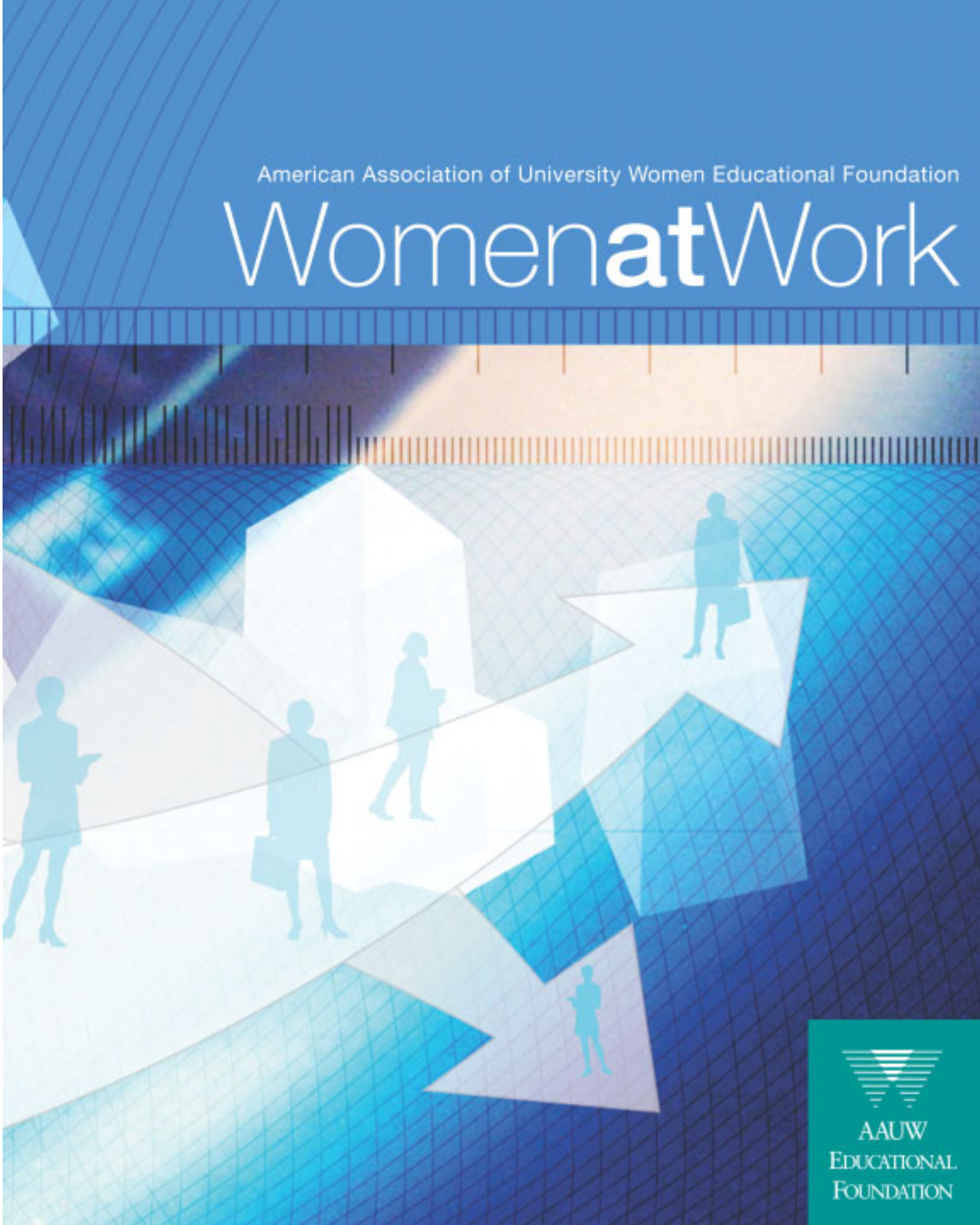
American Association of University Women Educational Foundation

