Behind the Pay Gap

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By Judy Goldberg Dey and Catherine Hill

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Foreword

Founded in 1881, the American Association of University Women has championed the rights of women and girls in higher education and the workplace for more than 125 years. During this time, women have gone from a small minority on college campuses to a majority of the student body. College-educated women have achieved positions of leadership in every field of endeavor, including making remarkable gains in traditionally male fields, such as medicine, business, and law. Yet women's earnings continue to lag behind those of their male peers in nearly every occupation and at every educational level.

Why have women's educational accomplishments failed to close the gender pay gap in the workplace? This question is a focal point of AAUW's research and advocacy work. Four years ago the AAUW Educational Foundation published *Women at Work* (2003), a report documenting sex segregation in the workplace. The report found that while women's overall levels of education and participation in the paid labor force had increased, women remained segregated in lower-paying occupations.

Over time, the gender pay gap cumulates into substantial differences in economic security. As noted in the Educational Foundation's report *Mom's Retirement Security* (2006), women are twice as likely as men to spend their retirement years living alone, in or near poverty.

Behind the Pay Gap examines how the choices made in college affect later earnings and, by implication, economic security throughout a lifetime. Building on the Educational Foundation's previous research on workplace equity, including *Women at Work* and *Public Perceptions of the Pay Gap* (2005), this report analyzes the gender pay gap and presents strategies for its dismantling.

Barbara O'Connor, President
AAUW Educational Foundation
April 2007

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Executive Summary

Women have made remarkable gains in education during the past three decades, yet these achievements have resulted in only modest improvements in pay equity. The gender pay gap has become a fixture of the U.S. workplace and is so ubiquitous that many simply view it as normal.

Behind the Pay Gap examines the gender pay gap for college graduates. One year out of college, women working full time earn only 80 percent as much as their male colleagues earn. Ten years after graduation, women fall farther behind, earning only 69 percent as much as men earn. Controlling for hours, occupation, parenthood, and other factors normally associated with pay, college-educated women still earn less than their male peers earn.

Individuals can, however, make choices that can greatly enhance their earnings potential. Choosing to attend college and completing a college degree have strong positive effects on earnings, although all college degrees do not have the same effect. The selectivity of the college attended and the choice of a major also affect later earnings. Many majors remain strongly dominated by one gender. Female students are concentrated in fields associated with lower earnings, such as education, health, and psychology. Male students dominate the higher-paying fields: engineering, mathematics, and physical sciences. Women and men who majored in "male-dominated" subjects earn more than do those who majored in "female-dominated" or "mixed-gender" fields. For example, one year after graduation, the average female education major working full time earns only 60 percent as much as the average female engineering major working full time earns.

The choice of major is not the full story, however. As early as one year after graduation, a pay gap is found between women and men who had the same college major. In education, a female-dominated major, women earn 95 percent as much as their male colleagues earn. In biological sciences, a mixed-gender major, women earn only 75 percent as much as men earn. Likewise in mathematics—a male-dominated major—women earn only 76 percent as much as men earn. Female students cannot simply choose a major that will allow them to avoid the pay gap.

Early career choices, most prominently occupational choices, also play a role in the gender pay gap. While the choice of major is related to occupation, the relationship is not strict. For example, some mathematics majors choose to teach, while others work in business or computer science. One year after graduation, women who work in computer science, for instance, earn over 37 percent more than do women who are employed in education or administrative, clerical, or legal support occupations. Job sector also affects earnings. Women are more likely than men to work in the nonprofit and local government sectors, where wages are typically lower than those in the for-profit and federal government sectors.

The division of labor between parents appears to be similar to that of previous generations. Motherhood and fatherhood affect careers differently. Mothers are more likely than fathers (or other women) to work part time, take leave, or take a break from the work force—factors that negatively affect wages. Among women who graduated from college in 1992–93, more than one-fifth (23 percent) of mothers were out of the work force in 2003, and another 17 percent were working part time. Less than 2 percent of fathers were out of the work force in 2003, and less than 2 percent were working part time. On average, mothers earn less than women without children earn, and both groups earn less than men earn.

The gender pay gap among full-time workers understates the real difference between women's and men's earnings because it excludes women who are not in the labor force or who are working part time. Most college-educated women who are not working full time will eventually return to the full-time labor market. On average, these women will then have lower wages than will their continuously employed counterparts, further widening the pay gap.

What can be done about the gender pay gap? To begin with, it must be publicly recognized as a problem. Too often, both women and men dismiss the pay gap as simply a matter of different choices, but even women who make the same occupational choices that men make will not typically

end up with the same earnings. Moreover, if "too many" women make the same choice, earnings in that occupation can be expected to decline overall.

Women's personal choices are similarly fraught with inequities. The difference between motherhood and fatherhood is particularly stark. Motherhood in our society entails substantial economic and personal sacrifices. Fatherhood, on the other hand, appears to engender a "wage premium." Indeed, men appear to spend *more* time at the office after becoming a father, whereas women spend considerably less time at work after becoming a mother. Women who do not have children may still be viewed as "potential mothers" by employers, who may, as a result, give women fewer professional opportunities.

Ideally, women and men should have similar economic opportunities and equal opportunities to enjoy meaningful unpaid work, such as parenting. Improving women's earnings could have positive consequences for men who would like to spend more time with their children but who can't afford to reduce their work hours. Likewise, workplace accommodations for parenting could be valuable for fathers as well as mothers. Other groups may also benefit from greater flexibility in the workplace, including older workers seeking "partial retirement," students hoping to combine work with study, and workers with other kinds of caregiving responsibilities.

The pay gap between female and male college graduates cannot be fully accounted for by factors known to affect wages, such as experience (including work hours), training, education, and personal characteristics. Gender pay discrimination can be overt or it can be subtle. It is difficult to document because someone's gender is usually easily identified by name, voice, or appearance. The only way to discover discrimination is to eliminate the other possible explanations. In this analysis the portion of the pay gap that remains unexplained after all other factors are taken into account is 5 percent one year after graduation and 12 percent 10 years after graduation. These unexplained gaps are evidence of discrimination, which remains a serious problem for women in the work force.

Women's progress throughout the past 30 years attests to the possibility of change. Before Title VII of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972, employers could—and did—refuse to hire women for occupations deemed "unsuitable," fire women when they became pregnant, or limit women's work schedules on the basis of gender. Schools could—and did—set quotas for the number of women admitted or refuse women admission altogether. In the decades since these civil rights laws were enacted, women have made remarkable progress in fields such as law, medicine, and business as well as some progress in nontraditional "blue-collar" jobs such as aviation and firefighting.

Despite the progress women have made, gender pay equity in the workplace remains an issue. Improvements to federal equal pay laws are needed to ensure that women and men are compensated fairly when they perform the same or comparable work. Flexibility, meaningful part-time work opportunities, and expanded provisions for medical and family leave are important to help women and men better balance work and family responsibilities. Making gender pay equity a reality will require action by individuals, employers, and federal and state governments.

Chapter 1. Why the Pay Gap Matters

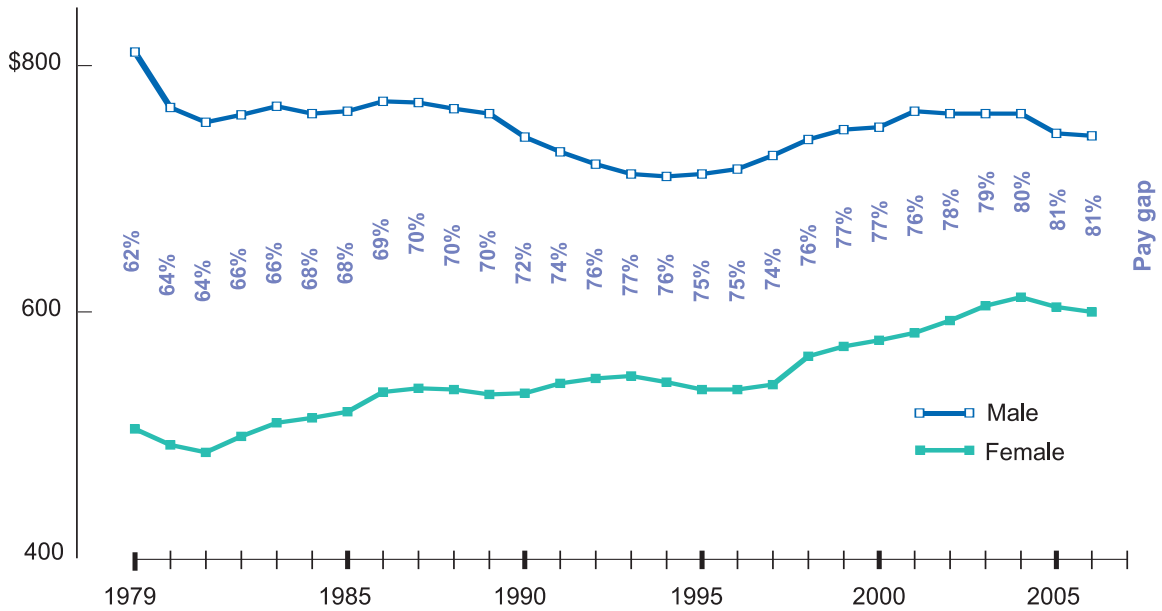
Women have made remarkable gains in education during the past three decades, yet improvements in women's earnings have been relatively modest during this time (see Figure 1). In the 1970s, men outnumbered women on college campuses, with 38 percent of young men ages 18 through 24 enrolled in college in 1974 compared to 33 percent of young women in this age group. During the intervening decades, college attendance grew for both women and men, but women made more rapid gains. By 2003, 51 percent of young women and 41 percent of young men had attended, or graduated from, some kind of college (U.S. Department of Education, 2005a). Despite the dramatic increase in women's participation in higher education, the gender pay gap narrowed only somewhat during these decades.

In part, pay equity is simply a matter of fairness. When women are paid less than men are for comparable work, women have fewer resources to support themselves and their families. Some women experience real deprivation as a result of the pay gap, especially when they enter their retirement years. The pay gap impedes women's ability to negotiate in the workplace, at home, and in the political arena. Because women earn less, most couples are likely to prioritize the higher-earning husband's well-being in child care, choice of residence, and other household decisions.

In marriages that last a lifetime, these compromises could conceivably work out well for both parties. Yet as the economic lives of women and men have grown farther apart, the gender pay gap proves especially troubling. Nearly one-half of U.S. women did not live with a husband in 2005, and while most women marry at some point, most also spend a large part of their lives on their own. Furthermore, women are much more likely than men to be single parents, and many mothers shoulder the full responsibility for the care of their children with little or no financial assistance from fathers. In this way, pay equity for women is a children's issue as well as a women's issue.

The larger issue at stake in pay equity, however, revolves around family values. Many critics have charged that the U.S. workplace is unnecessarily rigid and punitive toward any time out of the work force. As described in Chapters 3

Figure 1. Median Usual Weekly Earnings of Full-Time Wage and Salary Workers (25 Years and Older), Annual Averages in 2006 Dollars



Source: Authors' analysis of U.S. Bureau of Labor Statistics data.

and 4, mothers pay a hefty price if they reduce their hours or temporarily leave the work force to care for children. Fathers do not pay this penalty, nor do they typically reduce their work hours when they become parents. Ironically, many men who might want to spend more time with their children are prevented from doing so because their wives do not make equivalent salaries. Improving gender equity in the workplace is truly a family value.

The U.S. economy is characterized by "masculine" values of competition and individual achievement. Both women and men reap economic rewards for competing successfully in the workplace. With few exceptions, workers are rewarded for working more hours, and those who fail to work long hours are off the "fast track"—probably for good. Women who professionally care for young children or disabled adults are among the worst-paid workers in the economy. Closing the pay gap demands that caregiving work be valued and adequately compensated (Crittenden, 2001).

Few dispute that women earn less than men earn, but there is little agreement about what to do about it or, indeed, whether anything should be done. Do we see the pay gap disappearing for the younger work force? Is the gap larger or smaller among the college-educated population than it is among the whole work force?

Behind the Pay Gap addresses these questions by analyzing early career choices and earnings for female and male graduates one year and 10 years out of college. These segments of the labor force represent the upcoming generation of educated workers, and understanding pay differences within these populations provides us with insight into the future of the pay gap.

The group one year out of college should arguably be the least likely to show a gender pay gap. Women and men graduating from four-year colleges have made a considerable investment in their education, and it is reasonable to assume that both plan to have a career. Furthermore, neither male nor female graduates are likely to have children yet, so both enter the work force without this constraint. With some exceptions, both female and male graduates enter the work force without significant prior experience, eliminating another potential source of pay differences. If the pay gap can be expected to disappear "naturally" over time, as many claim that it will, we would expect to see small differences among young female and male college graduates at the beginning of their careers, and we would expect any differences to shrink as their careers progress.

The first decade after graduation is a formative time in the careers of women and men. Many pursue additional professional and graduate training, and many start families. For this group, a more narrow pay gap might indicate that women increase their earnings by attending graduate or professional school, while a wider pay gap might suggest that motherhood is exacting a penalty on women's earnings. In either case, the examination of these graduates provides a valuable perspective on the relative importance of educational, occupational, and parenting choices and offers a unique opportunity to link educational choices with later earnings.

Behind the Pay Gap uses data from the U.S. Department of Education's *Baccalaureate and Beyond Longitudinal Study* (B&B), which provides a nationally representative sample of students graduating with bachelor's degrees in selected years.[1] Two sets of data were analyzed: 1992–93 graduates, who were interviewed in 1994, 1997, and 2003, and 1999–2000 graduates, who were interviewed in 2001.[2] The 1999–2000 graduates are the source for the analysis of outcomes one year out of college, and the 1992–93 graduates are the source for the analysis of outcomes 10 years after graduation.[3]

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[1] The B&B is conducted by the U.S. Department of Education, National Center for Education Statistics. Student cohorts are drawn from the National Post Secondary Student Aid Study—a large, nationally representative sample of institutions, students, and parents.

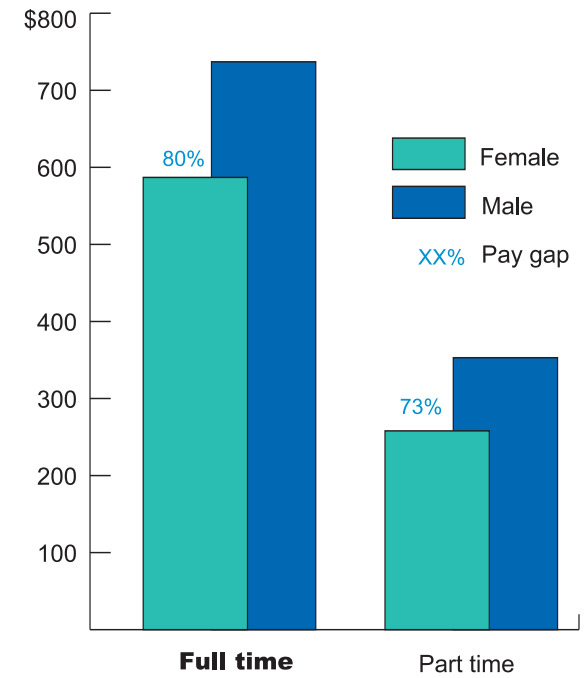
[2] *Behind the Pay Gap* focuses on the full-time work force, although part-time workers and those out of the work force are included as noted. Because age (and presumably experience) is often associated with earnings, only individuals who graduated from an undergraduate institution at or before age 35 were included, resulting in the exclusion of about 10 percent of the B&B population who received their first bachelor's degree after age 35. For the 1999–2000 group, more than 10,000 women and men were interviewed. For the 1992–93 group, 9,000 women and men were interviewed.

