemerges among advanced-degree holders.

Change or Stability in Intergenerational Mobility among College Graduates?

Do the findings of virtually null intergenerational association among BA holders but pronounced intergenerational reproduction among those with an advanced degree identify change or stability over time? This question cannot be addressed by the current analysis given that all previous studies collapse these groups into a single "college graduate" category. In order to ascertain mobility trends, I examine the intergenerational socioeconomic association separately for BA holders and advanced-degree holders among adults during the 1970s and 1980s and use this analysis as baseline for comparison for current findings. I pool GSS surveys from 1972 to 1983 to examine class and occupational status mobility and use a merged sample from the NLS Original Cohorts data set to study mobility of occupational status and total family income.

The findings, reported in table 6, are unambiguous. In both samples, and for all measures of socioeconomic standing, the intergenerational association among both BA holders and advanced-degree holders is not significantly different from zero in the past, while there is a much stronger intergenerational correlation among those with lower levels of schooling. These findings indicate that the substantial mobility among BA holders reflects stability over time. In contrast, the strong intergenerational association among advanced-degree holders is a recent phenomenon, which sharply departs from the substantial mobility opportunities of those who attained an advanced degree a quarter century ago.

Intergenerational Mobility among College Graduates: Accounting for Mechanisms

The sharply different pattern of intergenerational mobility among BA holders vis-à-vis advanced-degree holders and the recent decline in mobility among the educational elite urges the question about mechanisms. As discussed in the background section, the literature has suggested that the labor market for college graduates is highly meritocratic, but no explicit definition or test of this hypothesis has been offered. In this section I examine two determinants of meritocratic outcomes, as highlighted by the educational stratification and labor market discrimination literatures: the extent to which individuals of different socioeconomic origins are al-

TABLE 6
 INTERGENERATIONAL CLASS, STATUS, AND INCOME ASSOCIATION: MEN AND WOMEN 25-64 YEARS OLD, 1972-83 (GSS),
 MEN BORN 1942-52 AND WOMEN BORN 1944-54 (NLS Original Cohorts)

	SOCIAL CLASS (GSS)		OCCUPATIONAL STATUS (GSS)		OCCUPATIONAL STATUS (NLS Original Cohorts)		INCOME (NLS Original Cohorts)	
	Men	Women	Men	Women	Men	Women	Men	Women
Less than high school ...	.284*** (.053)	.315*** (.072)	.203*** (.040)	.111*** (.021)	.385*** (.090)	.206** (.066)	.148 (.123)	.261* (.120)
High school graduate ...	.170*** (.037)	.293*** (.042)	.124*** (.030)	.126*** (.018)	.183*** (.044)	.093* (.041)	.165*** (.062)	.281*** (.053)
Some college .....	.070* (.031)	.129* (.052)	.097*** (.027)	.083*** (.024)	.090 ⁺ (.051)	.116*** (.036)	.076 (.052)	.290*** (.075)
College graduate .....	.028 (.038)	.017 (.089)	-.007 (.038)	-.035 (.036)	.032 (.057)	-.068 (.041)	.033 (.091)	.004 (.068)
Graduate degree	-.031 (.087)	.086 (.204)	-.004 (.040)	.028 (.052)	-.041 (.057)	.006 (.075)	-.042 (.107)	-.082 (.149)
All .....	.253*** (.016)	.490*** (.024)	.371*** (.017)	.333*** (.015)	.192*** (.023)	.324*** (.030)	.206*** (.032)	.337*** (.032)

NOTE.—Data taken from Pooled GSS 1972-83: parental class and status reported retrospectively by respondents, children's class and status are current measures reported by respondents. NLS Original Cohort mature women, young women, older men, and mature men merged data sets: parental measures are average over 1965-70, children's income is measured as the average of years 1980, 1982, and 1983 for women and 1978, 1980, and 1981 for men. Numbers in parentheses are SEs.

⁺ $P < .10$.
 * $P < .05$.
 ** $P < .01$.
 *** $P < .001$.

located into different types of postsecondary education—*horizontal stratification*—and the extent to which social origins shape *occupational allocation* and *within-occupation differences in economic rewards*.

The analysis for BA holders is presented in table 7. The top part of table 7 examines central dimensions of horizontal stratification—institutional selectivity and field of study—across socioeconomic background separately for men and women. The analysis of horizontal stratification is based on the restricted-access B&B data set, which identifies the institution from which individuals graduated. Institutional selectivity is measured by Barron's *Profiles of American Colleges*, which ranks institutions according to median SAT/ACT scores, high school class rank, average GPA, and percentage of applicants admitted. I classify institutions into three ordinal selectivity categories—high, medium, and low. Field of study distinguishes nine areas: education, business, computer science/engineering/math (CSEM), health, communication, humanities, biological sciences, social sciences, and a residual other category. These classifications are widely used by the literature on higher education (e.g., Thomas and Zhang 2005; Alon 2009). Given relatively small sample sizes by field of study, socioeconomic background is operationalized as tertiles of parental income.

The top part of table 7 shows that BA holders with origins in the wealthiest income tertile are more likely to attend selective institutions—among men, 30% with origins in the top income tertile vis-à-vis 12% among those in the bottom income tertile; among women, 21% vis-à-vis 13% among their poorest counterparts. The social-origins differences in field of study are relatively minor. Among men, advantaged BA holders are somewhat more likely to major in social sciences and less likely to major in education. No differences emerge in CSEM, humanities, and business. Among women, differences in field of study are virtually nonexistent. In sum, this assessment suggests relatively limited horizontal stratification among BA holders. The finding is not consistent with pronounced “effectively maintained inequality” among those with a terminal bachelor's degree.

In spite of moderate horizontal stratification at the college level, labor market dynamics may still differentially allocate or reward BA holders according to their socioeconomic background. The bottom part of table 7 examines whether BA holders of different social backgrounds display unequal labor market outcomes using the NLSY79.¹³ The leftmost set of

¹³ The B&B data set is not suitable for the examination of labor market outcomes because it was discontinued when respondents were in their early 30s, a stage in the life cycle that provides a poor proxy for permanent economic well-being among this highly educated group.

