The Deepening Gender Divide in Credentials, 2000–2020: Continuity, Change, and Implications



CLAUDIA BUCHMANN[®], RACHEL E. DWYER, AND MAN YAO[®]

In the United States, women have earned more bachelor's degrees than men since the mid-1980s. We examine the historical continuities in this trend and its sources, as well as changes since 2000 in gender gaps in advanced credentials, fields of study, types of institutions attended, and financing for higher education. The gender gap in bachelor's degrees has remained stable at a high level over this period and a female advantage in advanced degrees emerged, especially in professional degrees. The deepening gender divide in credentials coincided with rising shares of women attending for-profit institutions and an emerging gender divide in student indebtedness. Thus, women disproportionately carry the promise and bear the costs of educational expansion, with far reaching implications for the future.

Keywords: gender, credentials, higher education, inequality, debt

It is now generally known that women began to earn more college degrees than men in the United States in the mid-1980s. The emergence of this gender divide in credentials has drawn considerable scholarly and policy attention and reflects a complex and significant change in the U.S. gender regime. With greater opportunity and fewer barriers, women were finally able to see their educational attainment match their long-standing higher levels of academic achievement. Women have now outpaced men in earning bachelor's degrees for several decades (Buchmann and DiPrete 2006, DiPrete and Buchmann 2013) such that in 2022, among twenty-five- to twenty-nine-year-olds, 44 percent of women have completed a bachelor's degree compared to only 35 percent of men (NCES 2023a).¹

Claudia Buchmann is a College of Arts and Sciences Distinguished Professor of Sociology and Faculty Affiliate of the Institution for Population Research at The Ohio State University, United States. **Rachel E. Dwyer** is a professor of sociology and faculty affiliate of the Institute for Population Research at The Ohio State University, United States. **Man Yao** is an assistant professor in the Women's and Gender Studies Program at Denison University, United States.

© 2025 Russell Sage Foundation. Buchmann, Claudia, Rachel E. Dwyer, and Man Yao. 2025. "The Deepening Gender Divide in Credentials, 2000–2020: Continuity, Change, and Implications." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 11(1): 154–77. https://doi.org/10.7758/RSF.2025.11.1.08. We appreciate the helpful comments of the editors and the participants of the RSF workshop on this special issue, as well as a small grant from the OSU Department of Sociology. Direct correspondence to: Claudia Buchmann, at buchmann.4@osu.edu; Rachel E. Dwyer, at dwyer.46@osu.edu; Man Yao, at many@denison.edu, United States.

Open Access Policy: *RSF: The Russell Sage Foundation Journal of the Social Sciences* is an open access journal. This article is published under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License.

1. Throughout this article, we use the term bachelor's degree to include the bachelor of arts, bachelor of science, bachelor of engineering, bachelor of fine arts, and all other variants.

This article provides an in-depth examination of trends in the female advantage in credentials since 2000, with particular attention to trends from 2010 to 2020, a decade bookended by the Great Recession of 2008 and the COVID pandemic-fueled economic crisis of 2020. Although a large body of research has developed around the female advantage in credentials, to the best of our knowledge, no overall assessment of the gender-specific trends since 2000 has been published. Here we offer a broad view of the gender divide in earning undergraduate and advanced degrees, as well as fields of study, and incorporate two key changes in the higher education landscape in the 2000s: growing diversity in the types of institutions attended, and the growing reliance on financing for higher education through student loan debt. Although the open and diverse system of higher education has long produced significant variation in institutions and financing, regulatory changes and austerity budgets in the 2000s brought a shift toward the treatment of education as a private good. We argue that the female advantage in college credentials must be understood in part within this context. In doing so, we provide a novel analysis that links trends in female enrollment to trends in institutions attended and student debt. We discuss historical continuities in the female advantage in bachelor's degrees in the 2000 to 2020 period relative to the two preceding decades of the 1980s and 1990s and then highlight key dimensions of change in the 2000s. This period brought a gender reversal and new female advantage in doctoral and professional degrees. At the same time, gender divides in institution type and student debt emerged, with women disproportionately contributing to both the growth in enrollment at for-profit colleges and the growth in student debtholders.

We consider the implications of the continuities and changes in the female advantage in credentials. In many ways, the female advantage in college credentials likely translates to advantages in other areas. Inequalities in the United States increasingly fall along the divide between the college educated and those with less education, in terms of work opportunities, wealth accumulation, political participation, and broader measures of well-being (DiPrete and Buchmann 2006; Case and Deaton 2020). At the same time, the costs of higher education have shifted toward individuals and away from public provision by the state (Bleemer et al. 2021). As the majority of bachelor's and advanced degree holders, women disproportionately carry the promise and bear the costs of educational expansion in the United States.

DATA SOURCES

We use a series of administrative records and population-level student surveys to provide trend data from 2000 to 2020 (or the latest year available) and examine gender differences in several outcomes. First, to examine degree attainment and fields of study, we use annual Digest of Education Statistics data from the U.S. Department of Education's National Center for Educational Statistics (NCES). We calculate the proportion of women among those receiving bachelor's, master's, and doctoral or professional degrees from 2000 to 2021 or 2022 and analyze the proportions within different racial and ethnic groups.² In some analyses, we report trends separately for doctoral and professional degrees.3 With these data, a supplemental analysis presents high school status dropout rates from 2006 to 2021. To assess course-taking patterns among high school graduates, we use data from the 2019 High School Transcript

2. Here ethnic and racial categories are based solely on self-reported data. As John Anders and his colleagues (2025, this issue) describe in detail, for a small segment of the population, ethnoracial identities may have changed over the time period of study.

3. Doctoral degrees include Ph.D., Ed.D., and comparable degrees at the doctoral level, except for professional degrees. Some doctoral degrees may focus on practice rather than research and Ph.D.s take on a diversity of jobs with diverse labor-market outcomes (Posselt and Grodsky 2017). Professional degrees are conferred on completion of a program for the recognition, credential, or license required for professional practice. They include chiropractic (D.C. or D.C.M.), dentistry (D.D.S. or D.M.D.), law (J.D.); medicine (M.D.), optometry (O.D.), osteopathic medicine (D.O), pharmacy (Pharm.D.), podiatry (D.P.M., Pod.D., D.P.), or veterinary medicine (D.V.M.) and others, as designated by the awarding institution.

Study (HSTS), a nationally representative survey among high school students in the United States (NAEP 2019).

To examine enrollment patterns across public, private nonprofit, and private for-profit postsecondary institutions, we use data from the Integrated Postsecondary Education Data System (IPEDS). IPEDS includes data from every college, university, and technical-vocational institution participating in federal student financial aid programs and provides the institutional sampling frame for other nationally representative postsecondary surveys provided by NCES.