Women at Work



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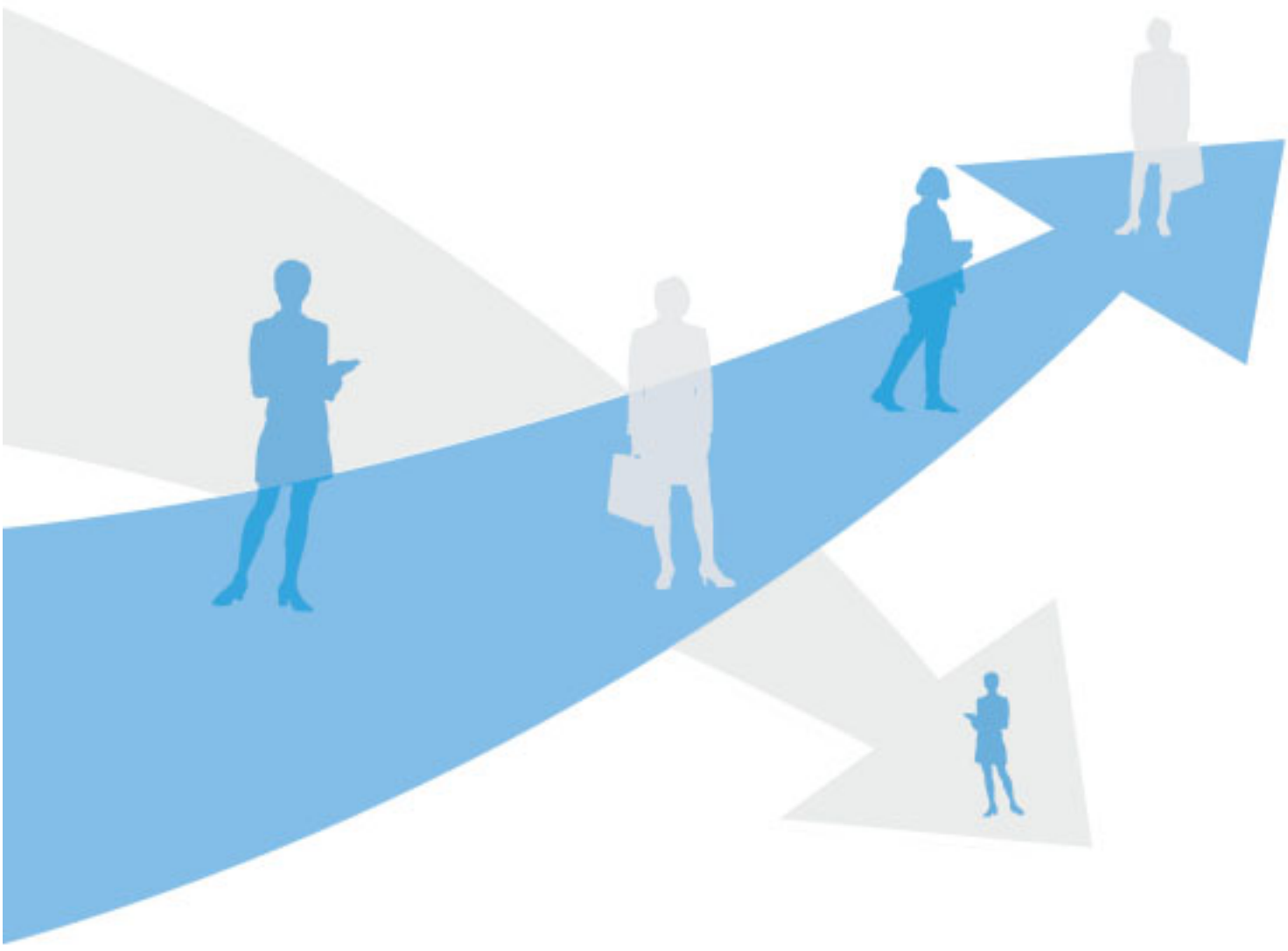

AAUW Educational Foundation

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Foreword

Three years ago, the American Association of University Women Educational Foundation released a powerful research report on the participation of girls in today's growing computer culture. That report, *Tech-Savvy: Educating Girls in the New Computer Age* (2000), described disturbing differences between the participation and involvement of boys and girls in computer technology and computer science classes. The study reported that girls are more likely to be disengaged or disenchanted with computer classes and, therefore, less likely to gain the full scope of computer literacy skills. Today's girls, it seems, are growing up without the encouragement to excel in the rapidly growing computer science and information technology fields.

This report, *Women at Work*, reminds us that the education of today's girls has great implications for women's future success in the work force. As the report shows, the computer and technology literacy gap for school-aged girls is mirrored in the adult world of work. Certainly, we should celebrate the fact that women's education and work participation levels are higher than ever. Still, we cannot ignore the critical questions and clear warning signs presented in this report.

How are women positioned in today's service-based work force? Are we prepared and preparing to succeed in the growing information technology industries that are projected to dominate the future work force?

Women at Work documents good and bad news for women in the work force today. At the same time, and perhaps more significantly, our path to the future is filled with possibilities for both progress and persistent inequity. If we continue to advance slowly into the high-status information-technology fields of the future, we run the risk of being left behind and relegated to low-level service jobs. Even with more rapid advancement, it is clear that not all women will be extended the same access and opportunity.

This report presents us with an honest and sweeping look at these and other dilemmas that characterize our contemporary struggle for gender equity in the workplace and beyond. We hope it draws greater attention to the problems and promise of women at work and a renewed commitment to provide more security and better opportunities for all women and their families.