TABLE 7
EDUCATIONAL HORIZONTAL STRATIFICATION AND OCCUPATIONAL ALLOCATION AND REWARDS AMONG BACHELOR'S DEGREE HOLDERS

DISTRIBUTION OF COLLEGE SELECTIVITY AND FIELD OF STUDY BY SOCIAL ORIGINS (B&B 1993-2003)													
Field of Study													
Institutional Selectivity													
SOCIAL ORIGINS	Low (%)	Med. (%)	High (%)	Education (%)	Business (%)	CSEM (%)	Health (%)	Commun. (%)	Humanities (%)	Biology (%)	Soc. Sci. (%)	Other (%)	
Men:													
Lower	20	67	12	7	24	18	2	7	12	7	15	7	
Middle	13	71	16	2	24	17	3	7	15	7	15	8	
Upper	9	61	30	2	24	21	3	5	13	3	25	4	
Total	14	67	19	4	24	19	3	6	14	6	17	6	
Women:													
Lower	21	67	13	13	17	9	6	8	19	6	18	6	
Middle	17	70	13	13	17	5	9	10	15	4	20	7	
Upper	12	67	21	10	20	6	7	8	15	5	19	8	
Total	17	68	15	12	18	7	7	9	17	5	19	7	
DISTRIBUTION OF OCCUPATION HELD AND WITHIN-OCCUPATION EARNINGS BY SOCIAL ORIGINS (NLSY79)													
Occupational Allocation													
Manager (%)	Prof. (%)	CSEM (%)	Other (%)	Service (%)	Sales/Adm. (%)	Craft/Oper. (%)	Manager (%)	Prof. (%)	CSEM (%)	Other (%)	Service (%)	Sales/Adm. (%)	Craft/Oper. (%)
Within-Occupation Earnings													
Men:													
Lower	36	11	19	5	15	14	70,263	65,172	43,963	NA	51,013	NA	NA
Middle	46	13	7	6	14	13	73,674	62,305	52,751	NA	46,495	NA	NA
Upper	44	16	8	7	19	6	89,224	71,990	48,067	NA	77,462	NA	NA
Total	43	16	10	6	14	10	77,721	66,489	48,261	NA	58,323	NA	NA
Women:													
Lower	23	7	39	6	20	5	51,870	56,294	35,872	NA	24,466	NA	NA
Middle	28	7	34	5	24	1	46,105	47,427	38,458	NA	32,083	NA	NA
Upper	31	9	27	6	28	0	49,233	44,830	41,902	NA	44,659	NA	NA
Total	28	8	32	6	24	2	49,069	49,517	38,744	NA	33,763	NA	NA

NOTE.—Social origins measured as parental income tertiles. Children's occupational and earnings outcomes measures at age 40 or closest if age 40 was unavailable. See text for details. Institutional selectivity based on Barron's *Profiles of American Colleges* Ranking. Commun.: communication; Soc. Sci.: social sciences; Prof.: professional; CSEM: computer science, engineering, and math; Adm.: administration; Oper.: operatives. Occupational categories identified as NA contain small sample sizes, which prevents reliable calculation of mean earnings.

columns evaluates occupational allocation of individuals by parental income tertile, distinguishing six occupational groups: managers; professionals in CSEM; professionals in other fields; service workers; sales and administration; and craft, operatives, and primary workers. While a more finely grained occupational classification would certainly be preferable, the limited sample sizes constrain further disaggregation.

The results are clear and consistent across genders. The allocation into occupational groups is remarkably even across social backgrounds. Among men, the main sources of differential allocation are the higher proportion of upper-background college graduates with a managerial job—44% versus 36% of their less advantaged counterparts—compensated by the higher rate of lower-background individuals who hold professional occupations in fields other than CSEM; and craft/operative jobs. Among women, allocative differences are even weaker, with a slightly higher proportion of high-income female college graduates in sales—28% vis-à-vis 20% among lower-background BA holders—and a lower proportion in “other professional” jobs. Social-origins-based differences pale when compared, for example, with occupational gaps across gender (Peterson and Morgan 1995; Padavic and Reskin 2002).

As the literature on labor market discrimination indicates, even in a context of equal occupational allocation, class-based assets such as cultural capital and social connections may result in earnings differences by social background within occupation. The rightmost columns in table 7, labeled “Within-Occupation Earnings,” address this hypothesis. Again, the gradient based on socioeconomic background is discernible but not prominent. If we consider the two largest occupational groups—managers and professionals, who account for about two-thirds of the occupational destination of BA holders—lower-background males make about 83% of the earnings received by their more advantaged counterparts. Differences are narrower among women, except for a steep gradient across social background in sales occupations, which accounts for only one-quarter of BA holders’ jobs.

This analysis provides a concise answer to the question about the sources of substantial mobility among BA holders: it emerges from weak horizontal educational stratification, small disparities in occupational allocation and nonnegligible but limited within-occupation earnings discrepancies across social background. The outcome of these limited differences is a weak association between socioeconomic origins and destinations among those with a terminal BA degree.