Finally, to analyze trends in gender gaps in debt-holding, we use data from the National Postsecondary Student Aid Study (NPSAS), a comprehensive, nationally representative survey of undergraduate and graduate students enrolled in postsecondary institutions in the United States collected every four years since 1986 (Radwin et al. 2018).4 With data from 2003-2004 (NPSAS:04) through 2019-2020 (NPSAS:20), we examine the percentage of students who hold any debt in the academic year surveyed by gender, for undergraduate versus graduate students, and by institution types. In the available NPSAS data, all graduate students are combined together, including master's, doctoral, and professional degrees. Supplemental analyses report trends in total debt held by gender, undergraduate versus graduate student, and institution types. Examining the association between gender and the likelihood of holding debt for undergraduate students, net of demographic controls, we estimate a logistic regression model in which the dependent variable is a binary indicator for whether the student holds any debt in 2019-2020, first for all undergraduate students combined, and then for each major racial and ethnic group separately.

Available data on gender and credentials differentiates along the gender binary without considering the broader and growing gender diversity in the U.S. population (Carpenter, Lee, and Nettuno 2025). We report data for women and men, but we join others in calling for data collection that includes full gender diversity. In an encouraging development, in 2019–2020, for the first time, the NPSAS data included an indicator for students who identify other than as a woman or man, including "genderqueer, gender nonconforming, or a different identity" (Cameron et al. 2021). We reflect on the implications of our findings as well as this and other data challenges for future research.

THE CONTINUING FEMALE ADVANTAGE IN BACHELOR'S DEGREES, 2000-2020

Throughout much of the twentieth century, men earned more bachelor's degrees than women. In 1970, 20 percent of men and only 14 percent of women finished college. But then a dramatic change occurred. Figure 1, which shows the proportion of twenty-six to twentyeight-year-olds with a bachelor's degree by birth cohort, captures the gender reversal in college completion as women born during the late 1950s and early 1960s (who were of college age during the 1980s) overtook men in their rates of completing college. During the same period, men's rate of college completion stagnated and remained essentially flat for fifteen birth cohorts. As a result, between 1970 and 2010, men's college graduation rate had climbed only about 7 percentage points, to 27 percent. In contrast, women's rates skyrocketed from 14 percent in 1970 to 36 percent in 2010. The sources of this gender reversal in college completion have been documented in detail (DiPrete and Buchmann 2013). They include the civil rights and women's movements, which brought about major federal legislation such as the Civil Rights Act of 1964 and Title IX Education Amendments of 1972, as well as largescale changes in marriage, work, and family life, such as rising rates of divorce and women's labor-market participation, and the advent of the contraceptive pill. These and other forces altered women's incentives and opportunities to pursue higher education.

Figure 2 demonstrates that the female advantage in college completion continued at a stably high level after 2000. Since 2000, women have earned about 57 percent of all bachelor's

4. We use the NPSAS public data through the NCES DataLab (2024) platform, which allows researchers to analyze data online and conduct descriptive and regression analysis on the aggregate level.



Figure 1. Proportion of Twenty-Six to Twenty-Eight-Year-Olds with a Bachelor's Degree

Source: DiPrete and Buchmann 2013. Reprinted with permission.

degrees annually.⁵ In 2022, women earned 58.5 percent, but it is unclear whether the uptick demarcates a new upward trend. The female advantage in bachelor's degrees exists for all race and ethnic groups, but differences in the size of the gender gap by race and ethnicity are important. In 2022, women's share of bachelor's degrees was 65.2 percent for Blacks, 62.3 percent for Hispanics, 57.6 percent for Whites, and 55.3 percent for Asians/Pacific Islanders. As figure 2 makes clear, the female advantage in bachelor's degrees over this period remained high and stable for every race and ethnic group available in the data, with only slight fluctuations from year to year.⁶ Generally speaking, the successful completion of a college degree depends on individuals' academic skills and preparation, their incentives and educational aspirations, and their ability to manage the financial costs of those credentials. Research has established how educational transitions and academic performance strongly predict college enrollment and completion (Buchmann and DiPrete 2006; DiPrete and Buchmann 2013). High school completion, via either a diploma or certificate of general educational development (GED) is the first step to gaining access to a college education. Since 2006, the trend has been toward convergence in male and female status dropout rates,⁷ but

5. In this article, we report women or men as a proportion of degree recipients as consistent with most prior estimates of the female advantage in college completion. These estimates may slightly underreport the female advantage in educational credentials, given that U.S. Census data indicate that since 2000 between the ages of eighteen to thirty-four (Blakeslee et al. 2023), when individuals are most likely to pursue credentials, men outnumber women by 103 to 100.

6. As Thomas DiPrete and Claudia Buchmann (2013, 40) note, the historical trend for Blacks was distinctive in that "Black women have had a consistent advantage, albeit a small one early on, in college completion over Black men for more than seventy years; among Whites, women's advantage in college completion emerged in recent decades." DiPrete and Buchmann also expect incarceration to have a relatively small impact on the gender gap in educational attainment because "young people sentenced to time in jail or prison are disproportionately high school dropouts . . . though this question clearly requires further research" (71) as does the question of whether military service reduces the likelihood of earning a college degree (but for more detail, see MacLean and Elder 2007).

7. The status dropout rate reports sixteen- to twenty-four-year-olds who are not enrolled in high school and who have not completed a high school program or a GED (NCES 2022).



Figure 2. Women's Share of BA Degree Recipients, by Race and Ethnicity

Source: Authors' calculations based on NCES 2023b, table 322.20. *Note:* 2000 refers to the 1999–2000 academic year; 2001 refers to the 2000–2001 academic year, and so on.

still more men than women fail to complete high school (figure A.1), and this is the case for all major racial-ethnic groups.

Although earning a high school diploma or GED makes college enrollment possible, performance in high school coursework is a far stronger predictor of enrolling in and completing college. In fact, high school grades and coursework are stronger predictors of completing college than standardized test scores are (Bowen, Chingos, and McPherson 2009; Di-Prete and Buchmann 2014). This is because academic performance indicators such as high school grades and rigorous course taking reflect behavioral patterns that align with school success, including doing more homework and completing assignments on time, while avoiding problem behaviors such as skipping classes or getting suspended. These behaviors lay a strong foundation for later behaviors related to success in college.

The female advantage in academic perfor-

mance in high school continued unabated in the 2010s. Figure 3 shows a sizable and stable female advantage in overall high school grade point average (GPA) that is statistically significant at each timepoint and ranges from 0.23 to 0.30 over the last half century. Figure 4 shows a female advantage in rigorous math and science courses taken in high school. In 2019, about 60 percent of female high school graduates completed calculus, precalculus, statistics, or trigonometry as their highest-level math course versus 54 percent of their male counterparts. A similar gap exists for science, where about 36 percent of female high school graduates earned credits in advanced science courses relative to 29 percent of male graduates. Women's advantage in advanced math and science course taking continues a trend that began in the 1990s, before which males outpaced females in the rigor of high school coursework (DiPrete and Buchmann 2013, 89). These clear indicators of females' better academic perfor-



Figure 3. Mean Grade Point Average for High School Seniors

Source: Authors' compilation based on DiPrete and Buchmann 2013 and National Assessment of Educational Progress (NAEP 2019).

mance are central to their greater likelihood of enrolling in and completing college.