Mary Ellen Smyth, President
AAUW Educational Foundation
March 2003

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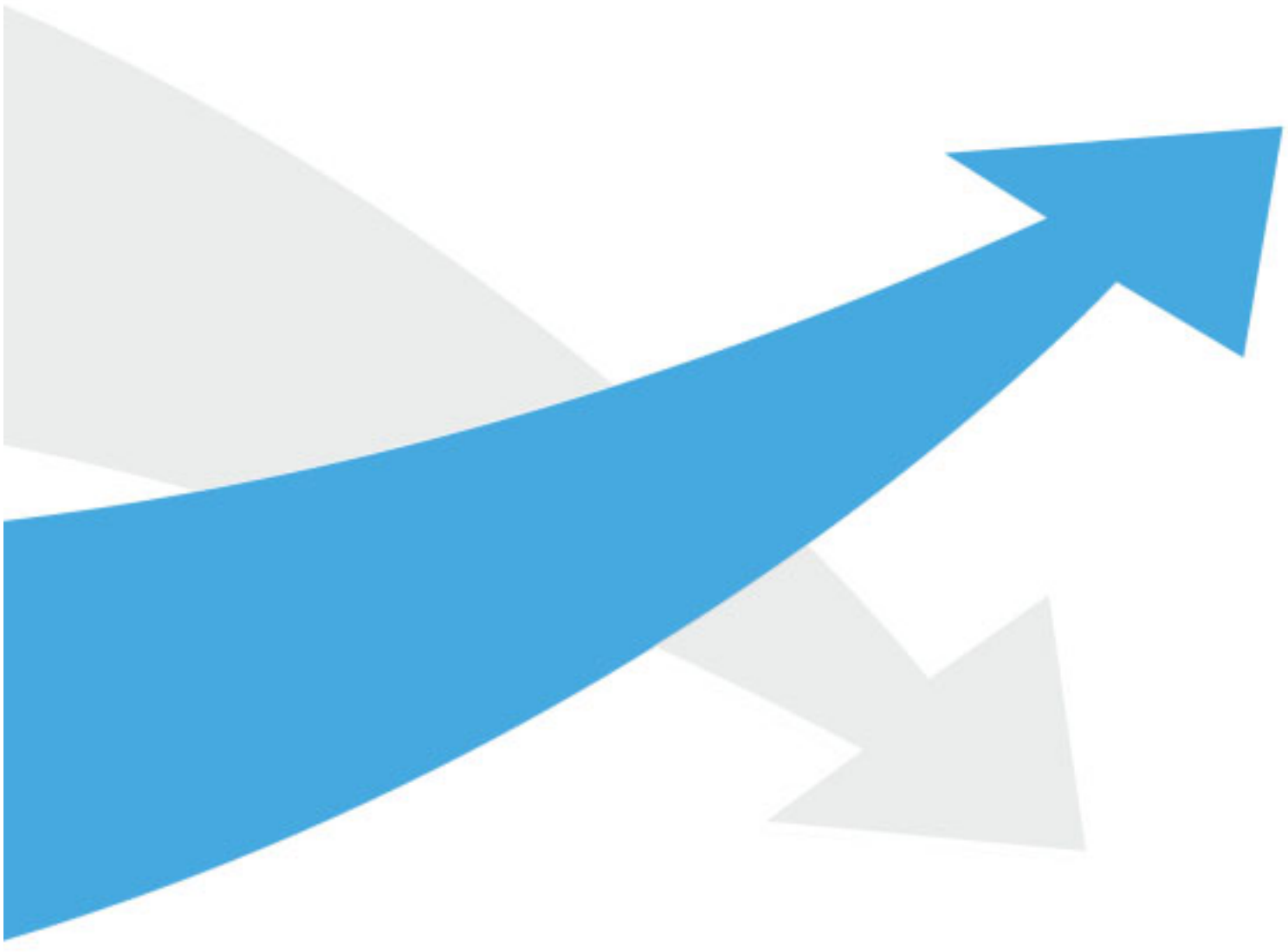
Special thanks go to the thousands of participants who, via questionnaires, interviews, and focus groups, shared their experiences and their ideas about women and the economy.

Executive Summary



During the second half of the 20th century, the U.S. economy experienced unprecedented levels of growth and expansion. Most notably, the United States shifted from an industrial, goods-producing economy to one dominated by service industries and, more recently, by the emerging knowledge-based field of information technology. The increase of these service industries, many of which are female-dominated, has resulted in a rising demand for women's labor and has helped draw many women into the paid labor force. At the same time, the recent growth of information- and technology-related occupations has raised concern about women's economic positions and occupational prospects, mostly because these better-paying, higher-status occupations tend to be male-dominated. To better understand the nature of women's participation and success as workers in the new economy, the American Association of University Women Educational Foundation explored two principal questions:

- How are women faring in today's economy?
- What are the future prospects for women in the labor market?

Women at Work examines these questions through national-level data comparing contemporary women with each other, contemporary men, and women of a generation ago. It looks at a combination of factors relevant to women's present status and future prospects in the labor market: women's levels of education and areas of study; women's marital and family status; women's participation and opportunities in the work force; and the conditions of today's work force, including levels of occupational segregation and prevalence of work-family programs and flexible work policies.

The report provides rich data on the two principal questions and paints a portrait of women's economic and educational well-being on the cusp of the 21st century. Paying close attention to women's status in the new economy, one driven by service and knowledge-based industries, the report will be useful to anyone interested in the social and economic prospects of women for the next several decades. Moreover, given recent evidence from the Educational Foundation's *Tech-Savvy: Educating Girls in the New Computer Age* (2000) research that the growing electronic culture is leaving girls behind, *Women at Work* is equally significant to the educational and career preparation of young and adolescent girls.

Not surprisingly, the story here includes good news and bad news. The good news is that women's decades-long push for educational opportunities—a focus for AAUW since the 1880s—has paid off. As this report describes, education for today's women overall is similar to that of men today and more than that of women in 1980. Furthermore, women's participation in the work force is greater than ever. With growing numbers of service-related jobs, women now have a greater likelihood of employment than men do.

Yet while women overall have gained dramatically in educational achievement and work force participation, inequities persist. Educational progress continues to vary by income levels and race-ethnicity. For example, Latinos, a disproportionately low-income population, lag markedly behind as the only racial-ethnic group that averages less than a high school education (10.9 years for both females and males). This lack of education puts them at a critical disadvantage in the labor market and presents a growing national crisis as the percentage of Latinos in the United States continues to rise.

Educational differences among women intersect with marital and family status differences to create further inequalities in labor force participation and economic conditions for women. During the last two decades, both married and single mothers increased their participation in the labor force. This participation has done little, however, to improve the social and economic conditions for single mothers, who are generally younger, less-educated, and more likely to live in poverty and rely on federal assistance than are their married peers.

The multiple roles they fulfill within their households make the condition for working mothers, particularly single mothers, more tenuous. Women frequently cope with this challenge by selecting jobs that allow them to work at home or that provide flexible schedules or part-time or "shift" work. Still, the demand for flexible work schedules far exceeds the supply and does not appear to reach the women most in need.

About one-third of employed women have some option to vary the beginning and end of their workday. This option is less available to women than men and least available to African American and Latina women and women with less education. In personal service occupations—those most likely to be held by women in general and unskilled and undereducated women in particular—flexibility is often associated with unpredictable workweeks and pay and longer hours of work.