Table 8 replicates the analysis of horizontal educational stratification and labor market outcomes for advanced-degree holders. I add type of program, distinguishing MA, MBA, first professional degrees, and PhD degrees to institutional selectivity and field of study as a dimension of

TABLE 8
EDUCATIONAL HORIZONTAL STRATIFICATION AND OCCUPATIONAL ALLOCATION AND REWARDS AMONG ADVANCED-DEGREE HOLDERS

Origins	DISTRIBUTION OF COLLEGE SELECTIVITY AND FIELD OF STUDY BY SOCIAL ORIGINS (B&B 1993-2003)															
	Institutional Selectivity					Field of Study						Type of Program				
	Low (%)	Med. (%)	High (%)	Education (%)	Business (%)	CSEM (%)	Health (%)	Law (%)	Humanities (%)	Biology (%)	Soc. Sci. (%)	Other (%)	MA (%)	MBA (%)	Prof. (%)	PhD (%)
Men:																
Lower	14	55	31	11	19	14	13	11	6	7	6	13	50	19	20	11
Middle ...	11	57	32	14	22	12	13	9	6	9	2	12	46	22	17	15
Upper	7	46	47	6	25	7	20	13	9	6	5	10	26	24	29	11
Total ...	11	52	37	10	22	11	10	10	7	7	4	12	43	22	23	12
Women:																
Lower	14	68	19	33	11	3	11	11	7	4	11	10	67	11	15	7
Middle ...	13	65	22	29	15	5	11	9	8	5	8	9	64	15	15	6
Upper	8	55	37	28	12	3	15	13	7	5	8	10	63	12	18	7
Total ...	11	62	27	30	13	4	13	11	7	5	9	10	65	13	16	7
DISTRIBUTION OF OCCUPATION HELD AND WITHIN-OCCUPATION EARNINGS BY SOCIAL ORIGINS (NLSY79)																
Origins	Occupational Allocation											Within-Occupation Earnings				
	Occupational Allocation			Sales/Adm.			CSEM		Prof.			Services		Sales/Adm.		Craft/Oper.
	Manager (%)	Prof. CSEM (%)	Other (%)	Services (%)	Sales/Adm. (%)	Oper. (%)	Manager (%)	CSEM (%)	Prof. CSEM (%)	Prof. Other (%)	Services (%)	Sales/Adm. (%)	Craft/Oper. (%)			
Men:																
Lower	17	16	62	0	5	1	102,550	74,983	51,463	NA	NA	NA	NA	NA	NA	NA
Middle ...	34	9	48	6	3	0	92,600	64,558	60,522	NA	NA	NA	NA	NA	NA	NA
Upper	38	11	39	3	9	1	124,395	113,419	85,975	NA	NA	NA	NA	NA	NA	NA
Total ...	31	12	48	3	6	0	106,515	84,320	65,987	NA	NA	NA	NA	NA	NA	NA
Women:																
Lower	21	11	58	1	10	0	53,221	76,000	38,560	NA	NA	NA	NA	NA	NA	NA
Middle ...	19	7	70	0	4	0	60,082	46,000	41,417	NA	NA	NA	NA	NA	NA	NA
Upper	23	7	56	8	6	0	56,379	39,028	40,245	NA	NA	NA	NA	NA	NA	NA
Total ...	18	8	64	3	7	0	56,221	53,676	40,074	NA	NA	NA	NA	NA	NA	NA

NOTE.—Social origins measured as parental income tertiles. Children's occupational and earnings outcomes measures at age 40 or closest if age 40 was unavailable. See text for details. Soc. Sci.: social sciences; Prof.: professional; CSEM: computer science, engineering, and math; Adm.: administration; Oper.: operatives. Occupational categories identified as NA contain small sample sizes, which prevent reliable calculation of mean earnings.

horizontal stratification.¹⁴ Although research examining the contribution of type of graduate program to intergenerational reproduction is lacking, it is well known that economic returns are highly stratified by type of program—on average, someone with a master's degree receives earnings 20% higher than a BA holder, while PhDs and professional degree holders earn, respectively, 80% and 100% more (Day and Newburger 2002; College Board 2005). If substantial variation in returns is related to differential access by social background, this association may provide an avenue for the strong intergenerational reproduction found among advanced-degree holders.

As in the case of BA holders, advanced-degree holders with upper-class origins are more likely to have attended highly selective institutions. Among men, 47% of those with origins in the upper income tertile compared with only 31% among the lower tertile graduated from a selective institution; among women the comparable figures are 37% and 19%. Social-background-based differences are not restricted to institutional selectivity, however. In contrast to BA holders, they extend to other dimensions of horizontal stratification. Among men, upper-class graduates are more likely to attain degrees in professional fields of study such as business, medicine, health, and law—58% graduate from these fields vis-à-vis 44% among their least advantaged counterparts—and less likely to choose education and CSEM degrees. They are also substantially more likely to attain professional degrees (about 90% of which are in medicine and law) and MBAs over masters' degrees, which are much more prevalent among their low-background peers. The pronounced variation in type of degree attained emerges entirely from the higher likelihood of upper-class individuals to attain lucrative professional degrees and MBAs.

Horizontal stratification among male advanced-degree holders is magnified in the labor market. The second part of table 8 shows marked occupational allocative inequality. While 38% of upper-background men with a graduate degree hold a lucrative managerial occupation, only 17% of their lower-background peers do so. In contrast, lower-class graduates are much more likely to take a professional occupation that is not in the field of computer sciences/engineering/math. Allocative disparities in occupational positions are compounded by marked within-occupation earnings gaps by social background among professionals, who constitute about three-quarters of advanced-degree holders. On average, a male professional with an advanced degree and origins in the lower income tertile receives earnings that are only about 60% of his upper-background counterparts—a gap substantially higher than among BA holders. The dis-

¹⁴ The fields of study classification is the same as the one used for BA holders, except for the addition of law.

parities in occupational allocation and within-occupation earnings gaps are much less pronounced among women with an advanced degree, except for professionals in the hard sciences, who constitute a very small proportion of women with advanced degrees.

In sum, horizontal stratification and labor market allocative and reward processes provide a plausible account for both substantial intergenerational mobility among BA holders and strong intergenerational reproduction among advanced-degree holders. Among men who attain an advanced degree, their socioeconomic background is strongly correlated with the type of graduate education they obtain—in terms of institutional selectivity, field of study, and type of program attended. Social background is also strongly correlated with the type of job attained and, for the majority who hold a professional job, with the economic rewards received. Horizontal stratification and labor market ascription-based disparities result in a pronounced association between social origins and adult economic status among men with an advanced degree. The story is different for women, with much narrower disparities in the educational and labor market outcomes, which explains the weaker intergenerational association found among them.