Research on the 2000 to 2020 period suggests that the labor-market incentives related to the returns to a college degree, combined with gendered ideas about the division of labor, continue to contribute to the female advantage in college credentials. Gender segregation in occupations likely contributes to gendered differences in evaluating the costs and benefits of college. Female-dominated occupations such as education and health care often require credentials, whereas men have historically had greater access to comparatively well-paid trade and construction jobs, with training more often provided on the job or through trade organizations (Duffy 2011; Dwyer 2013; Dwyer and Wright 2019). Gender segregation in fields of study continued in the 2010s and increased in those linked to occupations in growing areas of the economy, including high tech and care work: by 2021, more than five times as many

women received bachelor's degrees in health professions and related programs (227,300 versus 40,700), and more than three times as many men received bachelor's degrees in engineeringrelated fields (111,700 versus 33,300) (figure A.2).

At the same time, gendered labor-market incentives are only part of the story, as over this period, men's labor-market returns to college degrees have increased (Ashworth et al. 2021; Autor and Wasserman 2013) and the broader returns to higher education (probability of marriage, family standard of living, and insurance against poverty) have continued to rise for both men and women (DiPrete and Buchmann 2006). Due in part to their lack of college and advanced degrees, coupled with their resistance to switch into female-dominated jobs (Yavorsky and Dill 2020), some men are faring quite poorly in the labor market. Since the Great Recession, with the decline of middle skill white- and blue-collar sectors, the share of men in low-skill occupations has increased relFigure 4. Percentage of High School Graduates Across Highest Levels of Math and Science Courses Earned in 2019



Source: Authors' calculations based on NAEP 2019. *Note:* The sum of women's percentage is slightly above 100 because of rounding.

ative to those in high-skill ones (Autor and Wasserman 2013). Given the lower family wealth and income available to Black, Hispanic, and Indigenous young adults, the gendered tradeoffs of attending college may be particularly consequential for these men and their families (Fingerman et al. 2015; Fomby and Kravitz-Wirtz 2019). These realities make the ongoing decline in men's educational expectations a cause for concern: since 2001, more women than men have reported that they expect to complete a four-year degree (Buchmann, Di-Prete, and McDaniel 2008). Even more striking, more women than men also expect to attend graduate school, and this gender gap has grown over time. According to an analysis of Monitoring the Future data, in 2019, 52 percent of young women were predicted to plan to attend graduate school relative to 40 percent of young men (Young, Beutel, and Burge 2023). This emergence of a gender gap in expectations for graduate school reflects the emergence of a female advantage in doctoral and professional degrees

in the 2000s—one of the major changes in the gender divide in credentials since 2000, to which we turn next.

THE GENDER REVERSAL AND NEW FEMALE ADVANTAGE IN ADVANCED CREDENTIALS

A large female advantage in advanced degrees emerged over the first two decades of the twenty-first century. The gender reversal for master's degrees occurred before 2000, just as for bachelor's degrees, but women increased their share of master's degrees from 57.7 percent in 2000 to 61.9 percent in 2021. Their share of doctoral and professional degrees increased even more strikingly, from 45.3 percent in 2000 to 56 percent in 2021, such that the gender gap reversed from a male advantage to a female advantage (figure 5), the last remaining credentials for which men had previously maintained an advantage. The female advantage in master's degrees and doctoral or professional degrees increased for all race and ethnic groups

161





Source: Authors' calculations based on NCES 2022, table 318.10. *Note:* The given year is the second of an academic year span: 2000 refers to 1999–2000, 2001 to 2000–2001, and so on.

such that by 2022, women's share of master's degrees was 70.2 percent for Blacks, 66.8 percent for Hispanics, 64.3 percent for Whites, and 59.4 percent for Asians/Pacific Islanders (figure 6). In that same year, women's share of doctoral and professional degrees was 68.4 for Blacks, 59.7 percent for Hispanics, 58.4 for Asians/Pacific Islanders, and 57.8 for Whites.

The gender reversal in advanced degrees over the past twenty years occurred for both doctoral and professional degrees, but was especially large for professional degrees. Figure 7 reports the number of doctoral and professional degrees by gender. The pattern of gender divergence in professional degrees is striking in that since 2013 the number of professional degrees awarded to men stagnated (from 51,872 in 2013 to 49,286 in 2022) and the number awarded to women increased by more than 25 percent (57,273 in 2013 to 77,867 in 2022). For doctoral degrees, women began to pull away from men in 2016, and the gender gap has continued since that time. The U.S. Department of Education projects a continued gender divergence in doctoral and professional degrees, with those awarded to women projected to increase by 30.2 percent and those to men to increase by only 3.2 percent between 2021 and 2032 (NCES 2022, table 318.10).

Given that educational expansion has shifted to graduate degrees (Torche 2011), the growing gender divide in graduate degrees is notable. As Julie Posselt and Eric Grodsky (2017, 354) explain, "far from being a site of social equality, graduate and professional credentials are substantially more heritable than are other levels of education." Moreover, the economic returns to graduate credentials constitute a growing share of the overall returns to higher education for both women and men. Ac**Figure 6.** Women's Share of MA (Panel A) and Doctoral/Professional Degrees (Panel B), by Race and Ethnicity



Source: Authors' calculations based on NCES 2023b, table 323.20, 324.20 (with updated 2022 data). *Note:* The given year is the second of an academic year span: 2000 refers to 1999–2000, 2001 to 2000–2001, and so on.



Figure 7. Number of Doctoral and Professional Degree Recipients, by Gender

Source: Authors' calculations based on NCES 2023c. *Note:* The given year is the second of an academic year span: 2000 refers to 1999–2000, 2001 to 2000–2001, and so on.

cording to Rob Valleta (2015), from 2000 to 2013, relative to high school graduates, the earnings advantage to a graduate credential increased 17 percent over this period, while the earnings advantage for an undergraduate degree increased only 6 percent. Among college graduates of all age groups in 2021, women with a master's, doctoral, or professional degree enjoyed median salaries that were 21.7 percent, 53.3 percent, and 83.3 percent greater than those of bachelor's degree recipients, respectively. Among men, the benefits of advanced degrees over bachelor's degrees for median salaries were 10.5 percent, 24.2 percent, and 94.7 percent, respectively (National Center for Science and Engineering Statistics 2022).

In one sense, the female advantage in advanced credentials represents the logical progression of the gender reversal in college degrees, given that over time women have achieved the credentials that match their academic performance, and that achievements at lower levels of attainment provide access to advanced credentials. And the challenges for at least some men to earn college degrees now also appear to be limiting their earning advanced degrees. At the same time, other shifts in higher education suggest some more ambiguous conclusions for women who are now at the forefront of educational expansion.