While women's overall levels of education and participation in the paid labor force have increased, women remain overrepresented in clerical and service positions. Likewise, women find themselves on the margins of new and high-status fields and occupations, including systems analysts, software designers, computer scientists, engineers, and information technology professionals. Some related and especially troubling news is that college-age women today are actually *less likely* than their counterparts from 20 years ago to be majoring in high-growth fields. Compared to men, women today are less likely to study in a field that will prepare them for work in science, engineering, or information technology.

Furthermore, women—more than men—remain highly concentrated in specific occupations, and little has changed in these numbers or kinds of occupations in the past 20 years. The U.S. Census Bureau identifies 500 different occupations, but almost one-third of women today are concentrated in just 10 of these occupations. Although women have increased their representation in managerial and professional specialty fields, this broad occupational category includes the relatively low-paying and traditionally female-dominated occupations of teaching, nursing, and bookkeeping.

What does all of this mean for women's prospects in the new economy? Women's job and economic prospects for the future are best described as mixed. Women are increasingly likely to enter the paid labor force, and all women, including those with less education, will be more able to secure positions in the burgeoning ranks of service employees. At the same time, however, women are less represented in and less prepared to assume technology- and information-related occupations than lower-status service occupations.

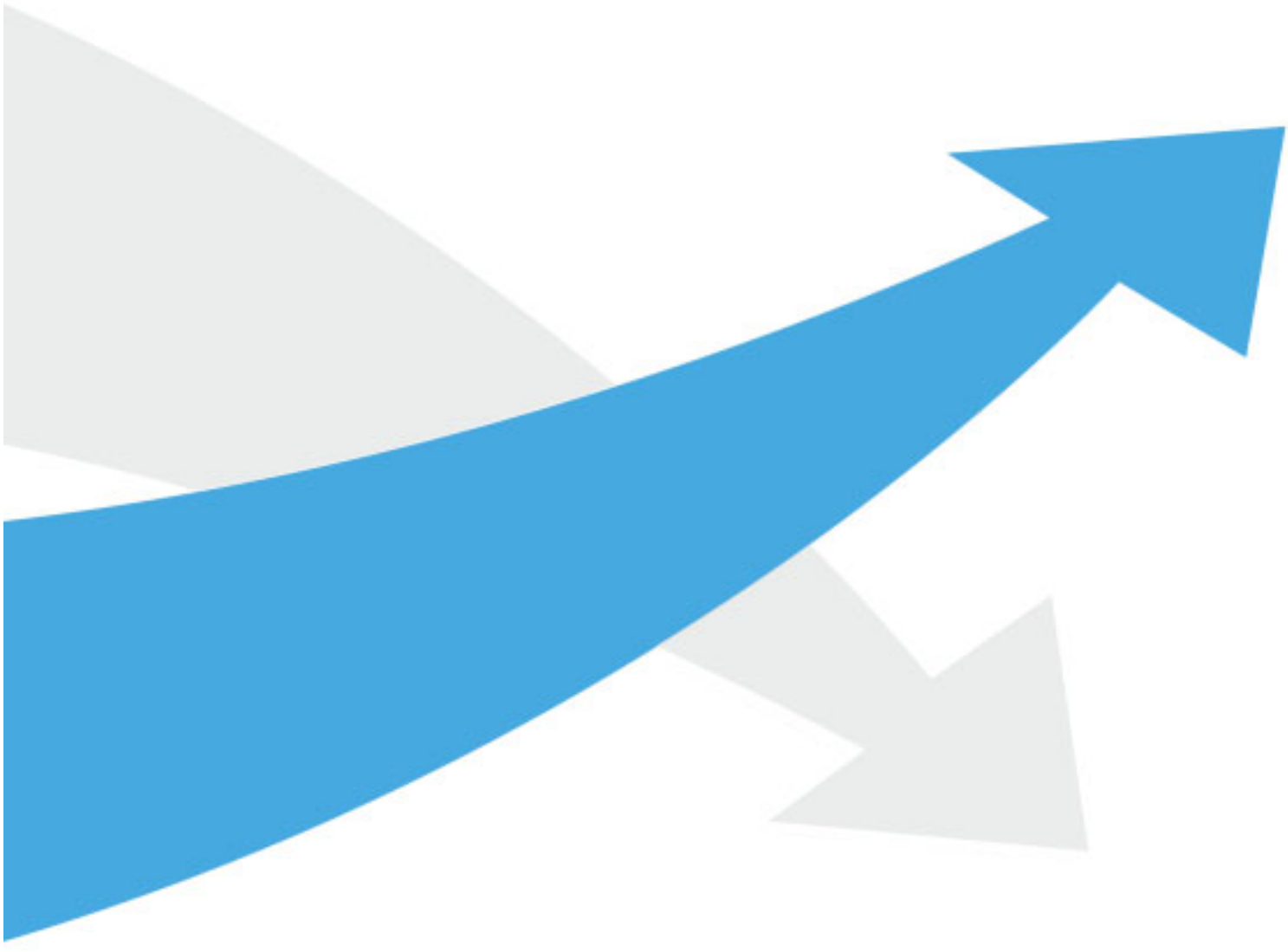
Quite simply, women do not appear well-positioned to access high-paying, high-quality jobs in emerging information- and technology-related segments of the labor market. Men, particularly white and Asian American men with a bachelor's degree or four years of college, dominate these jobs, and this is not likely to change given the current trends in women's educational preparation. For less-educated women and women in certain racial-ethnic groups, the prospects for economic security in today's work force are discouraging.