[3] A comparison of these two groups reveals few significant differences related to the variables studied here (Bradburn, 2006, pp. 43–44).

Chapter 2. One Year After Graduation, the Pay Gap Is Already Established

If the pay gap is going to disappear naturally over time, we would expect that pay differences among full-time female and male workers after college would be small or even nonexistent. Most new college graduates are at the beginning of their careers and typically don't have extensive professional experience. Few graduates have started a family, so parenthood is a less important factor than it will be later in their career. Yet, one year after college, female graduates working full time earn only about 80 percent as much as male graduates earn. Among part-time workers, the gap is larger, with women earning 73 percent as much as their male colleagues earn (see Figure 2).

Figure 2. Average Weekly Earnings of 1999–2000 Bachelor's Degree Recipients Employed in 2001, by Gender and Employment Status



Notes: Includes respondents with multiple jobs, regardless of hours worked in any job; for these respondents, earnings are for the primary job. Excludes graduates older than 35 at bachelor's degree completion. **Bold** indicates a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2000–2001 Baccalaureate and Beyond Longitudinal Study*.

More women than men graduated in 1999–2000.

About 57 percent of students who received a bachelor's degree in 1999–2000 were women. Women made up 60 percent of graduates ages 22 or younger and 67 percent of students ages 40 or older at graduation. About half of bachelor's degree recipients received their degree before age 22.

Women and men attended similar kinds of colleges.

Most women and men receiving a bachelor's degree attended "moderately selective" schools, (59 percent of women and 54 percent of men). Among graduates in the full-time work force, men were more likely to have attended "very selective" institutions (35 percent of men and 28 percent of women). About half of women (50 percent) and men (49 percent) took classes at a community college at some time, and nearly half graduated from public doctoral institutions (46 percent of women and 49 percent of men), with the remainder attending nondoctoral or private doctoral institutions (see Figure 3).

Women outperformed men academically.

Among those working full time one year after graduation, women as a group had a slightly higher grade point average (3.16 on a 4.0-point scale) than did their male peers (3.04). Women were also more likely to have a GPA of 3.75 or higher. For all graduates, employed or not, women's GPA was 3.19 and men's was 3.07 on average. Women's GPAs were higher than men's in every major, including science and mathematics. At the very least, a comparison of GPA by gender does not provide evidence that women are less likely to be successful than men in the work force.

Women are more likely to earn a professional license or certificate.

Women are slightly more likely than men to hold a professional license or certificate after graduation (34 percent of women and 28 percent of men). One year after completing a bachelor's degree, 12 percent of full-time workers enroll in some kind of graduate education, and 2 percent complete a graduate certificate or master's degree. Participation in work-related training one year out of college is comparable for women and men.

Figure 3. Undergraduate Institution Characteristics of 1999–2000 Bachelor's Degree Recipients Employed Full Time* in 2001, by Gender

	Female	Male
Ever attended less-than-four-year institution	50%	49%
Degree-granting institution sector		
Public doctoral	46%	49%
Private nonprofit doctoral	13%	15%
Public four-year nondoctoral	21%	18%
Private nonprofit four-year nondoctoral	19%	17%
Private for-profit	1%	1%
Degree-granting institution selectivity		
Very selective	28%	35%
Moderately selective	59%	54%
Minimally selective	8%	7%
Open admission	5%	4%

* Includes respondents with multiple jobs, regardless of hours worked in any job.
Notes: Excludes graduates older than 35 at bachelor's degree completion. Gender differences are not statistically significant.
Source: U.S. Department of Education, National Center for Education Statistics, *2000–2001 Baccalaureate and Beyond Longitudinal Study*.

Women and men choose different majors.

Women and men who received bachelor's degrees in 1999–2000 made different choices about their undergraduate major (see Figure 4). Women earned the majority of bachelor's degrees in education (79 percent versus 21 percent), psychology (78 percent versus 22 percent), and health professions (73 percent versus 27 percent). Men earned the majority of bachelor's degrees in engineering (82 percent versus 18 percent), mathematics and physical sciences (61 percent versus 39 percent), history (59 percent versus 41 percent), and business and management (55 percent versus 45 percent).

Looked at another way, about 13 percent of women majored in education compared to only 4 percent of men. Conversely, 25 percent of men majored in business and management compared to 17 percent of women, and 12 percent of men majored in engineering compared to 2 percent of women. Women and men were about equally likely to major in biological sciences (3 percent each) and social science (8 percent each) (see Figure 5).

Choice of major plays a significant role in future wages.

Choice of major emerges as the leading difference between women and men in their education and training. When we look at women's and men's wages by undergraduate major, some clear patterns emerge. Students who graduated in female-dominated majors tend to get jobs that pay less than do students who graduated in male-dominated majors. For example, one year after graduation, the average full-time-employed female education major earns just 60 percent as much as the average full-time-employed female engineering major earns ($520 versus $872 per week). Men who majored in education also earned only 60 percent as much as men who majored in engineering ($547 versus $915 per week).

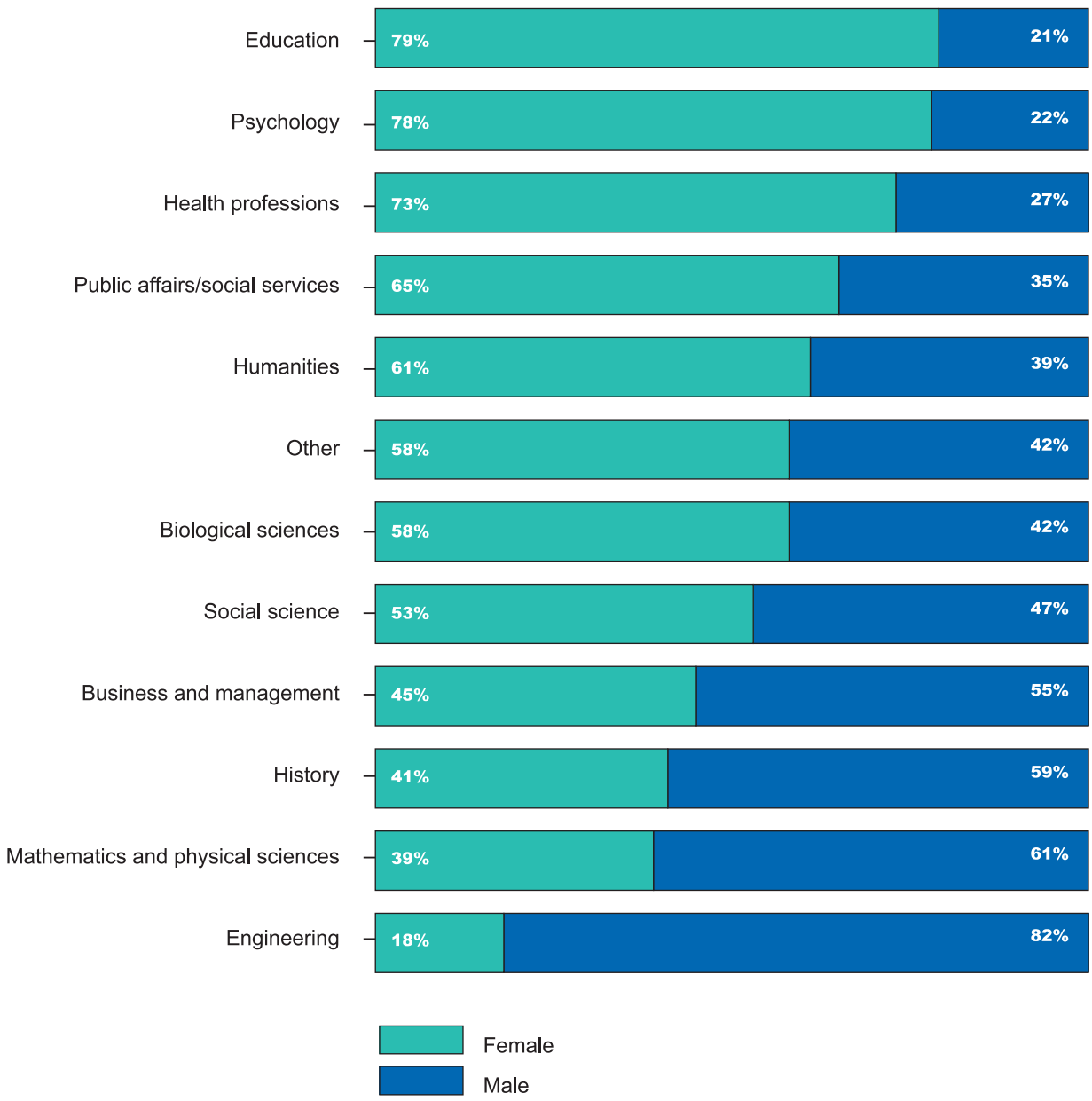
But even within majors, women earn less than men earn.

One year out of college, female full-time workers earn less than men earn in nearly every major; however, the size of this gap varies (see Figure 6). In education, a female-dominated major (and occupation), women earn 95 percent as much as their male colleagues earn. In biology, a mixed-gender major, women make only 75 percent as much as men make; likewise in humanities—another mixed gender major—women earn only 73 percent as much as men earn. The one major where women earn more than men earn—history—accounts for a very small proportion of graduates.

Most women and men work full time in the year following graduation.

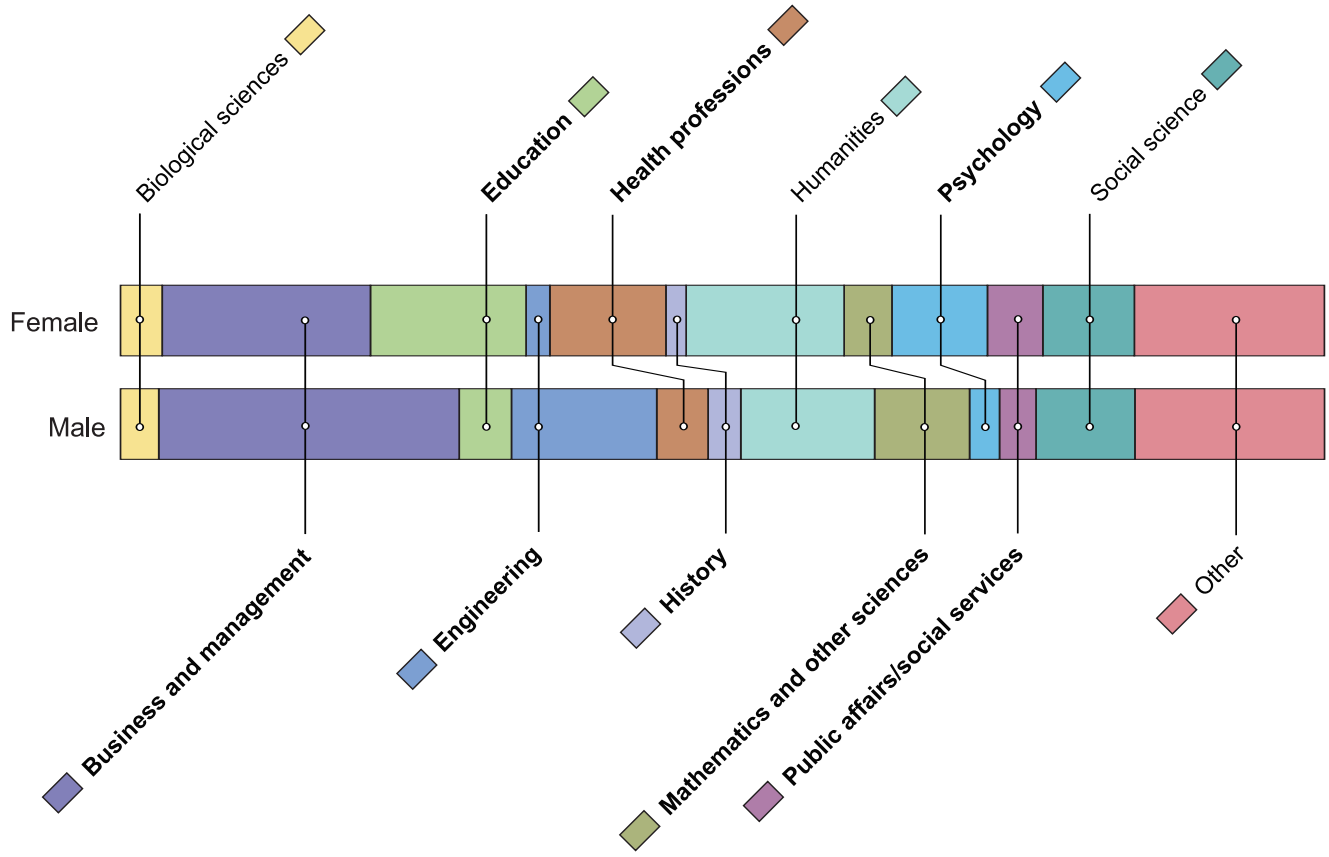
Most women and men (89 and 87 percent respectively) are employed one year following graduation. Men are more likely to be working full time for one employer (74 percent of men and 67 percent of women). A sizeable minority of women and men enroll in graduate education instead of or in addition to working. Overall, women are slightly less likely to work full time and slightly more likely to be out of the work force or enrolled in an educational program.

Figure 4. Gender Composition of Undergraduate Majors of 1999–2000 Bachelor's Degree Recipients Employed Full Time* in 2001



* Includes respondents with multiple jobs, regardless of hours worked in any job.
Note: Excludes graduates older than 35 at completion of bachelor's degree.
Source: U.S. Department of Education, National Center for Education Statistics, *2000–2001 Baccalaureate and Beyond Longitudinal Study*.