EMERGING GENDER DIVIDES IN TYPES OF INSTITUTIONS ATTENDED

The continued female advantage in bachelor's degrees and in advanced credentials occurred during a period marked by a shift toward treating higher education as a private good (Dwyer, McCloud, and Hodson 2012; Houle 2014; Seamster and Charron-Chénier 2017; Cellini and Koedel 2017; Quadlin and Powell 2022). Although higher education in the United States has been understood as both a public and private good, in the 2000s the balance shifted at both the institutional and individual levels. At the institu-

tional level, a striking feature was major expansion of private for-profit institutions due to loosening federal regulations along with organizational and market innovation (Brown et al. 2019). At the individual level, government subsidy of student tuition declined at the state level and student financial aid increasingly came in the form of federal loans with expectation that students and families would shoulder more of the costs of higher education. Notably, for-profit institutions took significant advantage of the expanding federal loan system; for example, admissions officers and materials at these for-profit institutions helped their oftendisadvantaged students secure loans (McMillan Cottom 2017; Dawson 2024). Indeed, forprofit colleges depend more heavily on student loans for their tuition dollars than either public or private nonprofit colleges (McMillan Cottom 2017; Cellini and Koedel 2017).8

Little research to date has examined the implications of the coincidence of the rise of forprofit institutions of higher education with the growing gender divide in credentials, though some work has highlighted the large presence of women at these institutions (McMillan Cottom 2017; Quadlin, Conwell, and Rouhani 2023; Dawson 2024). Here we build on that research by analyzing gendered trends in undergraduate and graduate enrollment in three institution types: public, private nonprofit, and private forprofit institutions. Figure 8 shows men and women undergraduates (top panel) and graduate students (bottom panel) enrolled in each type of institution from 2000 to 2021. Gender gaps in undergraduate enrollment in public and private nonprofits changed little over the period, but the top right panel shows an emerging female-favorable gender gap in undergraduates in private for-profit institutions such that by 2021, more than twice as many women

(704,400) as men (345,000) were enrolled in these institutions (for these findings in percentage terms, see figure A.3). Although the popular image of for-profit universities are those serving undergraduates, the bottom panel of figure 8 shows growing numbers of doctoral and professional students attending for-profit schools and an emerging gender gap in private for-profit graduate enrollment. In 2000, almost no graduate students were enrolled at for-profit institutions, which at that time were more likely to be trade schools than institutions offering graduate degrees. Around 2004, graduate enrollment at for-profit schools began to increase more rapidly for women than for men, opening a gender gap that either grew or stayed stable over the 2010s. Posselt and Grodsky (2017) note that women continue to be more likely to engage in lower-prestige graduate programs than do men despite the increasing female advantage and encourage more research on this issue.9 Our findings demonstrate this persistence in lower prestige may be driven in part by the expansion of for-profit schools.

Trends in enrollment by institution type reveal an arguably underappreciated dimension in the unevenness of the gender revolution in the 2000s-women have likely borne more than men the costs of the shift towards education as a private good (England, Levine, and Mishel 2020). The growth of women with graduate credentials reflects achievements among the most privileged women but also the challenges of getting ahead in a credential society for lower income women. Research on graduate credentials from for-profit institutions is very limited, but findings on horizontal stratification and returns at the undergraduate level suggest that these degrees yield lower economic rewards than degrees from nonprofit institutions (Cellini and Koedel 2017; Cellini 2021). Because mi-

8. The rise of for-profit colleges and the high debt levels of students attending them led the Barack Obama administration to enact restrictions and some of the most predatory actors were shuttered. However, the Donald Trump administration loosened those restrictions again.

9. In supplemental analyses not shown, we find that the female advantage in advanced degrees developed differently by institutional sector. In the public and private nonprofit sectors, women's enrollment grew strongest in professional degrees, matching the overall trend displayed in figure 8. At for-profit institutions, doctoral degrees grew even more than professional degrees, likely driven by fields in which doctoral degrees likely lead to careers in practice, such as education and business. We join Posselt and Grodsky (2017) in calling for greater attention to institutional diversity in graduate education. Figure 8. Total Fall Enrollment for Men and Women by Institution Type for Undergraduate and Graduate Students Through 2021



Source: Authors' calculations based on NCES 2023c.

Note: Figures in thousands. Graduate students include all students at master's, doctoral, and professional degree levels.

noritized and low-income women are more likely to attend these institutions, they may be especially subject to the risk of high costs with low rewards (McMillan Cottom 2017; Quadlin, Conwell, and Rouhani 2023; Mickey-Pabello 2024).

THE EMERGING GENDER DIVIDE IN STUDENT DEBT

At the individual level, in part through their greater representation at for-profit institutions

that rely on federal financial aid for tuition dollars, women may also have borne more of the costs of the shift to student loan debt overall. Increasing concerns over college financing drive public debates over the value of college, but there has been comparatively little attention to this broader context in discussions of the gender divide in credentials (Dwyer, Hodson, and McCloud 2013; Quadlin and Powell 2022). We find evidence of emerging gender gaps in student indebtedness with women an increasing percentage of debt-holders. Figure 9 shows the percentage of men and women undergraduates (top panel) and graduate students (bottom panel) holding any debt for public institutions, private nonprofit institutions, and private for-profit institutions from 2004 to 2020. For all three institution types, debtholding increased most from 2004 to 2008, then stabilized from 2008 to 2012 after the Great Recession and declined slightly between 2012 to 2016 (Green 2018). Aversion to debt after the Great Recession may have increased when criticisms of the student loan system were a subject of public debate. Despite a small decline in debt-holding from 2016 to 2020 in public and private nonprofit institutions, debt-holding at private for-profit institutions rebounded after the Trump administration loosened the Obama-era restrictions. These findings suggest that the pattern of for-profit institutions contributing to rising indebtedness in the 2000 to 2010 period has continued (Brown et al. 2019).

Strikingly, the 2000s brought a gender rever-

Figure 9. Percentage of Undergraduate and Graduate Students Holding Debt, by Gender and Institution Type



Source: Authors' calculations based on NCES 2023d.

Note: Academic years 2003–2004, 2007–2008, 2011–2012, 2015–2016, and 2019–2020. Graduate students include those attending master's, doctoral, and professional degree programs at the time of interview. Error bars present 95 percent confidence intervals.

sal in debt-holding to match the female advantage in degrees overall. In 2004, women were more likely to carry debt than men only at private non-profit institutions (59 percent to 52 percent). By 2020, women were more likely than men to carry student debt in public and private for-profit sectors as well. In public institutions, a gender gap opened in 2008, with 30 percent of women and 26 percent of men holding debt. In private for-profit institutions, a gender gap in debt-holding opened for the first time in 2012 with 76 percent of women versus 68 percent of men holding student debt, a larger gap than that among the other institution types. From 2012 to 2016, the gender gap grew in both the public and private nonprofit sectors and held steady at for-profit colleges, even as debtholding declined modestly in each sector. The rebound in debt-holding at for-profits from 2016 to 2020 occurred entirely among women, increasing the gender gap in that sector to 13 percentage points.