The findings from this research point to four primary areas of focus for future policy and advocacy activities on behalf of women and girls:

- Increase educational access and opportunity for women and girls in underrepresented racial-ethnic communities.
- Promote the benefits of education in computer science, engineering, mathematics, and technology to women and girls, and create opportunities and incentives for women and girls to pursue these fields.
- Enhance women's education and training in financial management and economic self-sufficiency, particularly for single working mothers.
- Promote equitable access to flexible work arrangements and additional research on work-family policies and programs.

Chapter 1

Women in the New Economy



During the last few decades, the U.S. economy has undergone significant transformations. One of the predominant structural shifts has been its move from an economy centered on manufacturing to one rooted in less tangible commodities, such as services and, most recently, information. Rapid changes in technology have accelerated this shift and the ensuing emergence of a dynamic, volatile, global economy often referred to as the "new economy."

In response to this transition from the industrial to the information age, the AAUW Educational Foundation embarked on a major study of how these changes are affecting women's work, their perceptions of their work, and their prospects for the future. The study was divided into two parts: Lake Snell Perry & Associates Inc. conducted a national survey and series of focus groups to explore how Americans think and feel about the new economy and their positions in it, and Rand collected and analyzed national-level data on women's positions and prospects in today's economy and job market. *Women at Work* combines the two studies and offers a rich portrait of the realities and experiences of women as workers in the new economy.

This chapter provides background information on today's economy and highlights the findings from the national survey and focus groups. The overview of the new economy and glimpse into Americans' everyday experiences within this new paradigm provide the backdrop to better understand how women are faring today (Chapter 2) and what their employment prospects might be in the future (Chapter 3). Finally, Chapter 4 offers conclusions and policy recommendations.

What's New About the New Economy?

Growing Service and Information-Technology Industries

The U.S. economy experienced major industrial shifts during the second half of the 20th century when manufacturing—once the economy's dominant industry—gave way to a rising service sector. In the last three decades alone, jobs in goods-producing manufacturing industries decreased by 39.6 percent (from 33.3 percent in 1970 to 20.1 percent in 1998) while jobs in service industries increased by 19.8 percent (from 66.7 percent in 1970 to 79.9 percent in 1998) (U.S. Bureau of the Census, 1999).

The service sector includes a diversity of industries that are consumer-oriented, business-oriented, or both. Consumer-oriented industries include health care, social services, private education, recreation and entertainment, and personal services, such as housekeeping and automotive repair (Goodman & Steadman, 2002). Business-oriented industries include consulting, management or accounting services, legal services, and membership services for organizations such as associations or churches. Because of this diversity, the service sector is extremely volatile and sensitive to societal shifts, including changes in demographic characteristics, business practices, government policy, and individual lifestyles. For example, much of the recent growth in health-care, personal, and recreational services reflects increased attention to health and personal appearance as well as the increasing proportion of elderly within the population.

Today, new information technology industries drive the economy and rapidly expand and alter the nature of work in the United States and globally. These industries are characterized by jobs that produce, process, and distribute data and other forms of knowledge through advanced computer and telecommunications technology. The growth of these knowledge-based industries has revolutionized the production and transfer of information and simplified the management of geographic distance and diverse international markets. Indeed, the digitized, information-based business of today and tomorrow is "weightless" and, therefore, much easier and cheaper to coordinate and transport.

The combined growth of the service sector and information technologies has led to more information-based jobs in computer technology, engineering, and database administration, as well as an

increased number of service positions in personal care, retail, and administrative support. Without question, adults in these information and service occupations have better chances for continued employment than do adults in slower-growing occupations, such as agriculture and manufacturing (Braddock, 1999). Research shows, however, that while service industries include jobs with a range of requirements, status, and employment returns, most service occupations (e.g., food preparation, health services, personal services) are characterized by relatively low wages, few benefits, and job instability (U.S. Bureau of Labor Statistics, 1999-2000).

A Changing Work Force

During the end of the 20th century, the composition of the labor force shifted significantly, and female participation in the labor market grew dramatically. This increase in female employment has been especially great for women with historically lower levels of participation in the paid labor force—married women with children, white women, and middle-class women. In large part, this change resulted from declining average wages for men following World War II and a growing reliance on women's employment, especially for married and cohabiting couples.

The median income for married-couple families without an employed wife was $35,670 in 1998, while that of families with working wives was $63,370. From 1980 to 1990, increases in median income for married couples resulted from the growing economic contributions of wives (White & Rogers, 2000). Moreover, across all races, married couples with two wage earners were 25 percent less likely to be poor than were couples with only a male wage earner.

Projections for the U.S. work force from 2000 to 2010 suggest that the trend toward greater female participation will continue, with the female labor force projected to grow by 15.1 percent and the male labor force projected to grow by only 9.3 percent. The U.S. work force is also expected to become more racially and ethnically diverse as Latino, non-Hispanic African American, and Asian American groups increase in population and share of the labor force. Among age groups, the youth labor force (workers from age 16 to 24) and the senior labor force (workers age 55 and older) are projected to increase their shares of the work force, while the group of workers from age 25 to 54 is projected to decline (U.S. Bureau of Labor Statistics, 1999-2000).

With greater levels of educational and employment opportunity, women today tend to spend less of their lives married—and economically tied to men—than did women a generation ago. Both the age at marriage and the likelihood of divorce rose during the 20th century (Cherlin, 1992; Cox, Hermsen, & Klerman, forthcoming; McLanahan & Casper, 1995). From 1970 to 2000, the rate at which American women from ages 15 to 44 married for the first time plummeted from 93 per 1,000 women to 49 per 1,000 women (Casper & Bianchi, 2002). With delayed marriage, women are more likely to attend school longer and attain educational credentials that are similar to or exceed those of their potential or future spouses (Cherlin, 1992; Spain & Bianchi, 1996).