Figure 5. Choice of Undergraduate Major of 1999–2000 Bachelor's Degree Recipients Employed Full Time* in 2001, by Gender



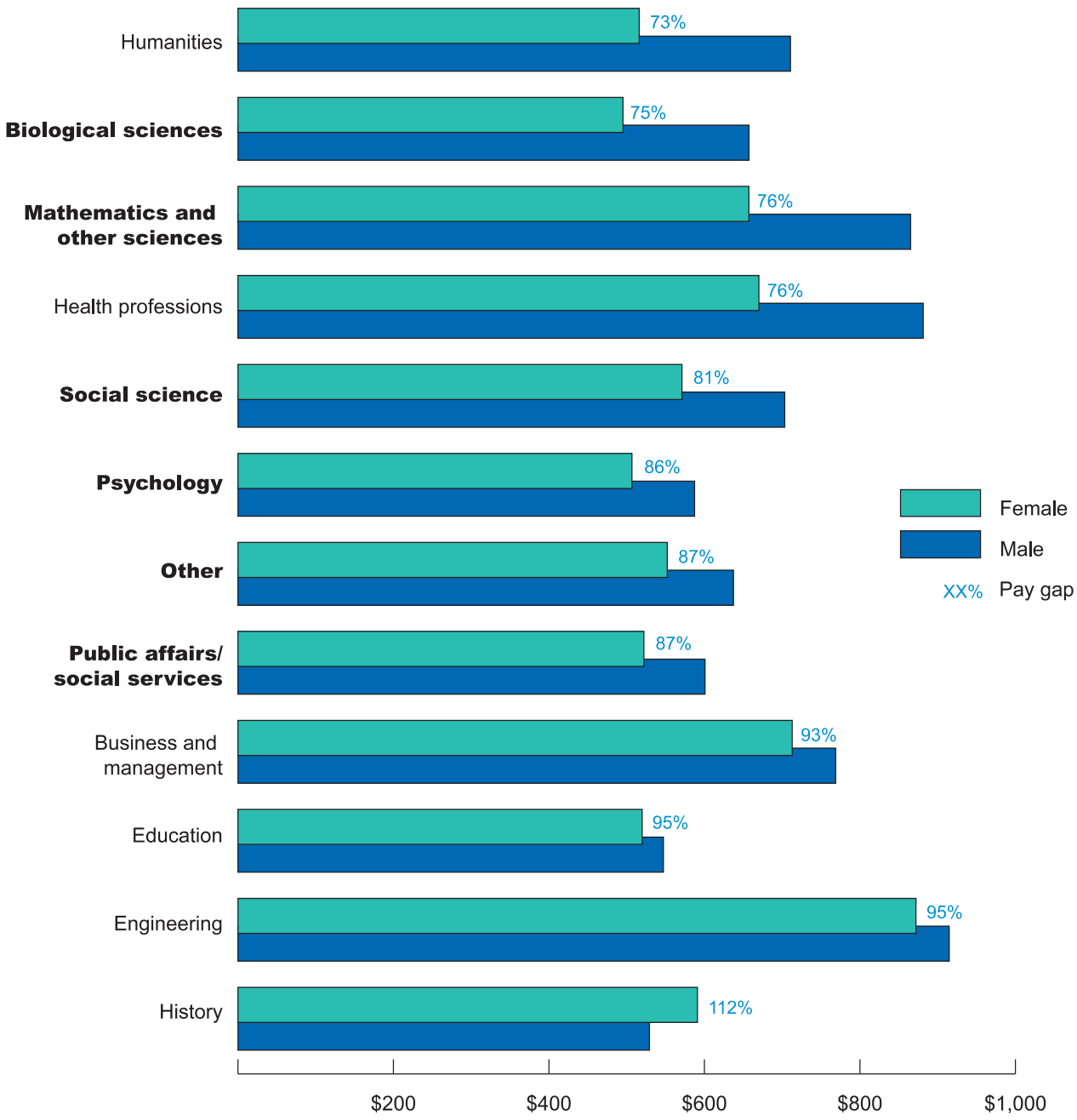
* Includes respondents with multiple jobs, regardless of hours worked in any job.
Notes: Excludes graduates older than 35 at bachelor's degree completion. **Bold** indicates a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2000–2001 Baccalaureate and Beyond Longitudinal Study*.

Women and men work in different occupations. Echoing segregation in choice of major, women and men tend to work in different occupations one year out of college (see Figure 7). Women are more likely to work in education, medical professions, and administrative/clerical/legal support jobs. Men are more likely to be engineers/architects or computer scientists or employed in research, science, or technology.

Occupational choices translate into different earnings for women and men (see Figure 8). The "within occupation" pay gap varies considerably, ranging from parity among engineers (105 percent), medical professionals (99 percent), and educators (98 percent) to wide disparities in the service (75 percent) and business (81 percent) occupations. The relationship between the percentage of female college graduates entering an occupation and the pay gap is not linear. For example, computer science and administrative jobs have a similar pay gap (92 and 93 percent respectively), but women make up 29 percent of those working in computer science and 72 percent of those working in administrative jobs. In mixed-gender occupations such as business, women earn only 81 percent as much as men earn.

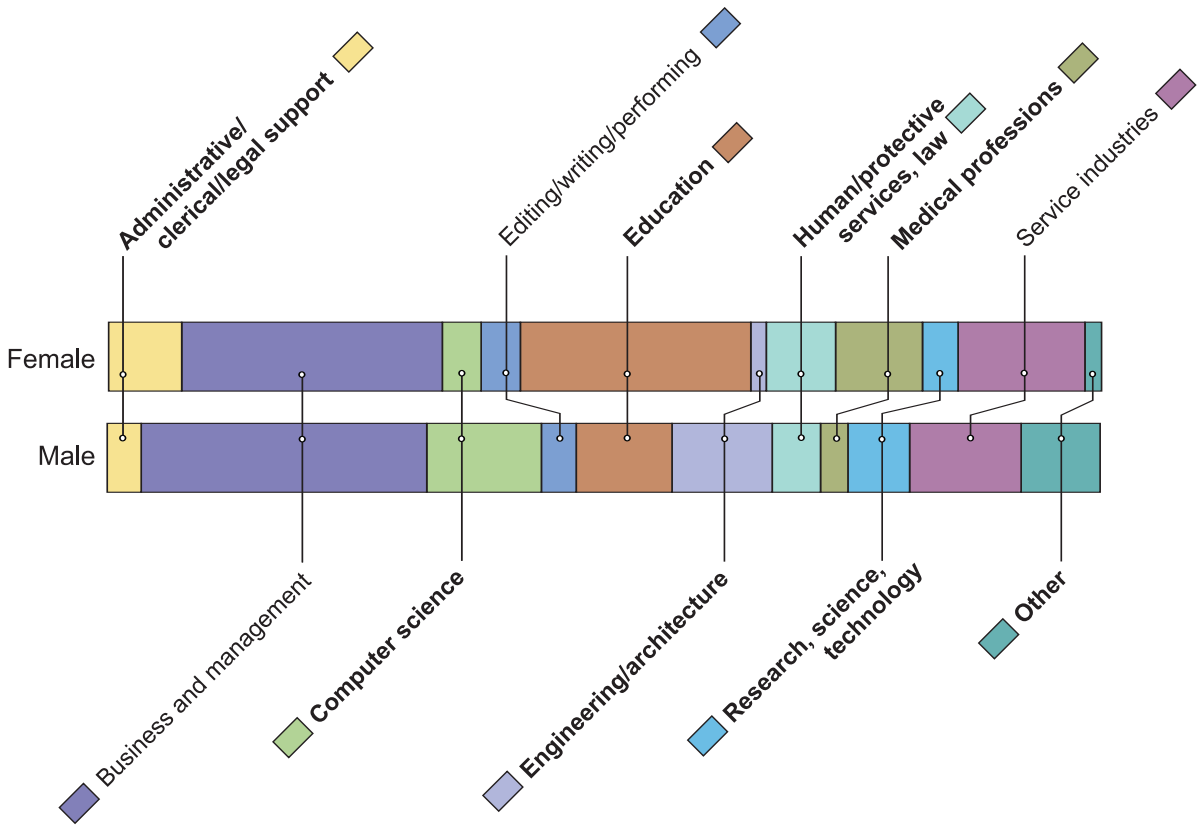
Similar pay differences also exist by sector of the economy. Women are more likely to work in the nonprofit or local government sectors, which typically pay less, whereas men are more likely to work in the for-profit or federal government sectors, where salaries tend to be higher.

Figure 6. Average Weekly Earnings of 1999–2000 Bachelor's Degree Recipients Employed Full Time* in 2001, by Gender and Undergraduate Major



* Includes respondents with multiple jobs, regardless of hours worked in any job; for these respondents, earnings are for the primary job.
Notes: Excludes graduates older than 35 at bachelor's degree completion. **Bold** indicates a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2000–2001 Baccalaureate and Beyond Longitudinal Study*.

Figure 7. Occupation of 1999–2000 Bachelor's Degree Recipients Employed Full Time* in 2001, by Gender



* Includes respondents with multiple jobs, regardless of hours worked in any job.
Notes: Excludes graduates older than 35 at bachelor's degree completion. **Bold** indicates a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2000–2001 Baccalaureate and Beyond Longitudinal Study*.

Men report working more hours than women report working.

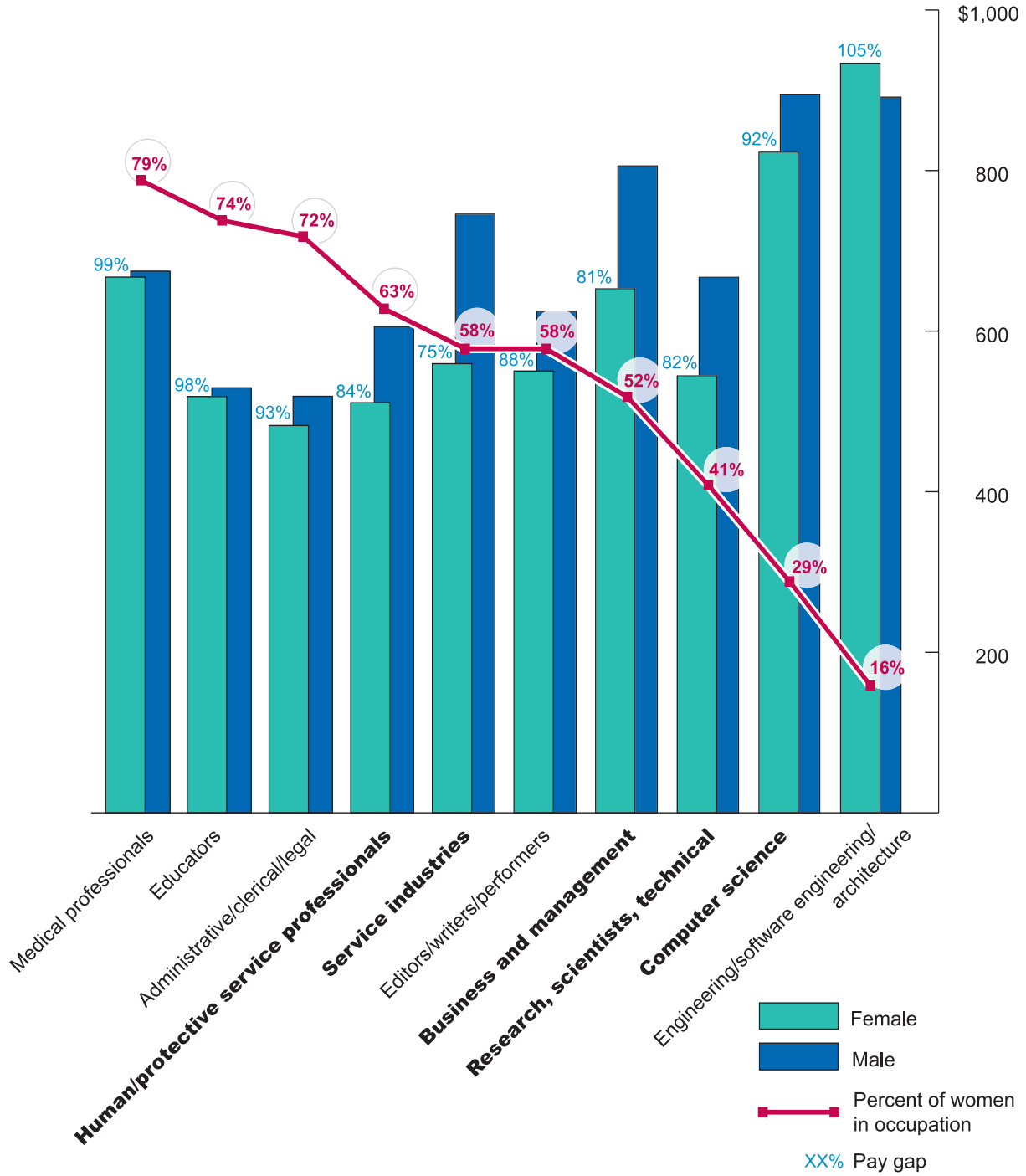
One year out of college, women in full-time jobs report working an average of 42 hours per week compared to men, who report working an average of 45 hours per week. In fact, 15 percent of full-time employed men and 9 percent of full-time employed women report working more than 50 hours per week (see Figure 9). Men working part time report averaging about 22 hours a week, and female part-time workers report working 20 hours per week.

Women graduates are not trading lower earnings for flexibility or other benefits.

Women and men graduating in 1999–2000 are about equally likely to report that their jobs are very flexible.[4] Among those who say their jobs are flexible, however, female full-time workers are more likely to say that they would not be able to work in the job without that flexibility (21 percent of women and 16 percent of men). Men are more likely to say that they can telecommute (30 percent of men and 21 percent of women). Among those who can telecommute,

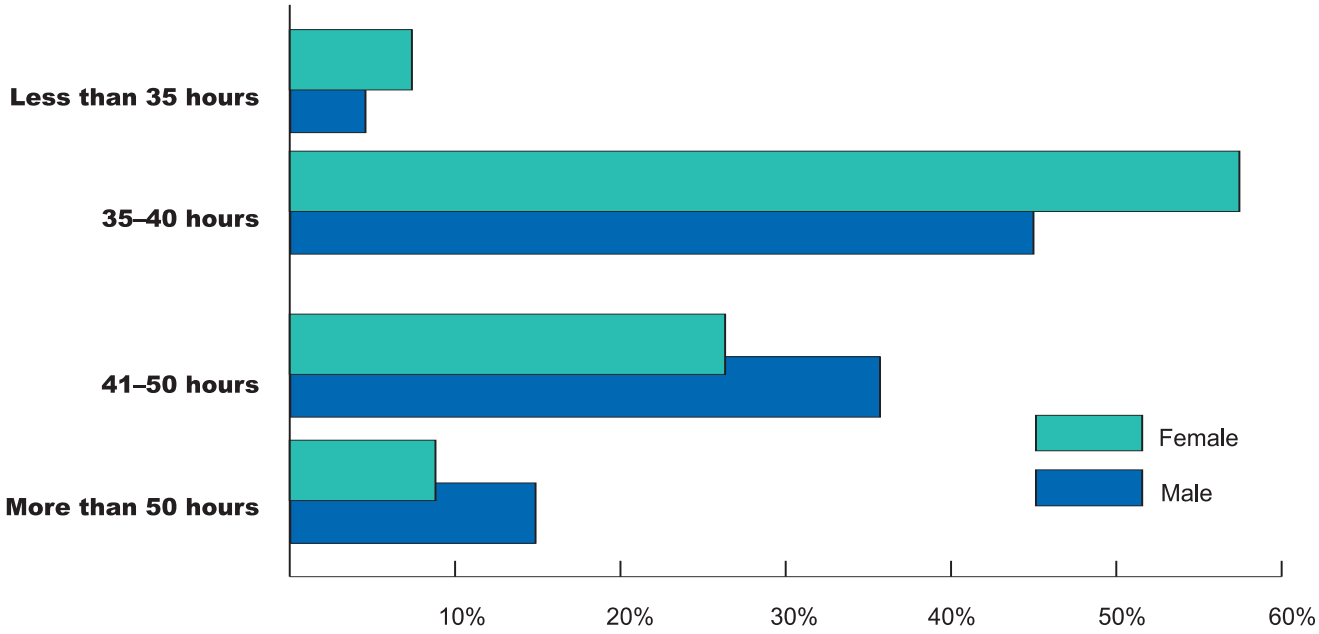
[4] Teachers were not asked to report on job flexibility or whether they could telecommute.

Figure 8. Average Weekly Earnings of 1999–2000 Bachelor's Degree Recipients Employed Full Time* in 2001, by Gender and Occupation



* Includes respondents with multiple jobs, regardless of hours worked in any job; for these respondents, earnings are for the primary job.
Notes: Excludes graduates older than 35 at bachelor's degree completion. **Bold** indicates a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2000–2001 Baccalaureate and Beyond Longitudinal Study*.