Although still a comparatively small proportion of all credentials, shifts in graduate degrees represent the leading edge of change in the U.S. credential society (Pyne and Grodsky 2020). Strikingly, we find the emergence of a gender divide in student indebtedness over the same period during which women became the majority of graduate degree recipients. The bottom panel of figure 9 reports the percentage of male and female graduate students who hold debt, for public, private nonprofit, and private for-profit institutions. Here graduate students include those in any master's, doctoral, and professional degree program. Debtholding increased slightly from 2004 to 2020 in the public and private nonprofit sectors.¹⁰ However, debt-holding was substantially higher in the for-profit sector relative to the other two sectors, and that disparity was greater for graduate students than for undergraduate students. This finding reflects the total absence of funded graduate study in the for-profit sector. Just as for undergraduates, however, the percentage holding debt dropped from 2008 to 2012 after greater regulation of that sector, but remained higher than in the other two sectors.

Now focusing on the patterns for men and women, a gender gap in debt-holding for graduate students emerged in every institutional sector. In 2004 there was no gender gap in debtholding for graduate students in any institutional sector but starting in 2012, higher percentages of women carried debt relative to men in every institutional sector, and those gaps persisted through 2020. Again, just as for undergraduate students, the gender gap is even larger when we account for the fact that women make up an increasingly disproportionate percentage of graduate students, especially in degree programs that tend to be student funded, including master's degrees and professional degrees, as well as those at for-profit institutions.

Overall trends in the average amounts of debt held (see figure A.4) follow similar patterns to those for debt-holding, though no total amounts in any institutional sector showed any decline from 2012 to 2016. Notably, average debt levels were comparable at private nonprofit and for-profit institutions, despite the much lower status and return to for-profit degrees. Gender gaps in debt levels among debtholders are fewer than in the likelihood to hold any debt. The gender gap in debt thus occurs primarily as a result of differences in the likelihood of taking on any debt at all, suggesting that one consequence of the gender gap in credentials is that on average women are a financially disadvantaged group who rely more on financial aid. Women and men who need to take on debt take on similar average amounts of debt.11

Given that the female advantage in credentials results in a broader population of women attending college than men, we conduct a multivariate analysis of 2020 data to determine whether the undergraduate gender gap in debtholding persists net of sociodemographic char-

10. Overall debt-holding among graduate students in the two nonprofit sectors were more similar than for undergraduates, reflecting more similar costs and funding models in graduate programs than in undergraduate programs.

11. One reason studies often find more variation in debt-holding than debt levels among debtors is that student loan offers are capped at standard levels, limiting variability (Goldrick-Rab 2016).

acteristics.¹² Table 1 presents the results of logistic regression analyses predicting debtholding with controls for sociodemographic characteristics and institution type. The model for all students shows a gender gap in debtholding among women and men with students in for-profit colleges the most likely to take on debt. The race-specific models reveal a gender gap in debt-holding for each group.¹³ Thus, women are more likely to hold debt than similarly situated men.

Gender differences in student debt may be both a cause and a consequence of the gender divide in college credentials. The rising cost of education in recent decades may be a source of women's continued outpacing of men in earning credentials, given that financial considerations are a key reason many Americans do not attend or complete college. According to a 2021 survey of adults without a four-year college degree by the Pew Research Center, 42 percent cited their inability to afford one (Parker 2021). Women and men may differentially evaluate the risks and benefits of investing in college because of different labor-market and marriage opportunities (Dwyer, Hodson, and McCloud 2013). Moreover, different conventions of masculinity and femininity result in greater family support for daughters than for sons into young adulthood and reinforce expectations of selfsufficiency and independence for men compared to women (DiPrete and Buchmann 2013). For all of these reasons, men may be less willing than women to take on debt to attain educational credentials.

Causal factors aside, any gender differences in student debt also represent an important consequence of the gender divide in college credentials. Because women make up a larger proportion of the college-going population, they and their families disproportionately bear the costs of college. Moreover, as educational expansion among women developed in the 2000s, a growing number of them attended forprofit institutions, which offer worse employment and earnings outcomes than nonprofit ones (Cellini 2021).

IMPLICATIONS

Although the female-favorable gender gap in bachelor's degrees remained stable over the first two decades of the twenty-first century, a large female advantage in advanced degrees emerged over the same period and has grown especially large for professional degrees. In light of the fact that the economic returns to graduate credentials constitute a growing share of the overall returns to higher education, these are important markers of women's continued educational advancement made possible by their higher academic performance and educational aspirations. In contrast, men's stagnant rates of college completion over the same period have limited some men's ability to acquire advanced degrees and advance in the labor market. Finally, the slow growth in college degrees among men, who make up about half the U.S. working-age population, has reduced the nation's competitiveness in the global economy; the United States has fallen to twelfth among OECD countries in the share of tertiary-educated twenty-five to thirty-fouryear-olds (OECD 2022).

The diverging educational pathways of American men and women have far-reaching impacts because the returns to a college degree extend beyond stable employment and higher earnings and include a higher probability of marriage, insurance against poverty (DiPrete and Buchmann 2006), and a healthier and longer life (Case and Deaton 2020). These pathways may also be related to other significant developments discussed by other articles in this double issue. Women's increasing receipt

12. Public NPSAS data does not provide adequate sample sizes to analyze the smaller population of graduate students.

13. The gender gap in debt-holding is not significantly different between these racial-ethnic groups, except that debt-holding of Hispanic students is significantly smaller than that of White students. Supplemental analyses (not shown) find that Black students are the most likely to take debt relative to all other racial-ethnic groups within each gender. And in analyses separated by institution type, the gender gap in debt-holding is the largest in for-profit colleges. We also added a category for nonbinary students (first collected in 2020) and find no significant differences in the likelihood of holding debt relative to men or women.

Table 1. Logistic Regression	Models Predicting Odds Ratio	os of Debt-Holdina Amo	ng Undergraduate Students
Jerre	.		J