During the past two decades, the number of families headed by never-married women increased tenfold. By the year 2000, 74 percent of U.S. women aged 25 to 54 with children under age 18 participated in the labor force (U.S. Bureau of the Census, 2000). The rate of women's participation in the work force also increased dramatically for women with children under age 3. Whereas in 1970 only 23 percent of mothers with young children entered the work force, by 2000, 61 percent entered or re-entered it before their child reached age 4. At the same time, welfare reform raised the need for women to find employment to sustain their families. The Personal Responsibility and Work Opportunity Reconciliation Act of 1997 placed a lifetime limit of five years of cash assistance for families with dependent children and requires parents to find permanent employment.

Changes in the demand for labor along with an increasingly female supply of labor also led to

changes in the culture and conditions of the work force. In particular, growing attention is being paid to the balance—or tension—between work and family responsibilities. The rise in women's employment, in the context of a rise in dual-earner and single-parent families, means more workers today have minor children at home than did workers a generation ago, and fewer workers have stay-at-home spouses to shoulder child-care responsibilities. Similarly, as life expectancy continues to rise and baby boomers approach retirement, caring for parents can increase family responsibilities further. Balancing these responsibilities with the requirements of a paid job is a difficult issue for women more often than for men, because women bear family responsibilities disproportionately (Bird, 1999; Presser, 1994). Partly in response, employers in the past decade have begun to offer programs such as flextime, telecommuting, and family leave (Presser, 1989; Hyland, 1990; Hofferth, 1996).

These changes—in the kinds of jobs available, the workplace, and women's circumstances—have had a dramatic effect on the nature of women's work and the economic status of women in the United States. The changes have also affected how Americans think and feel about the status and conditions of today's job market and their positions and prospects in it.

National Survey and Focus Group Findings

Through a national telephone survey and a series of national focus groups, the AAUW Educational Foundation set out to assess how working Americans experience and perceive the new economy and their positions and roles within it. Participants responded to a number of questions, including

- How do you feel about the new economy?
- Are you content with the economic and occupational changes [in the new economy]?
- Are you satisfied with your work?
- Are you concerned for the future?
- What are the biggest benefits and greatest frustrations of working in the new economy?
- How are women affected—for better and for worse?
- If you could, what would you change about the workplace in the new economy?

The results reveal a mixture of opinions and attitudes. Not surprisingly, participants with the education and skills relevant to the new economy feel better prepared to weather economic fluctuations and face future job changes than do their non-college-educated counterparts. Better-educated workers also feel more positive about the impact of technology and about prospects for more flexible and family-friendly work policies. While these participants are concerned about the economy, they are generally optimistic about the future. Less-educated workers are also concerned about the economy and equally concerned about education. Their optimism is more tempered, and they are the most likely to agree strongly that individuals without a college degree or proper training are being left behind. Most of these workers, particularly women, have chosen jobs that pay less but have better benefits or have stayed in jobs just to keep their benefits.

While a majority of participants feel positive about their job positions and prospects and "in control" of their economic situations, differences arise by gender, race-ethnicity, age, and marital and family status. Women feel more negative about their economic outlook than men do and are slightly less likely to feel in control of their economic situations. Overall, men are twice as likely to believe they have seen greater salaries from the technological revolution. Among those working in technology jobs, however, women are three times more likely to believe that recent changes in work have resulted in higher salaries for people like themselves.

Women of color, particularly African American women and Latinas, express more concern about the economy and their own economic futures than do their white counterparts. African American women and Latinas are also more likely to believe

that they have increasing opportunities and access to skills training and that the new economy has brought more equality to the work force. While African American women and Latinas express more concern about their personal job and economic situations, Asian American and white women are more negative in their macroeconomic outlook and more likely to say that the economy is increasingly unstable. Young single mothers and senior women are the most pessimistic about their own personal economic security. For both groups, these feelings are largely tied to concerns about health care for themselves and their families. For seniors in particular, concerns about retirement and social security top the list.

Despite differences by age, class, and race, some clear patterns exist across demographic subgroups. By and large, participants report more overall opportunity but also more concern about gaining the education and skills necessary to compete and succeed in today's economy. They acknowledge that the rise of the technology sector has required individuals to acquire a college education or specialized training to be successful. They also acknowledge that while many are prospering as a result of technological advances, others are falling behind as more and more industrial jobs are eliminated, companies move overseas, and machines replace human beings on factory floors. In the same vein, participants—especially working women in general and working mothers of young children in particular—share a concern about the balance of family and work responsibilities.

Note: The real names of the participants are not used in the survey and focus group summaries below.

Greater Options and Growing Concern

"There are more options. … That's a positive thing."

According to participants, the global nature and information technology focus of the new economy provide more job and career opportunities for individuals than ever before. Many attribute this to the Internet, describing it as a democratizing tool that allows for nameless, faceless, and genderless work. Participants largely agree that they are better off today than they were five years ago, and strong majorities from nearly every demographic subgroup believe that women and members of racial-ethnic minority groups have greater access and opportunities for entry into the labor market. By and large, participants of all demographic subgroups report that the new economy is driving greater progress, opportunity, and innovation in the workplace, and for women in particular.

Janice, a white single mother and receptionist at a dental office in Boston, remarks: "There are more options for people. There are definitely people who don't want to stay home, who want to work. … That's a positive thing."