Figure 9. Hours Worked Per Week of 1999–2000 Bachelor's Degree Recipients Employed Full Time* in 2001, by Gender



* Includes respondents with multiple jobs, regardless of hours worked in any job.
Notes: Excludes graduates older than 35 at bachelor's degree completion. **Bold** indicates a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2000–2001 Baccalaureate and Beyond Longitudinal Study*.

however, women and men do so with similar frequency. Most fringe benefits are available to similar proportions of women and men. Eighty-seven percent of full-time workers have health insurance, and 71 percent have life insurance. About four of five full-time workers have dental, optical, or other insurance and retirement benefits.

A large portion of the gender pay gap is not explained by women's choices or characteristics.

Discrimination cannot be measured directly. It is illegal, and for the most part, people do not believe that they discriminate against women or other groups. One way to discover discrimination is to eliminate other explanations for the pay gap. To uncover discrimination, regression analysis was conducted to control for the different choices women and men make. An analysis of weekly earnings one year after graduation was examined as a function of full-time employees' characteristics, including job and workplace, employment experience and continuity, education and training, and demographic and personal characteristics.[5]

If a woman and a man make the same choices, will they receive the same pay? The answer is no. The evidence shows

[5] A fuller description of the analyses can be found in the appendix and Bradburn (2006). The regressions were run for women and men separately. *T*-tests were used to compare regression coefficients for women and men to determine if differential effects on earnings were statistically significant. In addition, women and men were combined in the third regression, and a dependent variable of gender was used to see whether, after controlling for other choices and characteristics, statistically significant systematic differences were seen in women's and men's wages.

that even when the "explanations" for the pay gap are included in a regression, they cannot fully explain the pay disparity. The regressions for earnings one year after college indicate that when all variables are included, about one-quarter of the pay gap is attributable to gender. That is, after controlling for all the factors known to affect earnings, college-educated women earn about 5 percent less than college-educated men earn. Thus, while discrimination cannot be measured directly, it is reasonable to assume that this pay gap is the product of gender discrimination.

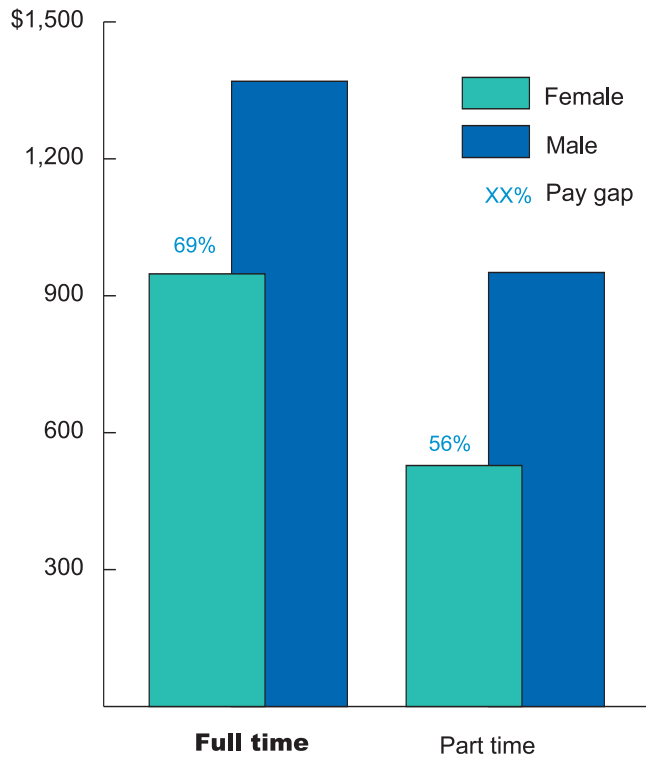
One year out of college, the pay gap is already established.

Women and men who received bachelor's degrees in 1999–2000 attended similar kinds of colleges. Women earned slightly higher grades, on average, and in other respects appear to be men's equals in the classroom. Most women entered full-time employment following graduation. One year later, women earn only 80 percent as much as their male colleagues earn—about the same as the pay gap for the work force as a whole. Gender segregation in undergraduate majors and the subsequent segregation of the work force partly explain the pay gap. Yet the pay gap within fields of study and occupations suggests that the answer is not so simple. Indeed, after accounting for all factors known to affect wages, about one-quarter of the gap remains unexplained and may be attributed to discrimination.

Chapter 3. Ten Years After Graduation, the Pay Gap Widens

Choices made in the decade after college graduation establish a career trajectory. Through graduate training and early job experiences, graduates define themselves professionally during this period. Both women and men also start families in these years and begin the time-consuming work associated with babies and young children. Understanding how these competing forces affect pay differences provides a valuable perspective on the future pay gap for this group, as well as for the work force as a whole.

Figure 10. Average Weekly Earnings of 1992–93 Bachelor's Degree Recipients Employed in 2003, by Gender and Employment Status



Notes: Includes respondents with multiple jobs, regardless of hours worked in any job; for these respondents, earnings are for the primary job. Excludes graduates older than 35 at bachelor's degree completion. **Bold** indicates a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2003 Baccalaureate and Beyond Longitudinal Study*.

Ten years after graduation, women working full time earn only 69 percent as much as men working full time earn, down from 80 percent one year after graduation (see Figure 10). Did women and men make different choices during the course of these 10 years? Did similar choices result in different outcomes? To what extent is the pay gap explained by observable differences in men's and women's characteristics?

About half of women and men have children.

Ten years after graduation, female and male graduates are about equally likely to be married and have children (49 percent of women and 48 percent of men). A little less than one-fifth of women and men are married but do not have children (20 percent of women and 19 percent of men). About a quarter of women and men are single and childless (25 percent of women and 29 percent of men) (see Figure 11).

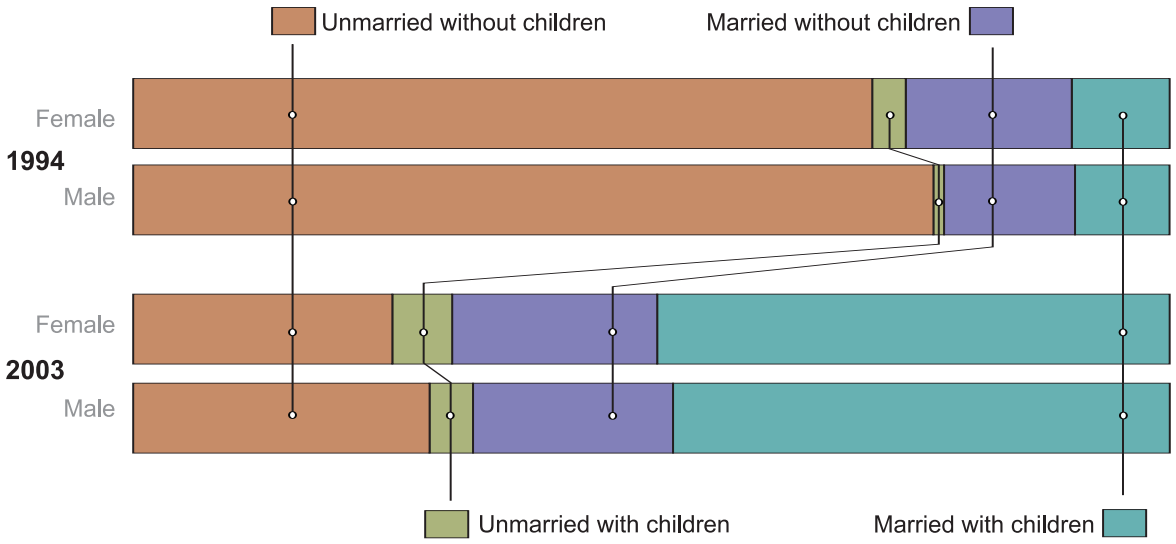
Women are more likely than men to take time off to care for children.

Labor-force participation rates confirm that women and men take different approaches to work-life balance (see Figure 12). Ten years after graduation, 81 percent of men are employed full time, while only 61 percent of women are employed full time.

When parents are considered, the gender difference is stark. About one-fifth (23 percent) of mothers are out of the work force and another 17 percent work part time, while only 1 percent of fathers are out of the work force and only 2 percent work part time. Stay-at-home dads appear to be a rare breed; indeed, most fathers do not work fewer hours than their peers without children work. Women's and men's labor-force participation rates are much closer for those who don't have children than for those who do.

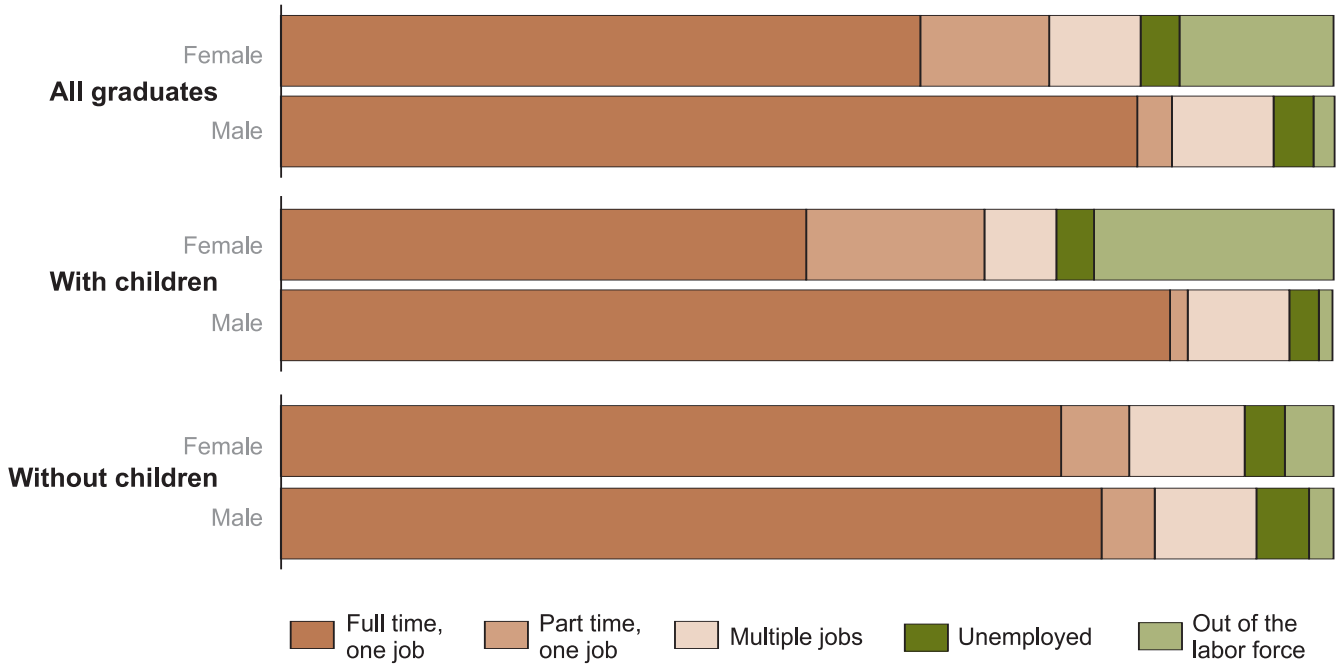
By necessity, estimates of the gender pay gap include only full-time workers who are working at the time of the interview. Women who are not working at that time can be expected to have lower wages when they return to the labor market than will the full-time workers included in the analysis for two reasons: Women are less likely to take breaks if

Figure 11. Marital and Parental Status of 1992–93 Bachelor's Degree Recipients in 1994 and 2003, by Gender



Note: Excludes graduates older than 35 at bachelor's degree completion.
Source: U.S. Department of Education, National Center for Education Statistics, *2003 Baccalaureate and Beyond Longitudinal Study*.

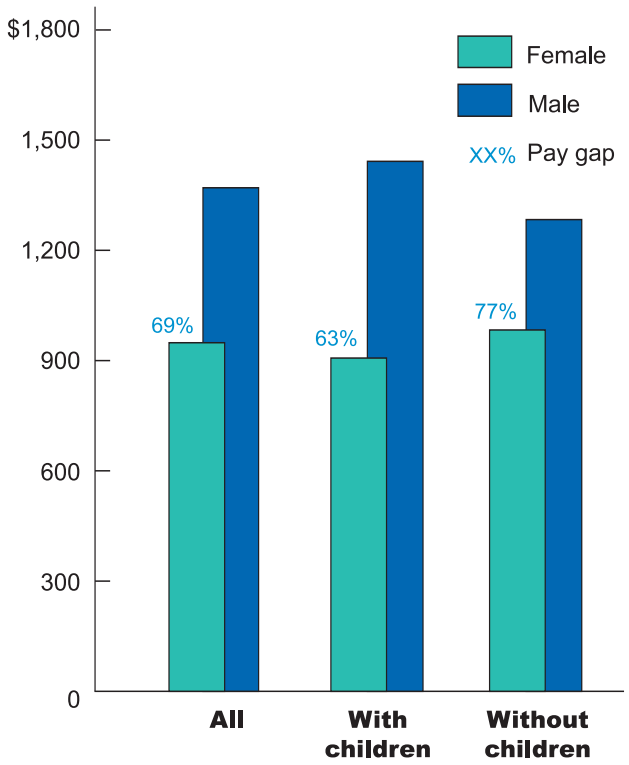
Figure 12. Employment Status of 1992–93 Bachelor's Degree Recipients in 2003, by Gender and Parental Status



Note: Excludes graduates older than 35 at bachelor's degree completion.
Source: U.S. Department of Education, National Center for Education Statistics, *2003 Baccalaureate and Beyond Longitudinal Study*.

they have high wages (Lundberg & Rose, 2000), and leaving the labor force usually results in lower pay upon return. Research shows that mothers who maintain employment after childbirth have higher earnings than do mothers who leave the work force (ibid.). Even among women who are employed full time, having children exacts a pay penalty (see Figure 13). In contrast, men with children earn more, on average, than do those without children. Thus, the results presented here, if anything, understate the pay gap.[6]

Figure 13. Average Weekly Earnings of 1992–93 Bachelor's Degree Recipients Employed Full Time* in 2003, by Gender and Parental Status



* Includes respondents with multiple jobs, regardless of hours worked in any job; for these respondents, earnings are for the primary job.
Notes: Excludes graduates older than 35 at bachelor's degree completion. **Bold** indicates a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2003 Baccalaureate and Beyond Longitudinal Study*.

Women and men remain segregated in the work force.