	All	White	Black	Hispanic	Asian	Other
Gender (Ref: Male)						
Female	1.321*** (0.037)	1.418*** (0.049)	1.324*** (0.102)	1.136* (0.069)	1.225*** (0.114)	1.243* (0.127)
Race and Ethnicity (Ref: White)						
Black	1.794*** (0.069)					
Hispanic	0.733*** (0.022)					
Asian	0.617*** (0.031)					
American Indian or Alaska Native	0.675* (0.114)					
Native Hawaiian /Other Pacific Islander	0.945					
Multiracial	(0.221) 0.895 (0.051)					
Institutional type (Ref: Public)						
Private nonprofit	1.745*** (0.042)	1.614*** (0.073)	1.711*** (0.211)	2.475*** (0.206)	1.412* (0.196)	1.974*** (0.264)
Private for-profit	4.7/3*** (0.245)	3.55/*** (0.326)	3.034*** (0.455)	10.438*** (2.185)	8.120*** (2.599)	5.548*** (1.176)
Degree program (Ref: Certificate; as	sociate's					
degree; not in a degree program or o	others)					
Bachelor's degree	3.092*** (0.235)	2.776*** (0.302)	3.262*** (0.354)	4.049*** (0.588)	3.609*** (0.854)	2.839*** (0.550)
Institution level (Ref: Less than two-	year)					
Four-year -	0.673*** (0.071)	0.823 (0.132)	0.640 (0.165)	0.584 (0.164)	0.215** (0.106)	0.675 (0.226)
Two-year	0.447*** (0.041)	0.540*** (0.076)	0.346*** (0.088)	0.418*** (0.418)	0.127*** (0.063)	0.583 (0.174)
School year (Ref: First year)						
Second year	1.266*** (0.041)	1.192*** (0.053)	1.277** (0.090)	1.275*** (0.087)	1.594** (0.221)	1.009 (0.127)
Third year	1.202*** (0.054)	1.139* (0.071)	1.114 (0.134)	1.400*** (0.118)	1.348* (0.177)	1.278 (0.200)
Fourth year	1.028 (0.042)	0.949 (0.050)	0.903 (0.106)	1.469*** (0.131)	1.008 (0.136)	1.052 (0.180)
Fifth year and unclassified	0.849* (0.065)	0./11*** (0.071)	0.666 (0.149)	1.284 (0.202)	1.623 (0.416)	0.827 (0.287)
U.S. born	1.95*** (0.086)	2.050*** (0.145)	2.077*** (0.191)	2.067*** (0.164)	1.505*** (0.150)	2.610*** (0.483)
Constant	0.173 (0.018)	0.152*** (0.025)	0.351*** (0.100)	0.096*** (0.022)	0.321* (0.147)	0.118*** (0.041)
Ν	79,700	38,800	12,000	18,500	5,800	4,600

Source: Authors' calculations based on Cameron et al. 2021.

Note: Other racial groups include American Indian or Alaska Native, Native Hawaiian/other Pacific Islander, and Multiracial. They are combined due to lack of sufficient sample sizes to run models separately. *p < .05; **p < .01; ***p < .001 of credentials from the 1980s onward may be related to their ability to close prior gender gaps in job tenure between the mid 1980s and late 1990s (Lachanski 2025, this issue), though this conjecture needs empirical investigation. At the same time, men's lack of college degrees may be related to their increasing precarity later in the life course. For example, Hyunjoon Park, Matthew Sheen, and Paula Clark (2025) find that at older ages, men without a college degree are more likely to live alone than their more educated counterparts.

Another striking feature of the 2000 to 2020 period was the expansion of for-profit institutions in the United States and concomitant increases in women's undergraduate and graduate enrollment at these institutions. Although for-profit enrollment still represents a small share of all higher education enrollments, the high level of debt-holding among students at those institutions means that a substantial proportion of the growing indebtedness among women occurs at these schools. Related to these institutional changes and the fact that the costs of higher education have increasingly come to be a private good, a gender divide emerged in student indebtedness over the same period during which women became the majority of graduate and professional degree holders. Today, as the majority degree holders, women disproportionately carry the promise and bear the costs of educational expansion in the United States.

Clearly many questions remain and thus we highlight particularly urgent directions for future research on the growing gender divide in educational credentials. First, future research should focus on the causes and consequences of gender differences in college and advanced degree receipt by race, ethnicity, socioeconomic status, and nativity, with a particular focus on low-income and minoritized populations. Second, as population-level data sources become available, a focus on sexual and gender minority (SGM) populations would be valuable given that research about educational experiences and attainment of this growing population in the United States is still quite limited (Stacey, Reczek, and Spiker 2022). Finally, it is important to continue to expand research on the growing heterogeneity among women degree holders in terms of institutions attended, debt-holding, and degree returns. As the female advantage in credentials continues, the population of highly educated women has become much more diverse than highly educated men. These differences in selection have significant implications for understanding both the promises and the costs of higher education for women relative to men, as well as for sexual and gender minority populations (Conwell and Quadlin 2022). Research has identified differential repayment rates across student populations to be a particularly important aspect of the costs of higher education, with minoritized students and students who attended for-profit institutions taking longer to repay loans and facing higher rates of default (Brown et al. 2019; Houle and Addo 2019). Research also highlights the implications of these realities for the racial wealth gap (Seamster and Charron-Chénier 2017; Houle and Addo 2019, 2022). Our work and that of others (Quadlin, Conwell, and Rouhani 2023; Dawson 2024) suggest implications for the gender wealth gap, and the gender-byrace wealth gap.

The gender divide in for-profit enrollment presents both cautions and opportunities in the next decade. The highly disproportionate female enrollment at for-profit institutions combined with high debt levels at those institutions underscores how the costs of declining public investment in higher education have fallen disproportionately on less advantaged women. Yet, after a time of growing prominence, for-profit institutions may now be facing significant headwinds. Increased public scrutiny has led to greater regulatory attention and rules that make it more difficult for these schools to encourage high levels of student debt while providing degrees with low returns. Moreover, some nonprofit colleges are competing with for-profit colleges by offering a wide range of practice credentials, micro-credentials, and, perhaps most important, remote educational programs. A few nonprofit public systems have even moved toward purchasing and absorbing formerly for-profit institutions, with significant debate over what such acquisitions mean for the nonprofit purchasers (Blumenstyk 2017). Finally, for-profit universities also face the demographic change challenging all

U.S. institutions of higher education: a declining number of college-aged young adults, with 2025 representing what some have called a demographic cliff as a smaller postmillennial cohort becomes college age.

The growing gender divide in educational credentials raises important questions for researchers, policymakers, and educators who want to improve educational performance and attainment and for educational institutions striving to respond to the needs of their students. The large, diverse system of higher education in the United States offers many pathways to educational credentials, but students also face numerous challenges in earning them, and the costs have become principal among the challenges (Goldrick-Rab 2016; Quadlin and Powell 2022). We have highlighted both the opportunities and costs for women who, as the majority of college students and degree recipients, must manage the risks of educational expansion in a time of lowered state subsidy and expanded allowances to for-profit institutions. Of course, men's lower rates of earning bachelor's degrees and advanced credentials also entail risks, especially for lower-income and minoritized men, and researchers and policymakers should seek to understand the sources and solutions for men's stagnant enrollment and completion rates. The growing gender divide in credentials was spurred at least in part by greater equity and access for women. In the next decade and beyond, policymakers, politicians, and educators should support the equity-enhancing possibilities of higher education rather than its stratifying and exclusionary risks.

Figure A.1. High School Status Dropout Rate by Gender



Source: Authors' calculations based on NCES 2022, table 219.80.

Note: Data for 2020 were not reported by NCES. Status dropouts are sixteen- to twenty-four-year-olds who are not enrolled in school and who have not completed a high school program, regardless of when they left school and whether they ever attended school in the United States. People who have received equivalency credentials, such as the GED, are counted as high school completers. Data are based on sample surveys of the entire population residing within the United States, including both noninstitutionalized persons (such as those living in households, college housing, or military housing located within the United States) and institutionalized persons (such as those living in prisons, nursing facilities, or other health-care facilities).