DISCUSSION AND IMPLICATIONS

This article has undertaken a long journey to evaluate the “meritocratic power” of a college degree and the factors accounting for the intergenerational association among the growing proportion of the population with college education. Its point of departure is an important finding emerging a quarter century ago: the influence of social origins on adult children’s economic well-being was strong among those with lower levels of schooling, but it fully disappeared among college graduates (Hout 1984, 1988). This finding suggested that, in addition to large economic returns and benefits in terms of health, well-being, and other nonmonetary outcomes, a college degree may fulfill an important meritocratic function: erasing the advantages of social origin in the competition for economic success.

Multiple factors render a comprehensive assessment of the “meritocratic power” of a college degree a necessary task. First, the substantial expansion and differentiation at the college level may have provided an avenue for privileged families to invest in a more advantageous type of higher education for their children. Second, the stratification literature has focused on occupational mobility, but recent developments in mobility analysis suggest that distinct measures of economic standing—class, occupational status, individual earnings, and total family income—capture different dimensions of attainment, so that mobility patterns may be sen-

sitive to the measure used. This is not just a matter of statistical robustness but, rather, a substantive concern about the validity of different indicators of socioeconomic opportunity. Third, stratification research tends to conceive of college graduates as a single, homogeneous category, rather than distinguishing those with a terminal bachelor's degree from advanced-degree holders. The substantial expansion, higher economic returns, and potentially different patterns of mobility among those with advanced qualifications require a distinct analysis, as an aggregate evaluation may result in biased findings for either group. Fourth, in spite of its empirical relevance, the mechanisms leading to a weak intergenerational association among college graduates have been scarcely explored and theorized. The conventional interpretation that labor markets for college graduates are "highly meritocratic" is, to date, a plausible but unverified hypothesis.

Drawing on five longitudinal data sources, this study evaluates intergenerational mobility across levels of schooling separately for men and women. The findings are clear. The intergenerational socioeconomic association is substantial among those without a college degree, but it virtually disappears among those with a terminal bachelor's degree. In other words, the chances of achieving economic success are independent of social background among those who attain a BA. The finding is largely consistent across all indicators of socioeconomic standing: social class, occupational status, individual earnings, and total family income. Given that total family income includes extraoccupational sources of advantage, such as financial assets and government transfers, and that it considers family-level dynamics such as direct parental transfers and assortative mating, it provides a particularly strong test of the meritocratic power of a college degree.

Pronounced intergenerational mobility among BA holders supports the hypothesis that labor markets for college graduates operate on the basis of meritocratic criteria. However, a second finding from this study questions this interpretation: a strong intergenerational association re-emerges among advanced-degree holders, reaching levels comparable to those with low levels of schooling. It should be noted that the reemergence of the intergenerational association is not fully consistent across all indicators of economic standing among women. Overall, however, there is substantial indication that the direct influence of social origins on economic well-being is stronger among advanced-degree holders than among those with a terminal BA degree. Analysis of trends shows that while the substantial mobility among BA holders has remained stable over the last three decades, the strong intergenerational association among the educational elite is a recent phenomenon that has emerged as the advanced degree level has expanded.

This is an unexpected result. Given that the human capital attained

by advanced-degree holders is more technically specialized than that of college graduates, that it requires spending more time in educational institutions undergoing socialization that may erase the direct influence of social origins, and that it is likely associated with positive unobserved selectivity, weaker, rather than stronger intergenerational association vis-à-vis BA holders was expected. This finding begs the question about the channels accounting for both results: substantial mobility among BA holders and substantial rigidity among graduate-degree holders. The second part of the analysis explores these channels by drawing on the educational stratification and labor market discrimination literatures. As the educational stratification literature suggests, horizontal differentiation at the higher education level—in particular as it refers to institutional selectivity, field of study, and type of program—may provide avenues for the reproduction of socioeconomic advantage. Research on labor market inequalities suggests that two processes will result in ascription-based disparities in the labor market: occupational allocation and within-occupation earnings gaps. Combining these literatures, I offer a testable formulation of the meritocracy putatively favoring college graduates: meritocracy implies limited horizontal stratification, small differences in occupational allocation, and narrow within-occupation earning gaps across individuals with different social origins.

The analyses evaluating these factors are easy to summarize. Among advanced-degree holders, horizontal stratification is pronounced and affects all domains analyzed: institutional selectivity, field of study, and type of program. Occupational allocation is strongly patterned by social origins, with upper-class background graduates much more likely to hold more lucrative managerial jobs than their less advantaged counterparts. Furthermore, among the large proportion of advanced-degree holders in professional occupations, earnings are highly dependent on socioeconomic background, exacerbating differences in occupational allocation. Social background-based differences are particularly marked among men. In contrast, lower levels of horizontal stratification and weak differences in occupational allocation and within-occupation earnings by social background account for the manifest intergenerational fluidity among BA holders.

This analysis indicates that horizontal stratification and labor market allocative and reward inequalities account for the pronounced intergenerational reproduction among advanced-degree holders. Even though the categories capturing educational and occupational differentiation are broader than ideal, the findings highlight these institutional domains as critical arenas for the intergenerational reproduction of inequality among the educational elite. They question a presumed univocal association between higher levels of education and highly meritocratic outcomes, and

call for expansion of stratification theoretical approaches in at least two respects.