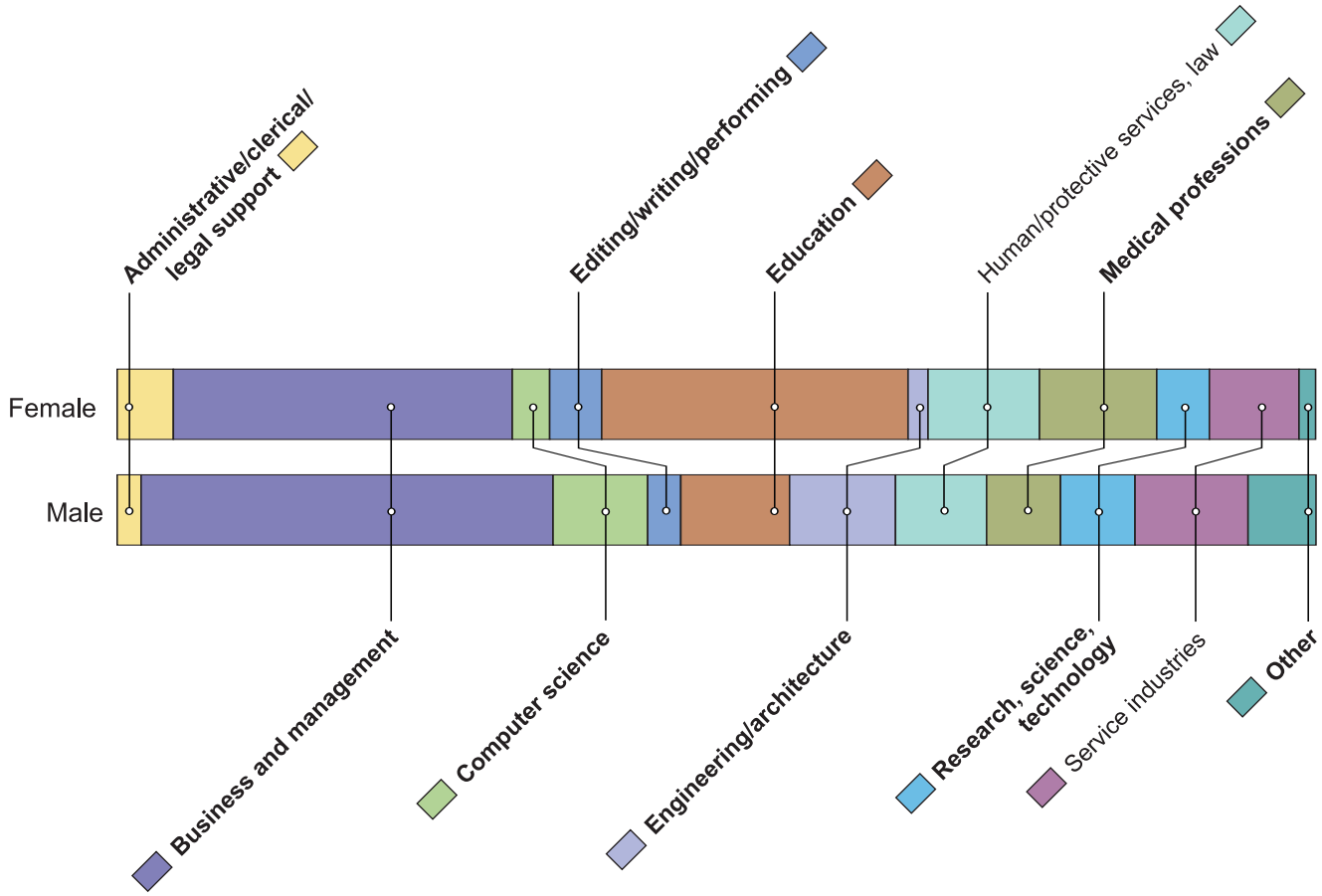
Gender segregation in the work force remains largely unchanged between one year and 10 years after graduation (see Figure 14). About as many women work in education as in business and management—26 and 28 percent respectively—followed by medical professions (10 percent) and human/protective services, law (9 percent). Business and management (34 percent) is the largest occupation for male college graduates, with the remainder of the male work force spread quite evenly across the remaining occupations. With two exceptions—service industries and human/protective services, law—the proportion of full-time employed women and men differs in all occupational groups.

Earnings differences within occupations, however, widen considerably in the 10 years following graduation (see Figure 15). Whereas women earn more than men earn in the first year after college in engineering and architecture, 10 years later women working full-time in these occupations earn only about 93 percent of their male peers' earnings. In business and management, the gap widens from 81 percent to 69 percent and in education from near equality to 87 percent. In medical professions the pay gap widens from parity to 67 percent, in part reflecting the high number of women in nursing. Women do not make gains in any fields relative to their male counterparts. In fields with the fewest women, such as engineering/architecture and computer science, the gap appears to be narrower than in occupations in which women are a majority, such as administrative/clerical/legal support and education.

The gender segregation found in occupations is mirrored in the gender division by industry across the economy. Nearly one-third (30 percent) of female full-time employees work in the education sector and another 14 percent work in the health-care sector, the only industries with a larger proportion of women than men. Most other industries are male-dominated.

[6] In fact the earnings regression in Figure 24 in the appendix does not show a penalty for having children, contrary to most estimates of the motherhood pay gap. For a review of the literature on the motherhood pay gap, see Anderson, Binder, and Krause (2003) or Budig and England (2001).

Figure 14. Occupation of 1992–93 Bachelor's Degree Recipients Employed Full Time* in 2003, by Gender



* Includes respondents with multiple jobs, regardless of hours worked in any job.
Notes: Excludes graduates older than 35 at bachelor's degree completion. **Bold** indicates a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2003 Baccalaureate and Beyond Longitudinal Study*.

Differences in employment by sector of the economy are also found (see Figure 16). Nearly two-thirds (65 percent) of full-time employed men work in the for-profit sector, compared with 55 percent of women (these figures exclude teachers). Conversely, women are twice as likely to work for a nonprofit employer (22 percent of women and 11 percent of men).

Part-time workers are much more likely than full-time workers to be self-employed, particularly among men. Part-time workers are also more likely to work for a nonprofit organization.

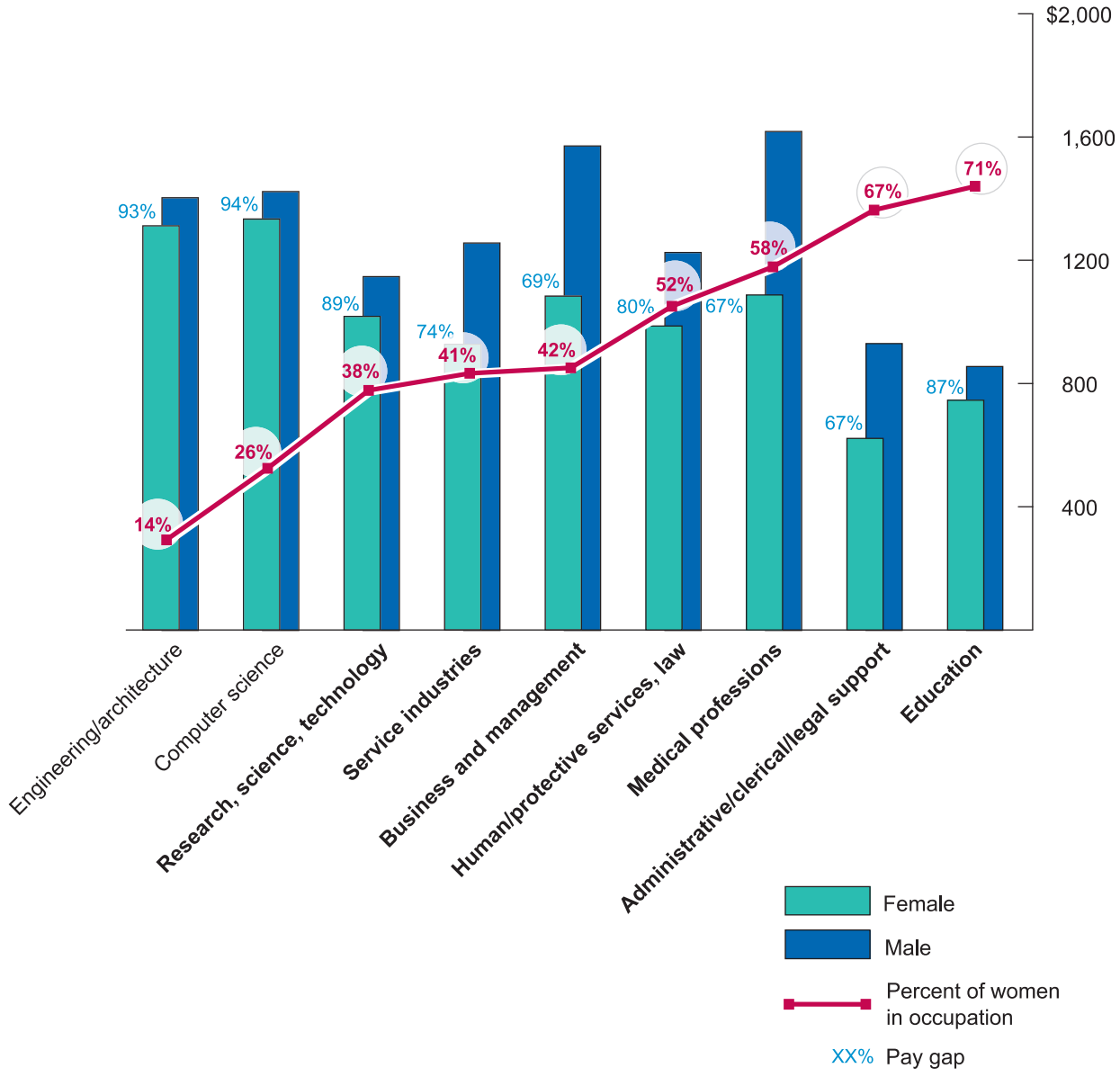
Men report working more hours than women report working.

Ten years after graduation, full-time employed men report working about 49 hours each week at their primary job, compared to 44 hours per week reported by their female counterparts. Most men report working more than 40 hours per week, and most women report working 40 or fewer hours.

Men have more authority and flexibility than women have in the workplace.

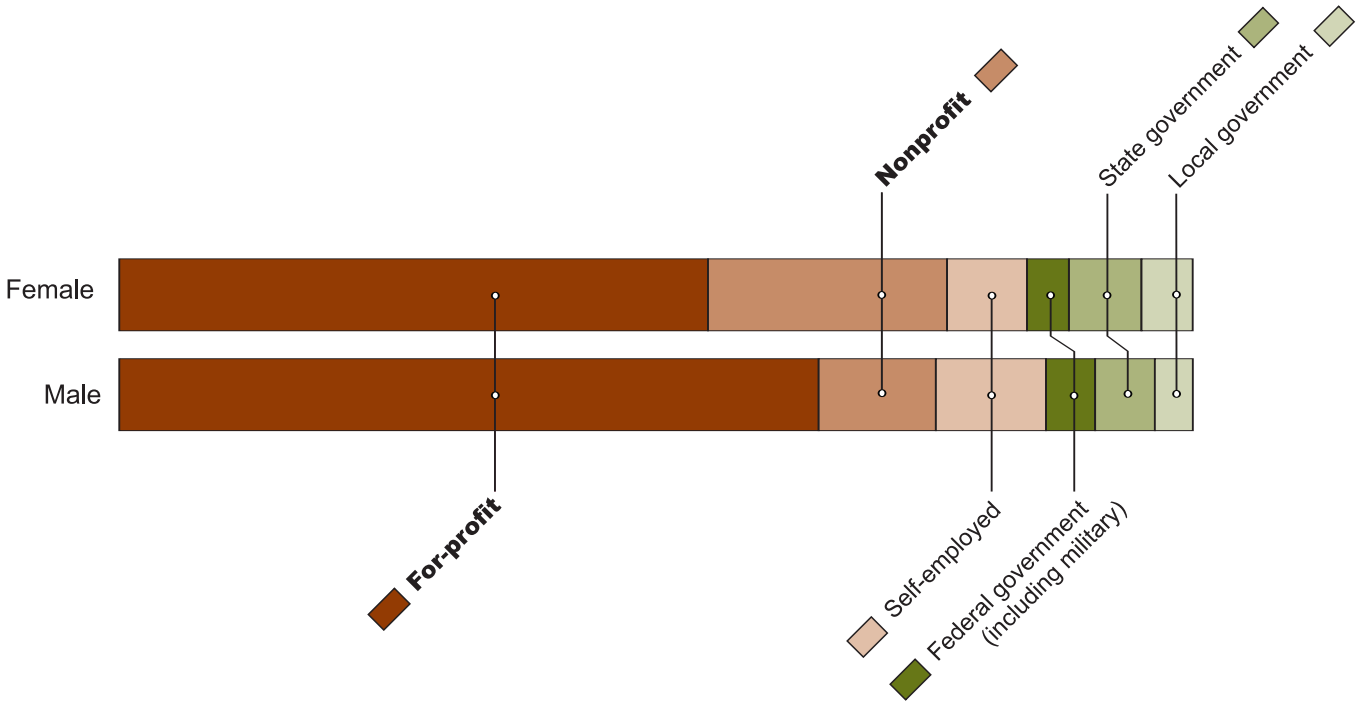
Ten years after graduation, male college graduates working full time have more workplace authority than do their female

Figure 15. Average Weekly Earnings of 1992–93 Bachelor's Degree Recipients Employed Full Time* in 2003, by Gender and Occupation



* Includes respondents with multiple jobs, regardless of hours worked in any job; for these respondents, earnings are for the primary job.
Notes: Excludes graduates older than 35 at bachelor's degree completion. **Bold** indicates a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2003 Baccalaureate and Beyond Longitudinal Study*.

Figure 16. Employment Sector of 1992–93 Bachelor's Degree Recipients Employed Full Time* in 2003, by Gender



* Includes respondents with multiple jobs, regardless of hours worked in any job.
Notes: Excludes graduates older than 35 at bachelor's degree completion. **Bold** indicates a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2003 Baccalaureate and Beyond Longitudinal Study*.

counterparts (see Figure 17). Men are more likely to supervise others (66 percent of men and 54 percent of women), participate in hiring and firing decisions (51 percent of men and 38 percent of women), or set pay rates (29 per-cent of men and 18 percent of women). Gender differences are even more pronounced when the entire work force is considered because women are more likely to work part time, and these kinds of authority are found less often among part-time workers.

Men are more likely than women to report that they are basically their own boss (16 percent of men and 10 percent of women). Men are also more likely to be able to telecommute, while women are more likely to say that telecommuting does not make sense for the job.

Women continue to invest in their education.

Ten years after graduation, women are more likely than men to complete some graduate education (see Figure 18). Among full-time workers, women are more likely to have completed a master's degree (25 percent of women and 19 percent of men), while men are more likely to have completed a doctorate (which is still relatively uncommon: 3 percent of men and 2 percent of women). As in 1994, women are slightly more likely to be enrolled in school while employed full time (8 percent of women and 6 percent of men). Women are more likely to have an occupational license or certification (42 percent of women and 34 percent of men) or to have taken work-related training in the past year (55 percent of women and 45 percent of men). A regression analysis of weekly earnings shows that

Figure 17. Workplace Authority and Flexibility of 1992–93 Bachelor's Degree Recipients Employed Full Time* in 2003, by Gender

	Female	Male
Workplace authority		
Supervise work of others	**54%**	**66%**
Help set salary rates for others	**18%**	**29%**
Participate in hiring/firing decisions	**38%**	**51%**
Workplace autonomy		
Someone else decides what you do and how you do it	4%	4%
Someone else decides what you do, but you decide how you do it	28%	24%
You have some freedom in deciding what you do and how you do it	57%	55%
You are basically your own boss	**10%**	**16%**
Describe job as "very flexible"	24%	25%
Telecommuting availability		
Option to telecommute	**21%**	**28%**
Telecommuting does not make sense for job	**64%**	**56%**
Telecommuting possible but not offered	15%	15%

* Includes respondents with multiple jobs, regardless of hours worked in any job.
Notes: The level of autonomy was not asked of those who were self-employed. Excludes graduates older than 35 at bachelor's degree completion. **Bold** numbers indicate a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2003 Baccalaureate and Beyond Longitudinal Study*.