Karen, a white, college-educated pharmacist from Virginia, says: "One of the things [the new economy] is doing is making women become interested in finance and making us business-savvy. We know that if we want to be competitive, we need to know the rules and the tricks of the trade. We need to know how to play the game like the big boys. … In that sense it's a good thing, because it is really making us think outside the box."

Carmela, a college-educated Latina in Massachusetts, offers a similar response: "Women have more exposure. Women are now working and in the work force. They get to travel [in] what was once just a man's world. I think it helps women because they also become exposed to the world in general, not just to the corner of the world they live in. I see more of us being more concerned about [our] careers, the fields that [we] are going to go into. We are leaving the molds. We are no longer housewives and mothers. We have careers."

Amani, an African American human resources manager in Detroit, speaks of growth and mobility: "There's more progress and more moving around. I can go from job to job if I have to. … New types of jobs keep popping up."

"A lot of people [are] being left behind. … [They] don't understand this computer thing."

While participants report feeling empowered by elements of the new economy, they also express significant concerns about being left out of the growing information-technology market and computer culture. Most participants report that they have "a great deal of control" of their current personal economic situations. At the same time, they describe an underlying concern and confusion about the larger impact of the new economy on their lives and the lives of others. They feel upset, concerned, nervous, frightened, and overwhelmed by a changing economy and workplace.

Barbara, a college-educated African American from Detroit, describes a transformation brought on by the information-technology economy: "There is no stopping it—it's here. There are changes everywhere. And it changes everything. The way we work, what we do, how we do it, how we perceive it, how we plan and organize."

Don, a white high school graduate from the same city, offers a similar description of grand and sweeping changes: "I see one economy. Eventually corporations buying corporations where it doesn't matter who has business in America. It won't matter. It's going to be a world owned by corporations."

Maxine, a college-educated African American from Detroit, suggests that the changes have a profound effect on people's work and job security: "Every time you turn on the news or pick up the paper, this company is closing, this Fortune 500 is downsizing, the situation at DaimlerChrysler, Montgomery Ward, Sears."

Cristina, a non-college-educated Latina from the Boston area, describes a widening gap between the haves and have-nots. Despite reporting that she enjoys her job and feels better off than her parents were at her age, she is cynical about the future direction of the economy and job market: "We're headed for hell. Seriously, all [of these computers are] taking over. [Fewer] people [have] jobs. The rich get richer, the poor get poorer. … It's going to be like the Jetsons [where] we have everything being done with a push of the button—even the food."

Maureen, a white non-college-educated woman from North Carolina, knows she cannot advance or even stay employed if these trends continue. She describes "this computer thing" with uncertainty and unease: "A lot of people [are] being left behind. [They] don't understand this computer thing. I hope it's not going to last long. I'm telling you, look at all the bugs and viruses they have. What are they going to think of next?"

The Need for New Education and Training

"I had to go back to school part time to keep up with them, to keep up with the times."

The growing need for new skills to match the new economy concerns participants, particularly those over age 50 and those without a college education. They describe fears of being unprepared, becoming obsolete, and losing their niche in the job market.

Connie, an African American from North Carolina, describes her reasons for entering college at 42: "I don't feel as secure in my job as I did before. Now I had to go back to school. Before when you had a job you [were] more secure that it would continue. But now you see the younger people coming in with more computer knowledge. I had to go back to school part time to keep up with them, to keep up with the times."

Richard, a white taxi driver from Detroit, explains how he feels: "Technology is eventually going to eliminate general labor. You've got people who were working at Ford. Now there's a robot that does their jobs for them. They're eliminating jobs. If you don't have the education to work with those computers, you're not going to be sitting there welding."

Malcolm, an African American security guard from North Carolina, reports a similar sense of insecurity for those without college degrees: "I think as technology rises, it knocks the less educated out of work. That I see as bad because at that point you don't have the education to regroup and go back out and find things."

When asked who is most disadvantaged in today's labor market, a majority of survey participants report that those with the least education are at the greatest disadvantage in the labor market of the new economy. In fact, more than 80 percent agree that with the advent of technology and the rise of information-oriented industries, individuals without a college degree or proper training are being left behind.

Describing her hopes to move up in the workplace and to provide the best education for her children, Kristen explains: "There is this big digital divide between the haves and have-nots. And it is just getting wider and wider. When you are a person who has to worry about where your next meal is coming from or how you are going to clothe your children or [if you] can afford to pay this amount of money for rent, owning a computer comes really down low on the list."

Balancing Work and Family

"How am I supposed to do it all? Tell me how."

When asked about the position of women in the new economy, participants agree that women have more opportunity today than they had 20 years ago, but they continue to face barriers to career advancement and remain at a disadvantage when compared to men, particularly women with children under age 6. Participants say that mothers of young children are less likely to be promoted than are males (with or without children) or females without small children. Women are even more sensitive to this distinction, with women of color and women with young children most likely to believe that they are at a disadvantage when it comes to promotional opportunities. Interestingly, men with young children are less likely than men overall to believe women with young children are at a disadvantage.

Women worry more about balancing the responsibilities of family and work. While some women report the ability to work part time or not at all to care for family, many women—particularly sole providers and those without college degrees—explain that this is not an option for them.

"I have kids and I have my father. I have to be on both ends. Like bookends."

Donna, a non-college-educated woman (race-ethnicity unknown) from Virginia, explains that she works full time and is a single parent of two small children. While she thinks she should take classes to advance her career and increase her earning power, she is overwhelmed by the thought of it, exclaiming, "How am I supposed to do it all? Tell me how."