First, these findings invite further expansion of the horizontal stratification approach—originally focused on secondary school and increasingly extended to the college level—to the advanced-degree level, in order to account for the distinctive mechanisms driving the strong influence of social origins on the type of graduate degree attained. Second, the findings invite theories of ascriptive sources of labor market inequality, currently focused on gender and race, to incorporate class background as a potentially relevant source of disparity. The current focus on gender and race is understandable and desirable. These are visible sources of blatant “categorical inequality” (Tilly 1998). This research suggests, however, that social origins may be a powerful source of advantage among highly qualified workers and urges further inquiry into the specific class-based sources of advantage—educational and occupational preferences, social networks, cultural capital, and employers’ discriminatory practices, among others—resulting in a strong influence of social origins on economic attainment. In particular, further examining the interaction between supply-side forces—individuals choosing graduate education institutions, fields of study, or occupations—and by demand-side forces—institutions choosing and tracking students; labor market institutions selecting, allocating, and rewarding workers according to their socioeconomic background—is an important area of inquiry. The fact that the horizontal educational stratification and labor market origins-based disparities are much more pronounced among men than women also suggests important gender differences that require examination.

This research raises several additional questions. An important concern refers to the role individual unobserved selectivity plays in accounting for differences in mobility across levels of schooling. The dynamic selectivity approach pioneered by Mare (1980) posits that as students advance in their educational career, the association between social background and unobserved determinants of economic attainment, such as cognitive ability or motivation, declines (Mare 1980, p. 299). In other words, given the substantial economic and cultural barriers that lower-class students face in attaining postsecondary education, those who “make it” to college are positively selected on unobserved attributes such as motivation and ability. To the extent that these attributes are rewarded in the labor market, lower-class college graduates will likely experience upward intergenerational mobility.

Two findings from this study are inconsistent with unobserved selectivity as the driving mechanism for intergenerational mobility among college graduates. First, intergenerational mobility is weaker among advanced-degree holders than among BA holders, but lower-class individ-

uals who “make it” to graduate school should be more positively selected on unobserved attributes than those who make it to college, given the enhanced difficulty and cost of attaining an advanced degree. Second, the role of selectivity in accounting for intergenerational mobility at a particular educational level should decrease as such level expands and the relative number of credential holders grows. In the extreme, when an educational level becomes universal, selectivity is by definition null (Raftery and Hout 1993). However, as I have shown, mobility among BA holders did not decrease as this level expanded over the last quarter century, questioning a negative effect of declining selectivity. Although the selectivity hypothesis cannot be conclusively ruled out with the data at hand, evidence is not consistent with a strong influence on mobility patterns.

There is, however, an alternative way in which unobserved selectivity may affect observed mobility among college graduates. As graduate education expands, the undergraduate level may serve an increasingly important sorting function into graduate school, differentially allocating individuals according to social background and unobserved characteristics.

As highlighted by Goyette and Mullen (2006), upper-background students may opt to maximize their chances of attending graduate school by choosing specific fields and, probably, specific postsecondary institutions and trajectories. In contrast, lower-background individuals may favor locations in the system which would maximize the returns of a terminal bachelor’s degree, reducing the risk of downward mobility (Breen and Goldthorpe 1997). It is plausible, then, that upper-background students who fail to advance to graduate school have miscalculated, choosing suboptimal college fields, institutions, or trajectories. This miscalculation may result in downward mobility among advantaged students, whereas the optimal investment of lower-background individuals in a BA but no subsequent degrees would account for upward mobility. The overall result of this process would be a weak intergenerational association among those with a “terminal” bachelor’s degree but reduced mobility among advanced-degree holders. More analysis of colleges as “sorting machines” could shed further light on this process.

The findings from this analysis strongly question the unqualified interpretation of increasing meritocracy among higher levels of education and indicate that mobility opportunity is embedded in educational and labor market processes, including, but not reduced to, horizontal educational stratification and the patterning of occupational allocation and economic rewards by social origins. I trust that analyses further examining these processes will continue to advance our understanding of the intergenerational reproduction of inequality.

REFERENCES

- Alon, Sigal. 2009. "The Evolution of Class Inequality in Higher Education: Competition, Exclusion, and Adaptation." *American Sociological Review* 74 (5): 731–55.
- Altonji, Joseph, and Thomas Dunn. 2000. "An Intergenerational Model of Wages, Hours and Earnings." *Journal of Human Resources* 35 (2): 221–58.
- Astin, Alexander, and Leticia Oseguera. 2004. "The Declining 'Equity' of American Higher Education." *Review of Higher Education* 27:321–41.
- Attawell, Paul, and David Lavin. 2007. *Passing the Torch*. New York: Sage.
- Autor, David, Lawrence Katz, and Melissa Kearney. 2006. "The Polarization of the U.S. Labor Market." *American Economic Review* 96 (2): 198–94.
- . 2008. "Trends in U.S. Wage Inequality: Revising the Revisionists." *Review of Economics and Statistics* 90 (2): 300–323.
- Baron, James, Michael Hannan, Greta Hsu, and Özgecan Koçak. 2007. "In the Company of Women: Gender Inequality and the Logic of Bureaucracy in Start-Up Firms." *Work and Occupations* 34:35–66.
- Beller, Emily, and Michael Hout. 2006. "Intergenerational Social Mobility: The United States in Comparative Perspective." *Future of Children* 16 (2): 19–36.
- Berger, Mark. 1988. "Predicted Future Earnings and Choice of College Major." *Industrial and Labor Relations Review* 41:418–29.
- Bielby, William. 2000. "Minimizing Workplace Gender and Racial Bias." *Contemporary Sociology* 29:120–29.
- Bjorklund, Anders, and Markus Jantti. 2000. "Intergenerational Mobility of Socioeconomic Status in Comparative Perspective." *Nordic Journal of Political Economy* 26 (1): 3–33.
- Blau, Peter, and Otis Dudley Duncan. 1967. *The American Occupational Structure*. New York: Free Press.
- Bowen, William, Martin Kurzweil, and Eugene Tobin. 2005. *Equity and Excellence in American Higher Education*. Charlottesville: University Press of Virginia.
- Brand, Jeannie, and Charles Halaby. 2006. "Regression and Matching Estimates of the Effect of Elite College Attendance on Educational and Career Achievement." *Social Science Research* 35:749–70.
- Breen, Richard. 1994. "Individual Level Models for Mobility Tables and Other Cross-Classifications." *Sociological Methods and Research* 23:147–73.
- Breen, Richard, and John Goldthorpe. 1997. "Explaining Educational Differentials: Towards a Formal Rational Action Theory." *Rationality and Society* 9:275–305.
- Breen, Richard, and Jan Jonsson. 2007. "Explaining Change in Social Fluidity: Educational Equalization and Educational Expansion in Twentieth-Century Sweden." *American Journal of Sociology* 112 (6): 1775–1810.
- Breen, Richard, and Ruud Luijkx. 2007. "Social Mobility and Education: A Comparative Analysis of Period and Cohort Trends in Britain and Germany." In *From Origin to Destination*, edited by Stefani Scherer, Reinhard Pollak, Gunnar Otte, and Markus Gangl. New York: Campus.
- Breen, Richard, and Christopher Whelan. 1996. *Social Class and Social Mobility in Ireland*. Dublin: Gill & McMillan.
- Brewer, Dominic, and Ronald Ehrenberg. 1996. "Does It Pay to Attend an Elite Private College? Evidence from the Senior High School Class of 1980." *Research in Labor Economics* 15:239–71.
- Brewer, Dominic, Eric Eide, and Ronald Ehrenberg. 1999. "Does It Pay to Attend an Elite College? Cross-Cohort Evidence on the Effects of College Type on Earnings." *Journal of Human Resources* 34:104–23.
- Buchmann, Claudia, and Thomas DiPrete. 2006. "The Growing Female Advantage in College Completion: The Role of Parental Resources and Academic Achievement." *American Sociological Review* 71:515–41.