Figure A.2. Number of BA Degree Recipients by Field and Gender

© Computer and information sciences

 \oplus Mathematics, statistics, and physical sciences

Source: Authors' calculations based on NCES 2022, tables 325.20, 325.35, 325.45, 325.60, 325.65. *Note:* Figures in thousands. 2000 refers to the 1999–2000 academic year; 2001 refers to the 2000–2001 academic year, and so on.



Figure A.3. Total Undergraduate and Graduate Student Fall Enrollment for Men and Women by Institution Type, 2000–2021

Source: Authors' calculations based on NCES 2023c.

Figure A4. Debt Amounts Held by Undergraduate and Graduate Students



Panel A. Undergraduate

16,540

2020

Source: Authors' calculations based on NCES 2023d.

2004 2008 2012 2016

2020

Note: Error bars present 95 percent confidence intervals. 2004 denotes the 2003-2004 academic year, and so on. For undergraduate students, debt amount includes Parent PLUS loans. For graduate students, debt amount does not include Parent PLUS loans and includes Direct PLUS loans to graduate students. NPSAS did not report the debt amount among graduate students at for-profit institutions in 2004 because the standard error represents more than 50 percent of the estimate. Graduate students include those attending master's, doctoral, and professional degree programs.

2004 2008

Gender

2012 2016

Year

Men

2020

Women

2004 2008 2012 2016

REFERENCES

- Anders, John, Mary E. Campbell, Craig Wesley Carpenter, and Luna Chandna. 2025. "Ethnoracial Transformations? Linking Administrative Data to Explain Changes in Identification." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 11(1): 65–84. https://doi.org/10.7758 /RSF.2025.11.1.04.
- Ashworth, Jared, V. Joseph Hotz, Arnaud Maurel, and Tyler Ransom. 2021. "Changes Across Cohorts in Wage Returns to Schooling and Early Work Experiences." *Journal of Labor Economics* 39(4): 931–64.
- Autor, David, and Melanie Wasserman. 2013. "Wayward Sons: The Emerging Gender Gap in Labor Markets and Education." Commissioned Report for the NEXT Initiative. Washington, D.C.: The Third Way Foundation.
- Blakeslee, Laura, Zoe Caplan, Julie A. Meyer, Megan
 A. Rabe, and Andrew W. Roberts. 2023. "Age and
 Sex Composition: 2020." Census Brief no.
 C2020BR-06. Washington: U.S. Census Bureau.
 Accessed October 2, 2023. https://www2
 .census.gov/library/publications/decennial
 /2020/census-briefs/c2020br-06.pdf.
- Bleemer, Zachary, Meta Brown, Donghoon Lee, Katherine Strair, and Wilbert Van der Klaauw. 2021.
 "Echoes of Rising Tuition in Students' Borrowing, Educational Attainment, and Homeownership in Post-Recession America." *Journal of Urban Economics* 122 (March): 103298. https://doi.org /10.1016/j.jue.2020.103298.
- Blumenstyk, Goldie. 2017. "Purdue's Purchase of Kaplan Is a Big Bet—and a Sign of the Times." *The Chronicle of Higher Education*, April 28.
- Bowen, William G., Matthew M. Chingos, and Michael McPherson. 2009. *Crossing the Finish Line: Completing College at America's Public Universities*. Princeton, N.J.: Princeton University Press.
- Brown, Meta, Rajashri Chakrabarti, Wilbert Van der Klaauw, and Basit Zafar. 2019. "Understanding the Evolution of Student Loan Balances and Repayment Behavior: Do Institution Type and Degree Matter?" *Economic Policy Review* 25(1): 1–23.
- Buchmann, Claudia, and Thomas A. DiPrete. 2006. "The Growing Female Advantage in College Completion: The Role of Parental Resources and Academic Achievement." *American Sociological Review* 71(4): 515–41.

Buchmann, Claudia, Thomas A. DiPrete, and Anne McDaniel. 2008. "Gender Inequalities in Education." Annual Review of Sociology 34(1): 319–37.

- Cameron, Margaux, T. Austin Lacy, Peter Siegel, Joanna Wu, Ashley Wilson, Ruby Johnson, Rachel Burns, and Jennifer Wine. 2021. 2019–20 National Postsecondary Student Aid Study (NPSAS:20): First Look at the Impact of the Coronavirus (COVID-19) Pandemic on Undergraduate Student Enrollment, Housing, and Finances (Preliminary Data). NCES 2021-456. Washington: U.S. Department of Education, National Center for Education Statistics. Accessed July 31, 2023. https://nces.ed.gov/pubsearch/pubsinfo.asp ?pubid=2021456.
- Carpenter, Christopher S., Maxine J. Lee, and Laura Nettuno. 2025. "Gender Minority Status and Family Inequality in the United States." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 11(2): 65–85. https://doi.org/10.7758 /RSF.2025.11.2.04.
- Case, Anne, and Angus Deaton. 2020. *Deaths of Despair and the Future of Capitalism*. Princeton, N.J.: Princeton University Press.
- Cellini, Stephanie Riegg. 2021. "For-Profit Colleges in the United States: Insights from Two Decades of Research." In *The Routledge Handbook of the Economics of Education*. Oxford: Routledge.
- Cellini, Stephanie Riegg, and Cory Koedel. 2017. "The Case for Limiting Federal Student Aid to For-Profit Colleges." *Journal of Policy Analysis and Management* 36(4): 934–42.
- Conwell, Jordan A., and Natasha Quadlin. 2022. "Race, Gender, Higher Education, and Socioeconomic Attainment: Evidence from Baby Boomers at Midlife." *Social Forces* 100(3): 990–1024.
- Dawson, Caleb E. 2024. "Precarity and the Predatory Inclusion of Black Women by For-Profit Colleges." *Critical Sociology*. First published online February 26, 2024. httsp://doi.org/10.1177 /08969205231223164.
- DiPrete, Thomas A., and Claudia Buchmann. 2006. "Gender-Specific Trends in the Value of Education and the Emerging Gender Gap in College Completion." *Demography* 43(1): 1–24.
- —. 2013. The Rise of Women: The Growing Gender Gap in Education and What It Means for American Schools. New York: Russell Sage Foundation.
- -----. 2014. "The Secret Behind College Completion: Girls, Boys and the Power of Eighth Grade

Grades." Commissioned Report for the NEXT Initiative. Washington, D.C.: The Third Way Foundation.

Duffy, Mignon. 2011. *Making Care Count: A Century* of Gender, Race, and Paid Care Work. New Brunswick, N.J.: Rutgers University Press.

Dwyer, Rachel E. 2013. "The Care Economy? Gender, Economic Restructuring, and Job Polarization in the U.S. Labor Market." American Sociological Review 78(3): 390–416.

Dwyer, Rachel E., Randy Hodson, and Laura Mc-Cloud. 2013. "Gender, Debt, and Dropping Out of College." *Gender and Society* 27(1): 30–55.

Dwyer, Rachel E., Laura McCloud, and Randy Hodson. 2012. "Debt and Graduation from American Universities." *Social Forces* 90(4): 1133–55.