Figure 18. Education and Training of 1992–93 Bachelor's Degree Recipients Employed Full Time* in 2003, by Gender

	Female	Male
Educational attainment		
Bachelor's degree	**54%**	**60%**
Some graduate enrollment, no completion	15%	13%
Master's degree	**25%**	**19%**
Professional degree	4%	5%
Doctorate	**2%**	**3%**
Currently enrolled	**8%**	**6%**
Other license or certification	**42%**	**34%**
Took work-related training or classes in past 12 months	**55%**	**45%**

* Includes respondents with multiple jobs, regardless of hours worked in any job.
Notes: Excludes graduates older than 35 at bachelor's degree completion. **Bold** numbers indicate a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2003 Baccalaureate and Beyond Longitudinal Study*.

these investments increase women's earnings more than men's (see Figure 24 in the appendix and Bradburn [2006]).

Women are more likely to use family leave, work part time, or leave the labor force for some period.

Women and men have similar tenure with their present employer and within the job title. In the previous six years, women were more than twice as likely to take leave and paid leave for child care, regardless of employment status. Among those who took leave for child care, women stayed out more than three months longer than men did. Full-time employed women were more likely than men to leave the labor force entirely (16 percent of women and 6 percent of men) or spend more time working part time (see Figure 19).

College selectivity appears to affect earnings for all workers.

College selectivity appears to matter for both women and men, with graduates from "very selective" institutions earning more than their peers earn (see Figure 20). Attending a very selective institution does not insulate women from the pay gap, e.g., women from very selective colleges earn about the same ($1,071) as do men from "minimally selective" colleges ($1,101). Attending a school with "open admission" rather than a very selective school does not result in lower wages for men, but it results in statistically significant lower wages for women.

The unexplained portion of the gender pay gap increases over time.

On average, women and men make different choices during the first 10 years after graduation. Yet this analysis shows that graduates' choices explain less of the widening gender pay gap during this period.

Figure 19. Employment Experience and Continuity of 1992–93 Bachelor's Degree Recipients Employed in 2003, by Gender and Employment Status

	Full Time*		Part Time	
	Female	Male	Female	Male
Years at employer	**5.0**	**5.3**	4.6	4.6
Years at job title regardless of employer	**5.6**	**5.3**	5.6	5.7
Since graduation				
Number of jobs	**6.0**	**5.5**	5.7	6.1
Ever unemployed	45%	46%	43%	64%
Number of unemployment periods	1.5	1.5	1.6	1.9
Total months unemployed	7.7	7.9	8.1	13.1
Since 1997				
Number of employers	**2.3**	**2.2**	2.3	2.7
Number of jobs	2.8	2.8	2.8	3.0
Ever unemployed	11%	11%	10%	25%
Number of unemployment periods	1.4	1.4	1.8	—
Total months unemployed	6.7	7.6	11.4	—
Ever out of the labor force	**16%**	**6%**	47%	20%
Number of periods out of the labor force	1.4	1.5	1.5	—
Total months out of the labor force	15.2	16.0	13.2	—
Years worked part time	**1.4**	**1.1**	3.1	3.8
Ever took leave for child care	**33%**	**15%**	**63%**	**11%**
Total months of leave	**4.8**	**1.6**	7.6	—
Took paid leave for child care	**28%**	**13%**	**49%**	**6%**
Total months of paid leave	**2.8**	**1.3**	3.2	—

* Includes respondents with multiple jobs, regardless of hours worked in any job.
– Too few cases for a reliable estimate.
Notes: Excludes graduates older than 35 at bachelor's degree completion. **Bold** numbers indicate a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2003 Baccalaureate and Beyond Longitudinal Study*.

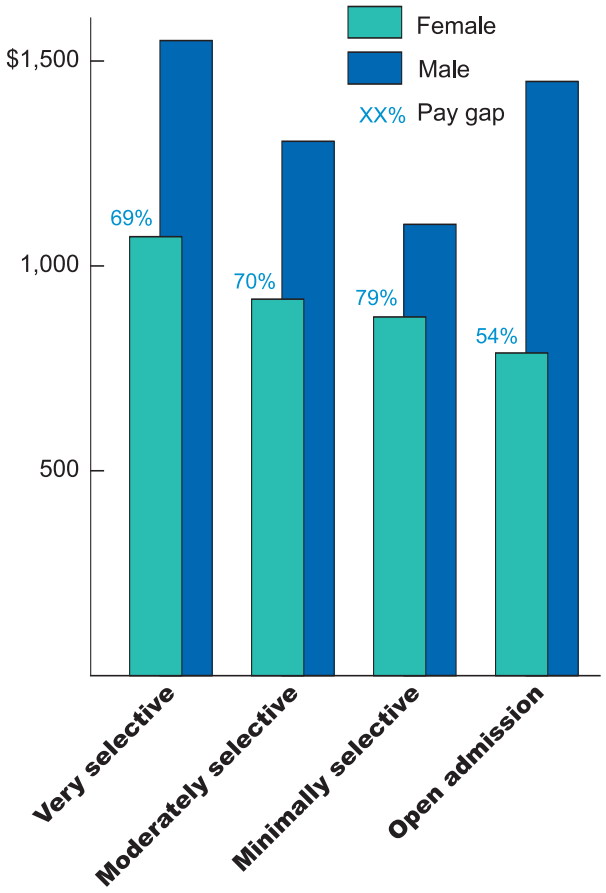
As mentioned in Chapter 2, discrimination cannot be measured directly. One way to discover discrimination is to eliminate other explanations. A multiple regression was used to control for variables known to affect earnings, such as experience (including work hours), training, education, and personal characteristics (see the appendix and Bradburn [2006] for details). After 10 years, variables such as education, training, and experience explained less of the gender pay gap. In other words, more of the gap is unexplained and may be attributed to discrimination.

When women's and men's earnings equations were run simultaneously, a gender variable was included to see how much of the pay gap could be explained by gender, after controlling for the other variables. Once job and workplace, demographic and experience, and education and training variables were added, an unexplained pay gap of 12 percent remained. Thus, it is reasonable to conclude that the negative effects of gender discrimination on women's pay have worsened over time.

Ten years after college graduation, the gender pay gap widens.

The 10 years after graduation is a decade of changes for women and men: A majority of both begin careers, marry, and start families. In addition, many complete postgraduate

Figure 20. Average Weekly Earnings of 1992–93 Bachelor's Degree Recipients Employed Full Time* in 2003, by Gender and College Selectivity



* Includes respondents with multiple jobs, regardless of hours worked in any job; for these respondents, earnings are for the primary job.
Notes: Excludes graduates older than 35 at bachelor's degree completion. **Bold** indicates a significant gender difference ($p < .05$, 2-tailed *t*-test).
Source: U.S. Department of Education, National Center for Education Statistics, *2003 Baccalaureate and Beyond Longitudinal Study*.

education and training, such as earning credentials for law, medicine, or business. During this time, the pay gap widens and becomes even larger than it is for the work force as a whole. For these college graduates, who on average are now in their early thirties, the pay gap is firmly entrenched and appears to be heading in the wrong direction.

Choice of major and occupation remain important factors driving wages for both women and men. Interestingly, although motherhood is not associated with lower earnings among full-time workers, mothers are much more likely than other women (or men) to take time out of the paid work force or work part time, and these choices are penalized.

Ten years after graduation, the portion of the gender pay gap that remains unexplained increases from 5 percent to 12 percent. This widening gap cannot be attributed to employment, educational, or personal choices, which suggests that discrimination may worsen over time or that the effects of gender discrimination are cumulative.

Chapter 4. What Can We Do About the Pay Gap?

Field of study and occupational gender segregation, motherhood and work-force participation, and discrimination emerge as the critical factors behind the gender pay gap. This chapter ties key findings to recent research in economics, psychology, sociology, and public policy and makes recommendations for action.

Integrate majors and occupations.

Occupational gender segregation is a leading factor in the gender pay gap. Based on the regression analyses (see appendix), job and workplace characteristics explain about one-third of the variation in women's wages and one-fourth of the variation in men's wages. Reducing gender segregation in the classroom and in the workplace should improve women's economic opportunities.

Promote careers in science, technology, engineering, and mathematics in ways that appeal to girls and women.

A survey of undergraduate women majoring in traditionally female fields found that the overwhelming majority of women do not select technical majors because the courses are "not interesting" (Weinberger, 2004). Information about the societal benefits of engineering as well as hands-on experience with science, engineering, technology, and mathematics (STEM) helps boost girls' and women's interest in these fields (Klein, et al., in press).

Many programs are available for promoting girls and young women in STEM fields, yet most of these programs remain small-scale pilot programs held during after-school hours. Many programs operate on a shoestring budget and rely heavily on volunteers (AAUW Educational Foundation, 2004). Funding programs to encourage girls to participate in STEM fields and integrating these programs as part of the regular school day could go a long way toward preparing girls and young women to enter the STEM work force.

Encourage girls to take advanced courses in mathematics.

Gender segregation in the job market begins in the classroom. Taking trigonometry, precalculus, or calculus in high school has been found to influence the likelihood of majoring in math or science in college. In fact one study found that a one-unit increase in calculus in high school doubled the odds that women would later choose a science or math major (Trusty, 2002).

Another factor is self-assessment. The higher students assess their abilities in a subject, the more likely they are to enroll in classes in that subject or choose it as their major. Men make higher assessments of their mathematical abilities than do women (above and beyond actual differences in achievement), contributing to men's higher participation in STEM majors (Correll, 2004).

Encourage women to negotiate for better quality jobs and pay.

Even women who majored in mixed-gender or male-dominated disciplines are more likely than men to enter clerical or other low-paid occupations. Female science and business majors, for example, are twice as likely as their male counterparts to enter clerical work (Joy, 2006). Men in these majors are more likely to go into management jobs (Joy, 2000, 2006). Thus, encouraging women to choose STEM college majors will not necessarily address the problem of occupational segregation: Women must also find employment where they can build upon the skills acquired in college.

Further magnifying these gender differences, women expect less and negotiate less pay for themselves than do men. Researchers have found that women expect less, see the world as having fewer negotiable opportunities, and see themselves as acting for what they care about as opposed to acting for pay. These learned behaviors and expectations (which may be based on experiences) tend to minimize women's pay (Babcock & Laschever, 2003).

Individual differences in negotiating skills may lead to pay variation among workers with similar skill sets. Employers have a fair amount of discretion in setting wages as long as they pay at least the minimum wage and do not discriminate based on gender, race, ethnicity, age, or other protected

group.[7] One study by Babcock and Laschever (2003) found that starting salaries for male students graduating from Carnegie Mellon University with master's degrees were about 7 percent higher (almost $4,000) than the starting salaries for similarly qualified women. Babcock and Laschever argue that this gap in part reflects differences in men's and women's willingness to negotiate. It may also reflect women's perceptions about the labor market, expectations about the wages they'll receive, and willingness to take a lower-wage job (Orazem, Werbel, & McElroy, 2003).

On a related front, several economic experiments have demonstrated that regardless of their actual work performance in a competitive setting and their beliefs about their performance, more women than men choose noncompetitive payment schemes over tournament (where a winner gets a prize and a loser gets nothing) or competition rates of payment for a task (Niederle & Vesterlund, 2005).

While women's competitiveness or negotiation skills may account for some of the wage differences between women and men, they do not explain the origin of these behaviors. As with occupational choice, women may be strongly socialized to be less competitive, and far from being a choice, lack of competitiveness or negotiation skills may simply be learned behaviors. In fact, research shows that women are viewed negatively when they behave confidently and assertively and rewarded when they behave in a self-effacing manner (Rudman, 1998).

But integrating women into male-dominated fields is only part of the solution.

Eliminating gender segregation in college and the workplace is only part of the solution to the pay gap for several reasons. First, women earn less than men earn in every field, so only a portion of the pay gap could be overcome in this way. Second, as more women enter a field, wages tend to decrease, especially after the field reaches a "tipping point" (when the field is perceived to no longer be the domain of one gender or the other). Research confirms that the higher the proportion of women in an occupation, the lower the compensation (Reskin & Bielby, 2005).

Support mothers in the workplace.

Mothers earn considerably less than other women earn. Although this regression analysis did not find a motherhood penalty among full-time women 10 years after graduation, it did observe a large number of women leaving the full-time labor force for at least some portion of time. Research indicates that leaving the work force or working part time results in less work experience and diminished earnings potential (Gabriel, 2005; Felmlee, 1995; Bowlus, 1997; Waldfogel, 1998).

Encourage employers to offer high-quality part-time employment opportunities.

Given the need for a reduced-hour schedule, many women turn to part-time jobs. The evidence shows, however, that part-time workers earn substantially less per hour than do full-time workers (Hirsch, 2005). One of the reasons for lower wages in the part-time sector is occupational segregation. In general, lower-paying occupations have part-time jobs and higher-paying occupations do not. In a national survey, 61 percent of employees working in organizations that have part-time workers said that those workers receive less compensation on a pro rata basis than do full-time employees (Galinsky, Bond, & Hill, 2004). Lettau (1997) also found that part-time employees earn less on an hourly basis than do full-time employees working in the same firms at the same occupations. Although those who desire to obtain part-time jobs often must change employers, jobs, or occupations (Gornick & Meyers, 2003), part-time work is penalized even if workers stay in the same occupation or with the same employer.

Clearly a large gap exists between the needs of workers, especially women workers, and the availability of high-quality part-time jobs. Many large firms have learned that providing the flexibility to move in and out of part-time status has radically increased the retention of women

[7] Federal and state laws determine minimum wages, and employees are entitled to the higher of the two. Various groups of workers are not covered under federal minimum wage law, such as agricultural workers and tipped employees (who have a separate, lower minimum hourly wage). Only employers who do at least $500,000 in business per year are covered under minimum wage rules (see www.bls.gov for more information).

workers (Hewlett & Luce, 2005). Federal employment standards should also be investigated to determine ways to promote part-time work (Garrett, 1999).

Rethink using hours as the measure of productivity. U.S. employees work more annual hours than do employees in almost any other country in the industrialized world. In most other countries, annual hours are declining, while in the United States the trend is in the other direction. In their national study of the changing work force, Galinsky, Bond, and Hill (2004) found that 61 percent of wage and salaried workers want to work fewer hours. Nearly two-thirds of dual-earner couples work more than 80 combined hours a week (Gornick & Meyers, 2003).

The issue of long work days is particularly relevant for college-educated women, who are more likely than less educated women to be in a dual-earner household (Jacobs & Gerson, 2001). Long work hours make it particularly hard for women and men to be involved parents and probably encourage women to leave the work force altogether. According to a Catalyst (2000) survey of 45 professional and managerial women with reduced-hours options, 60 percent of them would leave if their jobs did not offer flexibility.

Inefficient competition may be a reason that work hours are so long. A number of economists have shown theoretically that when workers perceive others working long hours, they believe that they must work the same number of hours to compete (Eastman, 1998). The national survey of employees echoes this notion. When asked why they did not work their preferred hours, about half of employees responded that they feel they need to succeed or make their organization successful (Galinsky, Bond, & Hill, 2004).