- Carneiro, Pedro, and James Heckman. 2005. "Human Capital Policy." Chap. 2 in *Inequality in America: What Role for Human Capital Policies?* edited by James Heckman and Alan Krueger. Cambridge, Mass.: MIT Press.
- Chadwick, Laura, and Gary Solon. 2002. "Intergenerational Income Mobility among Daughters." *American Economic Review* 92 (1): 335–44.
- College Board. 2005. *Education Pays Update*. Trends in Higher Education Series. Washington, D.C.: College Board.
- Cook, Clarissa, and Malcolm Waters. 1998. "The Impact of Organizational Form on Gendered Labour Markets in Engineering and Law." *Sociological Review* 46 (20): 314–39.
- Dale, Stacy, and Alan Krueger. 2002. "Estimating the Payoff to Attending a More Selective College: An Application of Selection on Observables and Unobservables." *Quarterly Journal of Economics* 117:1491–1527.
- Davies, Scott, and Neil Guppy. 1997. "Fields of Study, College Selectivity and Student Inequalities in Higher Education." *Social Forces* 75 (4): 1417–38.
- Day, Jennifer C., and Kurt Bauman. 2000. "Have We Reached the Top? Educational Attainment Projections of the U.S. Population." Working paper 43. U.S. Census Bureau, Population Division, Washington, D.C.
- Day, Jennifer C., and Eric Newburger. 2002. "The Big Payoff: Educational Attainment and Synthetic Estimates of Work-Life Earnings." *Current Population Reports* (P23-210): 1–13.
- DeLong, Bradford, Claudia Goldin, and Lawrence Katz. 2003. "Sustaining U.S. Economic Growth." Pp. 17–60 in *Agenda for the Nation*, edited by Henry Aaron, James Lindsay, and Pietro Nivola. Washington, D.C.: Brookings Institution Press.
- DiPrete, Thomas. 2002. "Life Course Risks, Mobility Regimes, and Mobility Consequences: A Comparison of Sweden, Germany and the United States." *American Journal of Sociology* 108 (2): 267–309.
- DiPrete, Thomas, and Claudia Buchmann. 2006. "Gender Specific Trends in the Value of Education and the Emerging Gender Gap in College Completion." *Demography* 43:1–24.
- Duncan, Otis Dudley. 1961. "A Socioeconomic Index for All Occupations," and "Properties and Characteristics of the Socioeconomic Index." In *Occupations and Social Status*, edited by Albert Reiss. New York: Free Press.
- Ellwood, David, and Thomas Kane. 2000. "Who Is Getting a College Education? Family Background and the Growing Gaps in Enrollment." Pp. 283–324 in *Securing the Future*, edited by Sheldon Danziger and Jane Waldfogel. New York: Russell Sage Foundation.
- Elvira, Marta, and Mary Graham. 2002. "Not Just a Formality: Pay System Formalization and Sex-Related Earnings Effects." *Organization Science* 13 (6): 601–18.
- England, Paula. 1992. *Comparable Worth: Theories and Evidence*. New York: Walter de Gruyter.
- Erikson, Robert, and John Goldthorpe. 1992. *The Constant Flux: A Study of Class Mobility in Industrial Societies*. Oxford: Clarendon Press.
- Ermisch, John, Marco Francesconi, and Thomas Siedler. 2006. "Intergenerational Mobility and Marital Sorting." *Economic Journal* 116:659–79.
- Featherman, David, and Robert Hauser. 1978. *Opportunity and Change*. New York: Academic Press.
- Ganzeboom, Harry, and Donald Treiman. 2003. "Three Internationally Standardized Measures for Comparative Research on Occupational Status." Chap. 9 in *Advances in Cross-National Comparison: A European Working Book for Demographic and Socio-Economic Variables*, edited by Jurgen H. P. Hoffmeyer-Zlotnik and Christof Wolf. New York: Kluwer.
- Gerber, Theodore, and Sin Yi Cheung. 2008. "Horizontal Stratification in Postsecon-