Dwyer, Rachel E., and Erik Olin Wright. 2019. "Low-Wage Job Growth, Polarization, and the Limits and Opportunities of the Service Economy." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 5(4): 56–76. https://doi.org/10.7758 /RSF.2019.5.4.02.

England, Paula, Andrew Levine, and Emma Mishel. 2020. "Progress Toward Gender Equality in the United States Has Slowed or Stalled." *Proceedings of the National Academy of Sciences*, 117(13): 6990–97.

Fingerman, Karen L., Kyungmin Kim, Eden M. Davis, Frank F. Furstenberg Jr., Kira S. Birditt, and Steven H. Zarit. 2015. "I'll Give You the World: Socioeconomic Differences in Parental Support of Adult Children." *Journal of Marriage and Family* 77(4): 844–65.

Fomby, Paula, and Nicole Kravitz-Wirtz. 2019. "Family Systems and Parents' Financial Support for Education in Early Adulthood." *Demography* 56(5): 1875–97.

Goldrick-Rab, Sara. 2016. *Paying the Price: College Costs, Financial Aid, and the Betrayal of the American Dream.* Chicago: University of Chicago Press.

Green, Erica L. 2018. "DeVos Ends Obama-Era Safeguards Aimed at Abuses by For-Profit Colleges." *New York Times*, April 10.

Houle, Jason N. 2014. "A Generation Indebted: Young Adult Debt Across Three Cohorts." *Social Problems* 61(3): 448–65.

Houle, Jason N., and Fenaba R. Addo. 2019. "Racial Disparities in Student Debt and the Reproduction of the Fragile Black Middle Class." *Sociology of Race and Ethnicity* 5(4): 562–77. —. 2022. A Dream Defaulted: The Student Loan Crisis Among Black Borrowers. Cambridge, Mass.: Harvard University Press.

Lachanski, Michael. 2025. "U.S. Trends in Job Stability by Sex, Race, and Ethnicity from 1996 to 2020." *RSF: The Russell Sage Foundation Journal* of the Social Sciences 11(1): 224–46. https://doi .org/10.7758/RSF.2025.11.11.

MacLean, Alair, and Glen H. Elder Jr. 2007. "Military Service in the Life Course." *Sociology* 33(1): 175– 96.

McMillan Cottom, Tressie. 2017. Lower Ed: The Troubling Rise of For-Profit Colleges in the New Economy. New York: The New Press.

Mickey-Pabello, David. 2024. "The Anti-Affirmative Action Avalanche: The Rise of Underrepresented Minority Enrollment at For-Profit Institutions." Sociology of Education 97(1): 37–57.

National Assessment of Educational Progress (NAEP). 2019. "High School Transcript Study 2019." Washington: U.S. Department of Education, National Center for Education Statistics. Accessed April 20, 2023. https://www.nations reportcard.gov/hstsreport/#closerlook.

National Center of Education Statistics (NCES). 2022. "Digest of Educational Statistics." Washington: U.S. Department of Education, National Center for Education Statistics.

- 2023a. "The Condition of Education." Washington: U.S. Department of Education, Institute of Education Sciences.
- 2023b. "Digest of Educational Statistics."
 Washington: U.S. Department of Education, National Center for Education Statistics.
- 2023c. "Integrated Postsecondary Education Data System (IPEDS)." Washington: U.S. Department of Education, National Center for Education Statistics.
- 2023d. "2019-20 National Postsecondary Student Aid Study (NPSAS:20)." Washington: U.S.
 Department of Education, National Center for Education Statistics.

2024. "Datalab." Washington: U.S. Department of Education, Institute of Education Statistics. Accessed April 20, 2024. https://nces.ed
 .gov/datalab.

National Center for Science and Engineering Statistics. 2022. National Survey of College Graduates: 2021. NSF 23-306. Alexandria, Va.: National Science Foundation.

Organization for Economic Cooperation and Devel-

opment (OECD). 2022. *Education at a Glance* 2022: OECD Indicators. Paris: OECD Publishing.

- Park, Hyunjoon, Matthew Sheen, and Paula Clark. 2025. "Living Alone for Black and White Men and Women over Four Decades, 1980–2019." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 11(2): 26–45. https://doi.org /10.7758/RSF.2025.11.2.02.
- Parker, Kim. 2021. "What Is Behind the Growing Gap Between Women and Men in College Completion?" Washington, D.C.: Pew Research Center.
- Posselt, Julie R., and Eric Grodsky. 2017. "Graduate Education and Social Stratification." *Annual Review of Sociology* 43(1): 353–78.
- Pyne, Jaymes, and Eric Grodsky. 2020. "Inequality and Opportunity in a Perfect Storm of Graduate Student Debt." *Sociology of Education* 93(1): 20– 39.
- Quadlin, Natasha, Jordan A. Conwell, and Shiva Rouhani. 2023. "The Economic Context of Higher Education Expansion: Race, Gender, and Household Finances Across Cohorts and Generations." *Journal of Family and Economic Issues*. Published online July 1, 2023. https://doi.org/10.1007 /s10834-023-09918-8.
- Quadlin, Natasha, and Brian Powell. 2022. *Who Should Pay? Higher Education, Responsibility, and the Public.* New York: Russell Sage Foundation.
- Radwin, David, Johnathan G. Conzelmann, Annaliza Nunnery, T. Austin Lacy, Joanna Wu, Stephen Lew, Jennifer Wine, and Peter Siegel. 2018. 2015-16 National Postsecondary Student Aid Study

(NPSAS:16): Student Financial Aid Estimates for 2015-16 (NCES 2018-466). Washington: U.S. Department of Education, National Center for Education Statistics. Accessed April 20, 2023. http://nces.ed.gov/pubsearch/pubsinfo. asp?pubid=2018466.

- Seamster, Louise, and Raphaël Charron-Chénier. 2017. "Predatory Inclusion and Education Debt: Rethinking the Racial Wealth Gap." Social Currents 4(3): 199–207.
- Stacey, Lawrence, Rin Reczek, and R. Spiker. 2022. "Toward a Holistic Demographic Profile of Sexual and Gender Minority Well-being." *Demography* 59(4): 1403–30.
- Torche, Florencia. 2011. "Is a College Degree Still the Great Equalizer? Intergenerational Mobility Across Levels of Schooling in the United States." *American Journal of Sociology* 117(3): 763–807.
- Valleta, Rob. 2015. "Higher Education, Wages, and Polarization." *FRBSF Economic Letter* 2015-02. Accessed April 18, 2024. https://www.frbsf.org /wp-content/uploads/el2015-02.pdf.
- Yavorsky, Jill E., and Janette S. Dill. 2020. "Unemployment and Men's Entrance into Female-Dominated Jobs." *Social Science Research* 85 (January): 1–20.
- Young, S. Abby, Ann M. Beutel, and Stephanie W. Burge. 2023. "High Hopes: Gender Trends in Educational Expectations for Graduate and Professional School, 1976–2019." *Sociological Quarterly* 64(3): 493–519.