In their study of lawyers, Landers, Rebitzer, and Taylor (1996) found evidence that lawyers work inefficiently long hours to gain promotions. Kuhn and Lozano (2005) also found that men use long hours to win promotions and higher compensation. Using long hours as a measure of productivity or as the basis for promotions is a disadvantage for women, who typically have more family responsibilities than men have (Hewlett & Luce, 2006).

Many firms are successfully challenging the notion that more hours are equivalent to more productivity. One recent example is the company Best Buy. Faced with retention and morale issues, this retailer instituted a policy called ROWE (Results-Only Work Environment), where workers set their own schedules and are responsible for meeting performance goals. The results have been positive, with improved retention and productivity (Conlin, 2006).

Protect and extend the Family and Medical Leave Act. The Family and Medical Leave Act of 1993 requires that all employers with 50 or more employees provide up to 12 weeks of annual unpaid family and medical leave to their workers. Among other things, family leave enables parents to care for a child after birth or adoption. Typically, workers take only short leaves under FMLA, e.g., in 2000 the typical leave was 10 days, and 90 percent of employees using the policy took 12 weeks or less (Waldfogel, 2001).

A major limitation of FMLA is that it ensures only *unpaid* leave, and many people cannot afford to take time off without pay. Only 8 percent of private sector employers provide paid leave (U.S. Department of Labor, Bureau of Labor Statistics, 2006). While disability insurance covers some workers (ibid.), only 22 percent of families have access to paid leave of four weeks or more (Gornick & Meyers, 2003).

Unfortunately, short leaves are associated with worse health outcomes for both mothers and children (Berger, Hill, & Waldfogel, 2005). In addition to being good health policy, maternity leave helps women stay in the labor force. Working women with maternity leave are more likely to return to work than are women without maternity leave (Heymann, Earle, Simmons, Breslow, & Keuhnhoff, 2004; Waldfogel, 1998). Currently at least 80 percent of women

will be mothers,[8] so these policies affect most women at some point. Nearly all working women (99 percent) who have a child take maternity leave, and more than 25 percent must leave their job as a result (Overturf Johnson & Downs, 2005).

Federal and state policy-makers should consider ways to improve upon FMLA by finding mechanisms to provide paid leave (Levin-Epstein, 2006). A promising example for the federal government is the state of California, which extends paid family leave to residents through its disability insurance program. Funding family leave may also encourage more men to take leave, possibly diminishing the pay differences between women and men (Gornick & Meyers, 2003).

Another necessary expansion to FMLA is universal national sick leave policies. Only 68 percent of the work force receives paid time off for personal illness.[9] Low-wage workers are less likely than higher-paid workers to receive paid personal sick days. More than half of employees are unable to take time off to care for sick children without losing pay, having to use vacation leave, or fabricating an excuse to use their own sick leave. Only 30 percent of the 51 percent who have paid sick leave are allowed to use it to care for sick children (Lovell, 2004). The less the worker earns, the more likely she or he does not have time off to care for children.

U.S. employees receive an average of 14 days per year of vacation time (Galinsky, Bond, & Hill, 2004), far less than Europeans receive. One impact on families is the care of children during school breaks (Gornick & Meyers, 2003). The lack of coordination between work and school schedules increases family pressures. Since mothers tend to be the primary caregivers for their children, this pressure disproportionately affects women. Long work hours and the lack of time for personal responsibilities or caring for others put women at risk for work separation and attendant pay penalties.

Increase women's employment options by supporting high-quality child care in conjunction with other family-friendly policies.

Most parents cannot work outside the home unless they can arrange care for their children. While all states provide kindergarten, no national system of child care exists for younger children. Even when children are old enough to attend school, school hours and calendars do not match standard work schedules. Reliance on the market to obtain child care means that poorer families either choose not to work or sometimes have to rely on lower-quality child care. Low wages in the child care and education industry are not conducive to attracting and retaining highly qualified child-care workers (ibid.). Programs should be developed to better assess community needs, monitor home-based care, increase compensation, and build career ladders in the child-care industry (Hamm, Gault, & Jones-DeWeever, 2005). Currently only high-income families and a portion of very low-income families have access to high-quality child care. Today's child-care market does not work, and state and federal governments must explore policies to resolve the problem (Brandon, Maher, Li, & Joesch, 2004).

End gender discrimination.

This report finds that the pay gap between female and male college graduates cannot be fully accounted for by factors known to affect wages. An extensive body of research also finds that some gap in pay between women and men is unexplained. While researchers disagree about the portion of the pay gap that is unaccounted for, many have attributed the unexplained portion to gender discrimination (Blau & Kahn, 2000; U.S. General Accounting Office, 2003; Hellerstein, Neumark, & Troske, 2002).

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[8] As of June 2004, 19 percent of women ages 40 through 44 were childless, and this estimate assumes that these women are at the end of their potential fertility. We do not know what the fertility rates of young women will be as they age; therefore, this number is an approximation.

[9] This figure does not include the self-employed.

In addition to evidence of pay discrimination nationwide, researchers also found it within particular occupations, including college administrators (Monks & McGoldrick, 2004), accountants (Smithson, Lewis, Cooper, & Dyer, 2004), Wall Street securities analysts (Roth, 2003), veterinarians (Smith, 2002), corporate executives (Bertrand & Hallock, 2002; Healy Burress & Zucca, 2004), and engineers (Morgan, 1998, 2000; Alessio & Andrzejewski, 2000).

While factors vary across the analyses, in all cases at least some of the gender earnings differential cannot be explained by individual factors or work characteristics. In fact a recent comprehensive look by Bayard, Hellerstein, Neumark, and Troske (2003) used a data set covering all industries and occupations and found that women are segregated into lower-paying occupations, industries, and establishments and one-half the pay gap remains attributable to an individual's gender.

Gender pay discrimination can be overt or subtle. It is difficult to document discrimination because gender is usually easily identified by name, voice, or appearance. One study in which gender was masked completely showed evidence of discrimination. Goldin and Rouse (2000) found that the adoption of "blind auditions" by symphony orchestras—in which a screen was used to conceal the identity of the candidate—explained 25 percent of the increase in the number of women in top U.S. symphony orchestras, from less than 5 percent of musicians in 1970 to 25 percent by 2000.

In another case, economist David Neumark sent women and men with equally impressive backgrounds and resumes to apply for jobs as wait staff in upscale restaurants in Philadelphia. He found that women were 40 percent less likely than men to get called for interviews and 50 percent less likely to receive job offers if they did get interviews. While women were generally viewed as being capable of serving food, male waiters were considered more desirable, simply because of their gender (Babcock & Laschever, 2003).

Gender pay discrimination also happens in more subtle forms. For example, managers may equate good organizational skills with management talent in men and secretarial talent in women (Murphy, 2005). Employers may subconsciously make discriminatory decisions about hiring, performance, and pay based on personal beliefs about gender roles.

Action must happen on multiple levels.

To address pay inequity, action must take place simultaneously, among employees, employers, and the public (Murphy, 2005). Strong national legal remedies may be warranted (National Women's Law Center, 2006). To make pay equity a reality, pressure must come from every level.

Individuals must take action at work.

Women should collect information about their workplaces and become advocates for themselves and other women employed there. By educating themselves and collecting hard evidence on inequities, women can apply pressure to employers to create change. For example, at the Massachusetts Institute of Technology, professor Nancy Hopkins was dismayed to discover that her lab space was smaller than that of colleagues with fewer credentials. She then looked at wages, research assistant allocation, and budgets for women and men. Her detailed and complete information, along with the support of other women faculty, was brought to the university president, who instituted policies to change the situation (Murphy, 2005).

When women find pay inequities in the workplace, they need to confront the problem. Women are better negotiators when they have solid knowledge about what their job is worth (Babcock & Laschever, 2003). Many resources are available for women seeking to learn negotiation skills.

Leaders in the workplace must embrace change.

Leadership is critical to changing pay inequities within an organization. Without a concerted commitment at the top, policies and changes are unlikely to be taken seriously by managers and employees (Murphy, 2005).

Once the leaders have made a commitment, an audit of an organization's jobs for gender composition, necessary skills, and pay scale is a good place to start. An obvious and often

overlooked second step is to implement the findings of the audit and change salaries to reflect its findings. In practice, salary increases may need to be implemented over time. In addition, an audit must be updated on a regular basis, and policies must be in place to ensure fair-pay practices.

Fair-pay policies can be effective in improving equity for women and usually improve productivity and retention as well (Chicago Area Partnerships, 2003; Murphy, 2005; Burk, 2005).

The public sector should be a model employer.
The public sector should model fair-pay practices. The state of Minnesota has been a leader in the pursuit of gender pay equity. It used an audit to evaluate job attributes (including complexity, danger, and required levels of experience and education). Each job was then assigned points, and the state compared the gender concentration of each job and its points and pay. The audit found that jobs with more women paid much less than similarly ranked jobs for men, e.g., jobs of delivery van driver and clerk typist were given the same number of points, but the delivery van driver job was filled mostly by men and paid $1,900 a month, while the clerk typist job was filled mostly by women and paid $1,400 a month. The state raised the wages of affected workers in all cases of disparity (State of Minnesota, 2006).

National legislation must be strengthened.
The Equal Pay Act of 1963 provides a valuable foundation for gender equity in the workplace. Legislative efforts to improve enforcement of the Equal Pay Act, including the Paycheck Fairness Act and the Fair Pay Act, are pending in Congress. Both proposals would extend the scope of the Equal Pay Act and improve protections for those who attempt to use it. "Equal pay for comparable work" lies at the core of both proposals, with technical fixes to help make the Equal Pay Act workable. For example, the Fair Pay Act eliminates the "gag rule" on wage disclosure, prohibiting employers from punishing employees who discuss their wages with a co-worker. The Paycheck Fairness Act requires that employers affirmatively prove that pay differences between women and men are caused by something other than sex, as opposed to simply demonstrating that the difference is not the result of discrimination. Rules and procedures that force employers to look carefully at pay differences and monitor inequities are the key to overcoming gender equities in the workplace.

Appendix. Methodology

Overview

Regression analysis was used to better understand the reasons for the gender pay gap. While the analysis presented in the text allows us to understand the correlation between each variable and earnings, it does so only one variable at a time, e.g., to what extent various factors such as college major or occupation affect earnings. The regression analysis allowed us to assess the relative impact of each of the factors at the same time.

In estimating the regression equations, the dependent variable was defined as the natural log of average weekly earnings. This form has the advantage that the resulting regression coefficients can be interpreted as the percentage change in weekly earnings for a one-unit change in the independent variable. For each regression, a traditional earnings equation was specified, where log weekly earnings one year after graduation are a function of the full-time employee's characteristics, including job and workplace, employment experience and continuity, education and training, and demographic and personal characteristics (see Figure 21 and Bradburn [2006] for a list of the variables used in each category). Most variables from the analysis presented in the report were included in the regression analysis.

A separate analysis was performed one year after graduation for the 1999–2000 graduates and 10 years after graduation for the 1992–93 graduates. For each group, the regressions were run separately for women and men. *T*-tests were used to compare regression coefficients for women and men to determine whether the differential effects of factors on earnings were statistically significant.

Women and men were combined in the third regression, and an independent variable of gender was used to see whether women's and men's earnings were statistically significantly different after controlling for other choices and characteristics. The regression coefficient of gender can be interpreted as the remaining percentage difference in earnings when taking into account the other variables in the model.

Figure 21. Key Variables Used in Regression Analysis, by Category

Job and Workplace Characteristics

Occupation
Industry
Employer sector (e.g., nonprofit)
Hours worked per week
Whether employee worked multiple jobs
Workplace flexibility, ability to telecommute
Months at employer

Education and Training Characteristics

Educational attainment (bachelor's and any graduate enrollment or completion)
Current enrollment status
Other license or certification
Work-related training
Undergraduate GPA
Undergraduate major
Ever attended less-than-four-year institution
Institution sector
Institution selectivity

Demographic and Personal Characteristics

Gender
Age
Highest education of either parent
Race/ethnicity
U.S. citizen
Disabled
Region of residence
Marital status
Has children
Volunteered in past year

Source: Bradburn (2006).

Data

The *Baccalaureate and Beyond Longitudinal Studies*, conducted by the U.S. Department of Education National Center for Education Statistics, are used in this research. These studies provide nationally representative information on the lives of two groups of U.S. college graduates. As of 2006, two studies have been conducted. The first followed the 1992–93 bachelor's degree recipients for 10 years after college graduation, interviewing them first in 1994 and then in 1997 and 2003. Approximately 9,000 recipients participated to some extent in all rounds of this study. The second study followed the 1999–2000 bachelor's degree recipients for one year and included more than 10,000 participants.

In both studies, the base year provided a wealth of information on the respondents as well as a retrospective look at the undergraduate experience. The base year covered a variety of topics: enrollment (field of study, institution type, attendance and enrollment patterns, financial aid), employment (occupation, hours per week), plans and expectations for the future (employment after graduation, graduate school enrollment, entry into the teaching profession), and basic demographic information (sex, age, race/ethnicity, marital status).

The first follow-ups, which were conducted one year after the initial interviews, focused primarily on the lives of bachelor's degree recipients after graduation. Topics included postgraduation employment (occupation, hours per week, job search strategies, job training, job entry), post-bachelor's degree enrollment (graduate school enrollment, field of study, financial aid), family formation, civic participation, and undergraduate experiences (coursework, institutions, credits earned, grade point average). The first follow-up of the 1992–93 cohort also included an analysis of undergraduate study transcripts.

Sample Selection

To avoid the confounding influence of prior bachelor's degrees, the sample in each year was restricted to those for whom the bachelor's degree that qualified them for participation was their first bachelor's degree. Prior certificates, licenses, associate degrees, or postsecondary enrollment without program completion were permitted. Demographic characteristics included age at bachelor's degree completion as indicated by graduates' age on Dec. 31 of the academic year in which they graduated. To minimize the effect of outliers, the sample in each year was restricted to those who were age 35 or younger at the time of bachelor's degree completion.

Employment Status

The sample was divided by employment level, which was based on the response to the first question about employment status. Response categories included working full time and working part time, laid off, disabled, or homemaker. For these rounds, employment was determined based on the answer to the first question, and respondents who indicated they worked full or part time were included.

In a few cases, a question or set of questions excluded a subset of these employed people. Elementary and secondary school teachers were sometimes excluded because they completed an additional detailed survey section on their employment experiences. Self-employed respondents were sometimes excluded from questions thought to be irrelevant to them, and where appropriate, their responses were imputed.

Once employment was determined, information about the number of jobs respondents held was used to determine who worked in multiple jobs, and these respondents were combined with those who worked full time in one job; part-time workers were analyzed separately. Approximate unweighted sample sizes are shown in Figure 22.

Regression Results for 1999–2000 Graduates One Year After Graduation

The regression analysis of earnings one year after graduation for the combined sample of women and men shows a gender pay difference of 5 percent, controlling for educational and occupational choices as well as demographic and personal characteristics (see Figure 23). That is, when all the selected job and workplace, education and training, and demographic and personal variables were included, women

Figure 22. Sample Sizes of 1992–93 and 1999–2000 Cohorts, by Employment Status

Employment status	Cohort	Unweighted sample size
Full time or multiple jobs	1992–93	5,600
Full time or multiple jobs	1999–2000	6,100
Part time	1992–93	1,100
Part time	1999–2000	780

Note: The 1992–93 cohort was interviewed in 1994; the 1999–2000 cohort was interviewed in 2001.
Source: Bradburn (2006).

earned 5 percent less than men earned (seen at the top of Figure 23 as the gender coefficient).