- dary Education: Forms, Explanations, and Implications." *Annual Review of Sociology* 34:299–318.
- Goldberger, Arthur. 1989. "Economic and Mechanical Models of Intergenerational Transmission." *American Economic Review* 79 (3): 504–13.
- Goldin, Claudia, and Lawrence Katz. 2008. *The Race between Education and Technology*. Cambridge, Mass.: Harvard University Press.
- Goldthorpe, John. 1980. *Social Mobility and Class Structure in Modern Britain*. Oxford: Clarendon Press.
- . 2007. *On Sociology*, vol. 2. 2d ed. Stanford, Calif.: Stanford University Press.
- Goodman, Leo. 1979. "Simple Models for the Analysis of Association in Cross-Classifications Having Ordered Categories." *Journal of the American Statistical Association* 74:537–52.
- Goyette, Kimberly, and Ann Mullen. 2006. "Who Studies the Arts and Sciences? Social Background and the Choice and Consequences of Undergraduate Field of Study." *Journal of Higher Education* 77 (3): 488–538.
- Grodsky, Eric. 2007. "Compensatory Sponsorship in Higher Education." *American Journal of Sociology* 112:1662–1712.
- Grogger, Jeff, and Eric Eide. 1995. "Changes in College Skills and the Rise in the College Wage Premium." *Journal of Human Resources* 30:280–310.
- Grusky, David, and Kim Weeden. 2006. "Does the Sociological Approach to Studying Social Mobility Have a Future?" Chap. 4 in *Mobility and Inequality*, edited by Stephen Morgan, David Grusky, and Gary Fields. Stanford, Calif.: Stanford University Press.
- . 2008. "Are There Social Classes? A Framework for Testing Sociology's Favorite Concept." Chap. 2 in *Social Class: How Does It Work?* edited by Annette Lareau and Dalton Conley. New York: Russell Sage.
- Haider, Steven, and Gary Solon. 2006. "Life-Cycle Variation in the Association between Current and Lifetime Earnings." *American Economic Review* 96 (4): 1308–20.
- Hauser, Robert. 1998. "Intergenerational Economic Mobility in the United States: Measures, Differentials, and Trends." Working paper. University of Wisconsin—Madison, Center for Demography and Ecology.
- Hauser, Robert, and David Featherman. 1976. "Equality of Schooling: Trends and Prospects." *Sociology of Education* 49:99–120.
- Hauser, Robert, and John Allen Logan. 1992. "How Not to Measure Intergenerational Occupational Persistence." *American Journal of Sociology* 97 (6): 1689–1711.
- Hauser, Robert, and John Robert Warren. 1997. "Socioeconomic Indexes for Occupations: A Review, Update and Critique." In *Sociological Methodology*, vol. 27. Edited by Adrian Raftery. San Francisco: Jossey-Bass.
- Haveman, Robert, and Timothy Smeeding. 2006. "The Role of Higher Education in Social Mobility." *Future of Children* 16 (2): 125–50.
- Hout, Michael. 1984. "Status, Autonomy, and Training in Occupational Mobility." *American Journal of Sociology* 89 (6): 1397–1409.
- . 1988. "More Universalism, Less Structural Mobility: The American Occupational Structure in the 1980s." *American Sociological Review* 93 (6): 1358–1400.
- Hout, Michael, Adrian Raftery, and Eleanor Bell. 1993. "Making the Grade: Educational Stratification in the United States, 1925–1989." Pp. 25–50 in *Persistent Inequality: Educational Stratification in Thirteen Countries*, edited by Yossi Shavit and Hans-Peter Blossfeld. Boulder: Westview.
- Jackson, Michelle. 2007. "How Far Merit Selection? Social Stratification and the Labour Market." *British Journal of Sociology* 58 (3): 367–90.
- Jaeger, David. 1997. "Reconciling the Old and New Census Bureau Education Questions: Recommendations for Researchers." *Journal of Business and Economic Statistics* 15:300–309.

- Kane, Thomas. 2004. "College-Going and Inequality." Chap. 8 in *Social Inequality*, edited by Kathryn M. Neckerman. New York: Russell Sage.
- Karabel, Jerome, and Katherine McClelland. 1987. "Occupational Advantage and the Impact of College Rank on Labor Market Outcomes." *Sociological Inquiry* 57:323–47.
- Karen, David. 2002. "Changes in Access to Higher Education in the United States: 1980–1992." *Sociology of Education* 75:191–210.
- Kennedy, Peter. 2008. *A Guide to Econometrics*. Hoboken, N.J.: Wiley Blackwell.
- Kim, Changhwan, and Arthur Sakamoto. 2008. "The Rise of Intra-Occupational Wage Inequality in the United States, 1983 to 2002." *American Sociological Review* 73: 129–57.
- Loury, Linda. 1997. "The Gender Earnings Gap among College-Educated Workers." *Industrial and Labor Relations Review* 50:580–93.
- Loury, Linda, and David Garman. 1995. "College Selectivity and Earnings." *Journal of Labor Economics* 13 (2): 289–308.
- Lucas, Samuel. 2001. "Effectively Maintained Inequality: Education Transitions, Track Mobility, and Social Background Effects." *American Journal of Sociology* 106:1642–90.
- Mare, Robert. 1980. "Social Background and School Continuation Decisions." *Journal of the American Statistical Association* 75:295–305.
- . 1991. "Five Decades of Educational Assortative Mating." *American Sociological Review* 56 (1): 15–32.
- Mayer, Susan, and Leonard Lopoo. 2005. "Has the Intergenerational Transmission of Economic Status Changed?" *Journal of Human Resources* 40 (1): 169–85.
- Mazumder, Bhashkar. 2005. "Fortunate Sons: New Estimates of Intergenerational Mobility in the US Using Social Security Earnings Data." *Review of Economics and Statistics* 87 (2): 235–55.
- McGarry, Kathleen, and Robert Schoeni. 1995. "Transfer Behavior in the Health and Retirement Study." *Journal of Human Resources* 30 (suppl.): S184–S225.
- Monks, James. 2000. "The Returns to Individual and College Characteristics: Evidence from the National Longitudinal Survey of Youth." *Economics of Education Review* 19:279–89.
- Morgan, Stephen, and Zun Tang. 2007. "Social Class and Workers' Rent: 1983–2001." *Research in Social Stratification and Mobility* 25:273–93.
- Mullen, Ann, Kimberly Goyette, and Joseph Soares. 2003. "Who Goes to Graduate School? Social and Academic Correlates of Educational Continuation after College." *Sociology of Education* 76 (2): 143–69.
- Nakao, Keiko, and Judith Treas. 1994. "Updating Occupational Prestige and Socio-economic Scores: How the New Measures Measure Up." *Sociological Methodology* 24:1–72.
- Padavic, Irene, and Barbara Reskin. 2002. *Women and Men at Work*. Thousand Oaks, Calif.: Pine Forge Press.
- Pallas, Aaron. 2000. "The Effects of Schooling on Individual Lives." Pp. 499–525 in *Handbook of the Sociology of Education*, edited by Maureen Hallinan. New York: Kluwer Academic.
- Park, Jin Heum. 1996. "Measuring Education over Time: A Comparison of Old and New Measures of Education from the Current Population Survey." *Economics Letters* 50:425–28.
- Persell, Caroline, Sofia Catsambis, and Peter Cookson. 1992. "Differential Asset Conversion: Class and Gendered Pathways to Selective Colleges." *Sociology of Education* 65:208–25.
- Petersen, Trond, and Laurie Morgan. 1995. "Separate and Unequal: Occupation-Establishment Sex Segregation and the Gender Wage Gap." *American Journal of Sociology* 101 (2): 329–65.

- Petersen, Trond, and Ishak Saporta. 2004. "The Opportunity Structure for Discrimination." *American Journal of Sociology* 109 (4): 852–901.
- Raftery, Adrian, and Michael Hout. 1993. "Maximally Maintained Inequality: Expansion, Reform and Opportunity in Irish Education, 1921–1975." *Sociology of Education* 66 (1): 41–62.
- Raudenbush, Stephen, and Anthony Bryk. 1992. *Hierarchical Linear Models: Applications and Data Analysis Methods*. Thousand Oaks, Calif.: Sage.
- Reskin, Barbara. 2000. "The Proximate Causes of Employment Discrimination." *Contemporary Sociology* 29 (2): 319–28.
- Ross, Catherine, and John Mirowsky. 1999. "Refining the Association between Education and Health: The Effects of Quantity, Credential, and Selectivity." *Demography* 36:445–60.
- Rowley, Larry, and Sylvia Hurtado. 2003. "Non-Monetary Benefits of Undergraduate Education." In *The Public Research University: Serving the Public Good in New Times*, edited by Darrell Lewis and James Hearn. Lanham, Md.: University Press of America.
- Shauman, Kimberlee. 2006. "Occupational Sex Segregation and the Earnings of Occupations: What Causes the Link among College-Educated Workers?" *Social Science Research* 35:577–619.
- Shavit, Yossi, and Hans-Peter Blossfeld. 1993. *Persistent Inequality*. Boulder, Colo.: Westview.
- Solon, Gary. 1992. "Intergenerational Income Mobility in the US." *American Economic Review* 82 (3): 393–408.
- Stevens, Gillian, and David Featherman. 1981. "A Revised Socioeconomic Index of Occupational Status." *Social Science Research* 10:264–395.
- Stevens, Mitchell, Elizabeth Armstrong, and Richard Arum. 2008. "Sieve, Incubator, Temple, Hub: Empirical and Theoretical Advances in the Sociology of Higher Education." *Annual Review of Sociology* 34:127–51.
- Stolzenberg, Ross. 1994. "Educational Continuation by College Graduates." *American Journal of Sociology* 99 (4): 1042–77.
- Thomas, Scott. 2003. "Longer-Term Economic Effects of College Selectivity and Control." *Research in Higher Education* 44 (3): 263–99.
- Thomas, Scott, and Liang Zhang. 2005. "Post-baccalaureate Wage Growth within Four Years of Graduation: The Effects of College Quality and College Major." *Research in Higher Education* 46:437–59.
- Tilly, Charles. 1998. *Durable Inequality*. Berkeley: University of California Press.
- Tomaskovic-Devey, Donald. 1993. *Gender and Racial Inequality at Work: The Sources and Consequences of Job Segregation*. Ithaca, N.Y.: ILR Press.
- Treiman, Donald, and Heidi Hartmann. 1981. *Women, Work, and Wages: Equal Pay for Jobs of Equal Value*. Washington, D.C.: National Academy Press.
- Vallet, Louis-Andre. 2004. "Change in Intergenerational Class Mobility in France from the 1970s to the 1990s and Its Explanation: An Analysis Following the CASMIN Approach." In *Social Mobility in Europe*, edited by Richard Breen. Oxford: Oxford University Press.
- Weakliem, David. 1999. "A Critique of the Bayesian Information Criterion for Model Selection." *Sociological Methods and Research* 27:359–97.
- Weeden, Kim. 2005a. "Stata Algorithm for Backcoding 1980 Census Occupation Codes into 1970 Census Occupation Codes." Cornell University, Department of Sociology.
- . 2005b. "Stata Algorithm for Backcoding 2000 Census Occupation Codes into 1990 Census Occupation Codes." Cornell University, Department of Sociology.
- Weeden, Kim, Young-Mi Kim, Matthew Di Carlo, and David Grusky. 2007. "Social Class and Earnings Inequality." *American Behavioral Scientist* 50 (5): 702–36.
- Wright, Erik Olin. 2005. "If 'Class' Is the Answer, What Is the Question?" In *Ap-*

College Degree the Great Equalizer?

- Approaches to Class Analysis*, edited by Erik Olin Wright. Cambridge: Cambridge University Press.
- Xie, Yu. 1992. "The Log-Multiplicative Layer Effect Model for Comparing Mobility Tables." *American Sociological Review* 57 (3): 380–95.
- Zimmerman, David. 1992. "Regression toward Mediocrity in Economic Stature." *American Economic Review* 82 (3): 409–29.