Job and Workplace Characteristics

The regression results show that occupational choice appears to be especially important to women. Women have higher earnings when they choose business and management; engineering/architecture; computer science; editing/writing/performing; research, science, technology; or service industry occupations as opposed to education; human/protective services, law; administrative/clerical/legal support; or "other" occupations.

Choice of industry and sector of the economy affect both women's and men's earnings. For women, working in the business services industry tends to increase pay relative to other choices. Employment in all sectors other than the nonprofit or self-employed sectors increases earnings for women. For men, industries such as manufacturing, utilities, communications, transportation, finance, insurance, and real estate are associated with a pay advantage over other industries. Men in the for-profit sector, especially self-employed men, earn more than those working for nonprofit companies earn.

Education and Training Characteristics

Women see significant earnings returns for completing a graduate program, certificate, or license after graduation. They also see penalties for being currently enrolled. For both women and men, having work-related training in the last 12 months increases pay.

Undergraduate major choice affects pay for women and men similarly. Majoring in business and management, engineering, and health professions increases pay for both women and men. Women see positive returns from majoring in public affairs or social services; men see positive returns from majoring in mathematics or other sciences.

The type of institution attended has only weak affects on pay, with penalties for men who attended institutions other than those providing doctoral programs. Women seem to experience pay gains from first attending a community college (though this effect is only marginally significant).

Demographic and Personal Characteristics

For both women and men, age at the time of bachelor's completion affects earnings positively (for the group in the sample that excluded those over 35). For women, being a black/African American is associated (marginally significantly) with higher earnings, whereas for men, being an Asian/Pacific Islander is associated with higher pay. Women living in the Midwest or South generally earn less. Neither marriage nor children have significant effects at this point in the respondent's career.

Summary

Overall, the regression analysis of earnings one year after graduation suggests that a 5 percent pay gap between women and men remains after accounting for all variables known to affect earnings. Women who choose male-dominated occupations appear to earn more than do other women. Undergraduate majors in business and management, engineering, health professions, or public affairs and social services enhance both women's and men's earnings.

Regression Results for 1992–93 Graduates 10 Years After Graduation

The results of this model show a significant gender difference in earnings for women and men, controlling for educational and occupational choices as well as demographic and personal characteristics. When selected job and workplace, education and training, and demographic and personal variables were included, women earned 12 percent less than men earned (seen at the top of Figure 24 as the gender coefficient).

Job and Workplace Characteristics

Sector of employment matters for both women and men. Men who work in for-profit organizations and self-employed men earn about one-third more than do those in the nonprofit sector. For women, working in a for-profit organization increases pay. Autonomy and authority at work are associated with higher pay for both women and men. Occupations associated with higher pay for women include business and management; engineering/architecture; computer science; and research, science, technology. For men, working in engineering/architecture, computer science, and medical professions increases pay.

Undergraduate Education Characteristics

Choice of major still has an effect on wages 10 years after graduation. Women who majored in engineering, health professions, social science, or "other" earn more than do peers who majored in education, public affairs/social services, history, humanities, or psychology. Men earn more from majoring in business and management, engineering, health professions, public affairs/social services, mathematics and other sciences, social science, and psychology than do peers who majored in education or humanities.

Ten years after graduation, institution selectivity appears to matter for women and men, with those graduating from very selective institutions earning more than their peers earn.

Graduate Education and Training Characteristics

For women more than men, obtaining a graduate degree is associated with higher pay. Current enrollment is negatively associated with pay for both women and men.

For women, past employment (number of jobs since graduation, months unemployed, months out of the labor force, and years working part time) negatively affects pay. Only past unemployment has a negative effect on men's earnings. The data do not show a direct penalty associated with having children. For men, but not women, having children is positively associated with pay.

Summary

The portion of the gender gap that remains unexplained increased from 5 percent to 12 percent 10 years after graduation, after controlling for a similar set of characteristics. This gap among full-time workers may understate the full gender disparities, because those excluded from the sample—those working part time or those temporarily out of the work force—include a disproportionate share of women, many of whom can expect to pay a penalty when they return to full-time employment or may have lower wages than the women in the sample.

A Note on Presentation of Figures 23 and 24

For each group, three main regressions were conducted and presented together in one table, for a total of six regressions. The regressions for the 1999–2000 graduates one year after graduation are reported in Figure 23, and the regressions for the 1992–93 graduates 10 years after graduation are reported in Figure 24. Each table has three columns that refer to three different regressions. The first column is the regression for women, the second is for men, and the third column is for all the women and men in the sample.

Figure 23. Significant Coefficients From Regressions of Weekly Earnings, 1999-2000 Bachelor's Degree Recipients Employed Full Time* in 2001

	Female	Male	All
Gender (female)	‡	‡	-0.049
Job and Workplace Characteristics and Employment Experience			
Occupation			
Administrative/clerical/legal support	†	-0.197	[-0.080]
Business and management	0.142	†	0.121
Computer science	0.348	†	0.276
Editing/writing/performing	0.145	†	—
Education	†	†	†
Engineering/architecture	0.355	†	0.229
Human/protective services, law	†	†	†
Medical professions	—	†	—
Research, science, technology	0.146	†	—
Service industries	0.145	†	0.095
Other	†	†	†
Industry			
Agriculture, forestry, and fisheries	-0.182	-0.298	-0.196
Business services	0.110	†	—
Education	†	[-0.088]	—
Finance, insurance, and real estate	†	0.146	[0.037]
Health care	†	—	—
Manufacturing	†	0.140	—
Mining, petroleum, construction	[-0.279]	—	—
Personal/hospitality services, entertainment/recreation	-0.209	[-0.172]	-0.223
Professional and related services	†	†	†
Public safety and administration	—	†	—
Retail and wholesale trade	-0.075	†	-0.095
Utilities, communications, transportation	†	0.130	—
Other	†	†	†
Employer sector			
For-profit	0.100	[0.077]	0.119
Nonprofit	†	†	†
Federal government (including military)	[0.119]	†	—
State government	[0.083]	†	—
Local government	0.182	†	0.157
Self-employed	†	0.339	0.245
Other	—	—	0.107
Hours worked per week	**0.068**	**0.045**	0.057
(Hours worked per week) squared	**-0.0006**	**-0.0003**	-0.0005
Had multiple jobs	—	-0.170	-0.120
Had option to telecommute	0.086	0.066	0.047
Months at employer	0.002	—	0.001
Education and Training Characteristics			
Educational attainment			
Bachelor's degree	†	†	†
Some graduate enrollment, no completion	†	†	†
Graduate program completed	0.178	—	0.134
Currently enrolled	-0.080	—	-0.062
Other license or certification	0.095	‡	[0.043]
Work-related training in past 12 months	**0.081**	**0.151**	0.098
Undergraduate major			
Biological sciences	†	†	†
Business and management	0.187	0.095	0.170
Education	†	†	†
Engineering	0.272	0.296	0.269

(continued)	Female	Male	All
Health professions	0.190	0.208	0.233
History	†	†	†
Humanities	†	†	†
Mathematics and other sciences	—	0.276	0.174
Psychology	†	†	†
Public affairs/social services	0.120	†	0.121
Social science	†	[0.054]	0.064
Other	†	†	†
Ever attended less-than-four-year institution	[0.042]	‡	[0.027]
Institution sector			
Public doctoral	†	†	†
Private nonprofit doctoral	†	†	†
Public four-year nondoctoral	—	[-0.117]	-0.050
Private nonprofit four-year nondoctoral	—	-0.057	[-0.046]
Private for-profit	n/a	-0.160	-0.226
Institution selectivity			
Very selective	†	†	†
Moderately selective	-0.067	—	-0.050
Minimally selective	[-0.066]	—	-0.078
Open admission	†	†	†
Demographic and Personal Characteristics			
Age in bachelor's completion year	0.012	0.018	0.014
Race/ethnicity			
Asian/Pacific Islander	†	0.131	—
Black/African American	[0.063]	†	—
Latino/a (any race)	†	†	†
Native American/other/more than one race	†	†	†
White	†	†	†
U.S. citizen	‡	[-0.132]	—
Region of residence			
Midwest	-0.114	‡	-0.100
Northeast	†	‡	†
South	-0.127	‡	-0.098
West	†	‡	†
Outside U.S.	n/a	‡	-0.472
Marital status			
Divorced, separated	†	†	†
Married	—	[0.045]	0.031
Single, never married	†	†	†
Widowed	—	n/a	—
Has any children	—	—	—
Volunteered in past year	‡	—	-0.038
Multiple R2	*0.403*	*0.296*	*0.384*
Percent of subpopulation included			
Unweighted	*71.2%*	*80.1%*	*70.7%*
Weighted	*61.4%*	*77.3%*	*61.1%*

* Includes respondents with multiple jobs, regardless of hours worked in any job.
— Results not significant ($p > 0.10$).
n/a Not applicable; category empty.
† Reference category for comparison.
‡ Not included in model.
Notes: Results in brackets [ ] are significant at $0.05 < p < 0.10$, and other results shown are significant at $p < 0.05$. Coefficients in **bold** type were significantly different for women and men (shown only if the coefficient was significant in at least one of the two equations). Coefficients were tested for gender differences only if the variable was categorized identically for men and women. Excludes graduates older than 35 at bachelor's degree completion.
Sources: U.S. Department of Education, National Center for Education Statistics, *2000–01 Baccalaureate and Beyond Longitudinal Study*. Figure from Bradburn (2006, Table 31B).

Figure 24. Significant Coefficients From Regressions of Weekly Earnings, 1992–93 Bachelor's Degree Recipients Employed Full Time* in 2003

	Female	Male	All
Gender (female)	‡	‡	-0.124
Job and Workplace Characteristics			
Occupation			
Administrative/clerical/legal support	†	†	†
Business and management	0.156	—	0.097
Computer science	0.351	0.151	0.220
Editing/writing/performing	†	†	†
Education	†	†	†
Engineering/architecture	0.192	[0.119]	0.169
Human/protective services, law	†	†	†
Medical professions	—	0.216	0.166
Research, science, technology	0.123	—	—
Service industries	†	†	†
Other	†	—	—
Industry			
Agriculture, forestry, and fisheries	†	—	[-0.119]
Business services	†	†	†
Education	†	†	†
Finance, insurance, and real estate	†	0.194	0.101
Health care	—	—	—
Manufacturing	†	†	†
Mining, petroleum, construction	†	†	†
Personal/hospitality services, entertainment/recreation	-0.133	—	-0.143
Professional and related services	†	†	†
Public safety and administration	†	†	†
Retail and wholesale trade	-0.178	†	-0.083
Utilities, communications, transportation	†	†	†
Other	†	0.078	0.078
Employer sector			
For-profit	0.250	0.305	0.256
Nonprofit	†	†	†
Federal government (including military)	0.238	0.274	0.236
State government	—	—	—
Local government	0.112	0.155	0.132
Self-employed	—	0.305	0.245
Hours worked per week	0.047	0.054	0.053
(Hours worked per week) squared	-0.0004	-0.0004	-0.0004
Hours at nonprimary job	‡	[-0.005]	—
Reported that job requires bachelor's degree	0.208	0.126	0.154
Reported being basically one's own boss	‡	[0.075]	0.073
Helped set salary rates for others	0.129	—	0.097
Participated in hiring/firing decisions	0.089	0.106	0.094
Had option to telecommute	0.101	0.129	0.127
Employment Experience and Continuity			
Number of jobs since graduation	-0.010	—	-0.007
Months unemployed since graduation	-0.005	-0.007	-0.007
Months out of the labor force since 1997	-0.006	‡	-0.005
Years part time since 1997	-0.056	—	-0.041
Education and Training Characteristics			
Educational attainment			
Bachelor's degree	†	†	†
Some graduate enrollment, no completion	†	†	†
Master's*	**0.136**	**—**	0.081
Professional	0.383	0.267	0.334

(continued)	Female	Male	All
Doctoral	**0.282**	**[0.109]**	0.194
Currently enrolled	-0.024	-0.100	-0.057
Work-related training in past 12 months	—	[0.042]	0.035
Undergraduate GPA	‡	0.113	0.077
Undergraduate major			
Biological sciences	—	—	—
Business and management	—	0.179	0.143
Education	†	†	†
Engineering	0.272	0.192	0.156
Health professions	0.174	0.268	0.214
History	†	—	—
Humanities	†	†	†
Mathematics and other sciences	—	0.177	0.115
Psychology	†	0.128	0.118
Public affairs/social services	†	0.239	0.158
Social science	0.089	0.166	0.137
Other	0.053	0.119	0.097
Institution selectivity			
Very selective	†	†	†
Moderately selective	-0.075	-0.112	-0.093
Minimally selective	—	-0.165	-0.118
Open admission	-0.142	—	-0.103
Demographic and Personal Characteristics			
Age in bachelor's completion year	—	—	—
Race/ethnicity			
Asian/Pacific Islander	—	‡	—
Black/African American	†	‡	†
Latino/a (any race)	†	‡	†
Native American/other/more than one race	†	‡	†
White	†	‡	†
Region of residence			
Midwest	-0.125	†	-0.085
Northeast	†	†	†
South	-0.130	†	-0.090
West	†	†	†
Outside U.S.	—	—	—
Marital status			
Cohabiting	‡	†	†
Divorced/separated	‡	†	†
Married	‡	—	—
Single, never married	‡	†	†
Widowed	‡	†	†
Has any children	**—**	**0.073**	—
Volunteered in past year	—	‡	[-0.034]
Multiple R2	*0.426*	*0.306*	*0.375*
Percent of subpopulation included			
Unweighted	*80.9%*	*79.2%*	*77.8%*
Weighted	*78.9%*	*77.0%*	*75.6%*

* Includes respondents with multiple jobs, regardless of hours worked in any job.
— Results not significant ($p > 0.10$).
† Reference category for comparison.
‡ Not included in model.
Notes: Results in brackets [ ] are significant at $0.05 < p < 0.10$, and other results shown are significant at $p < 0.05$. Coefficients in **bold** type were significantly different for women and men (shown only if the coefficient was significant in at least one of the two equations). Coefficients were tested for gender differences only if the variable was categorized identically for men and women. Excludes graduates older than 35 at bachelor's degree completion.
Sources: U.S. Department of Education, National Center for Education Statistics, *2003 Baccalaureate and Beyond Longitudinal Study*. Figure from Bradburn (2006, Table 21B).

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P.O. Box 96974
Washington, DC 20077-7022

We Need Your Help …

Because Equity Is Still an Issue

Founded in 1881, the American Association of University Women has championed the rights of women and girls in education and the workplace for more than 125 years. Hundreds of thousands of women and men have contributed their time and financial resources to help provide educational opportunities for women and girls through the AAUW Educational Foundation, which advances gender equity in education and the workplace through fellowships, research, and advocacy.

Today, our message remains as true as ever: Education helps women and girls, their families, and society. With more than 100,000 members, 1,300 branches, and 500 college and university partners, AAUW provides a powerful voice for women and girls—in Washington, D.C., our state capitals, and our communities.

AAUW's work would not be possible without generous contributions from people who share its commitment to education, passion for equity, and unwavering belief that women are an instrumental part of leadership, change, and growth. With your support, the Educational Foundation can continue its research and scholarship on issues of importance to women and girls.

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