Patrice, an African American college graduate and single mother, also faces difficult time constraints and financial burdens: "If you are a single mom, you have to worry about the rent and child care—which is ridiculous—and food and everything. It is really hard."

Married women and college-educated women also report feeling torn between family and work. Karen comments on the conflict between work and family: "I think family takes the back burner these days. I really do. And I think it's really sad. I don't think people necessarily want it to be that way, but I just look at my neighbors and I look at what time they get home from work. … I think the natural progression is going towards making a living as opposed to having your family."

Laura, a married, middle-aged Latina from Boston, describes her role as "bookends" as she struggles to balance work and family care: "I have kids and I have my father. I have to be on both ends. Like bookends. So nothing falls over. So everyone's okay."

Joanne, a married African American mother of three and an accountant in Virginia, characterizes today's work schedule as a problem: "People are working those long work weeks. They get home, feed the baby, put the baby to bed. Then they feel all crappy because they haven't had a chance to spend any time with their kid. Then when they do get time it's either sleep or spend time with the kid. So now they are sleep-deprived."

While some participants report options for flexible schedules, job sharing, and telecommuting, as well as a more family-friendly work culture, the majority say they do not have jobs that offer these benefits. Although most participants across demographic subgroups agree that technology has made life easier, they continue to have difficulty balancing work and family. As financial providers and caregivers, women feel that they carry the brunt of the load. This feeling is particularly acute for working women of color under age 50.

Nell, a 36-year-old executive assistant at a major business firm, describes one instance of work-family conflict at her job: "There was a snow day, I had to leave at 11:30 because my daughter's school was closing, and [the people in my office] postponed a meeting. One of the [executives] came to my boss and said, 'We are postponing this meeting.' My boss said, 'Why? Everyone is here now.' [The executive] said, 'Everyone has got to go home and pick up their kids now because schools are closing early.' My boss said, 'That's rubbish. You know none of the CEOs are the primary caregivers, their wives are. Nobody has to leave.' I stood up and said, 'I do.' It was a real rough moment."

Although many participants, particularly women, acknowledge serious challenges in balancing work and family in the new economy, they also have hopes and high expectations for positive changes in the workplace. Several participants commend their employers for understanding when family emergencies sometimes interrupt the workday. Others see some employers growing more family-friendly because they face similar demands in their own lives. Some participants report they can be honest with their employers about leaving work to attend to family obligations and do not have to worry about the repercussions.

Sarah, a college-educated sales manager in North Carolina, describes her husband's workplace in positive terms: "They are really flexible. They allow telecommuting. There is potential for that. I know quite a few people who can telecommute. Even some friends whose jobs will be held for them for years. [Employers] are being more tolerant. When my husband would say, 'I've got to leave' (he has gotten up out of meetings because it was my night to work late and he had to go pick up our daughter from day care), he has actually had people say, 'Good for you.' "

A Call for Change

When asked what changes they would make in today's workplaces, participants offer clear and specific suggestions. Across differences in gender, race-ethnicity, and educational level, most participants want more flexible work schedules, more family-centered benefits and policies, and greater access to job-related training opportunities. Notably, the need for elder care is a more popular response than the need for child care.

Greater benefits and more flexible work schedules top the list with participants suggesting better health insurance, on-site child care, elder care, and flextime. Suggestions include "Telecommuting, just two times a week—it would save my life," and "Emergency leave without fear of losing your job." One woman explains her idea for "a flexible schedule if you have appointments or kids at school. If you have school conferences or doctors appointments, you could scratch Tuesday and come in Saturday [or] come in from 8 to 11 and leave for an hour or two and then come back. Not the rigid 9 to 5 with a one-hour lunch."

Job training and educational opportunities are also high on the list, with participants requesting more on-the-job training, continued education, and "cross-training … training for different jobs in the workplace, so if your job is slow, you can help elsewhere." One woman suggests a plan for on-the-job training: "You could either have an employee-sponsored [plan]or some kind of education/work where you could maybe split it. You work 50 hours a week. You do 20 hours of school and 30 hours of work where you get actual on-the-job training as you're going into a career instead of finding yourself with a degree and in a field that [you don't like]. It would help me out a lot more if I went to school six months and got a little hands-on training to see if I was headed in the right direction."

The new economy has paved the way for a host of nontraditional benefits such as flexible schedules and telecommuting, and workers emphasize the importance of these types of benefits in their struggle to find more balance in their lives. While a majority of men and women list salary as a priority, three-quarters of men (74 percent) and more than eight in 10 women (83 percent) say that if they had the choice, they would choose a job that pays somewhat less but provides benefits such as family leave, flexible hours, retirement benefits, and help with family care. Only 18 percent of men and 11 percent of women would prefer a job that pays somewhat more but does not offer those benefits.

At the same time, workers across demographic groups are concerned about having basic health-care coverage for themselves and their families. While focus group participants stress the importance of acquiring health-care coverage through their employers, workers want health benefits that are not tied to one job. Strong majorities say they are worried about having secure health insurance for their families (91 percent of women and 87 percent of men are worried or very worried).

Focus group and survey participants express hope and anxiety about economic and work force changes. Across demographic subgroups, participants agree that new types of education and training are the key to success in today's economy, and they agree on a broad level that the new economy has introduced more opportunities and options. They see more pressures to balance family and work but find the workplace gradually responding to this trend with alternative work arrangements. Still, while participants of all demographic subgroups understand that the new economy is transforming the nature of work and most agree that technology is a positive development, they also understand that many—particularly the less educated—risk being left behind. Of all focus group and survey participants, single mothers and less-educated workers—both male and female—report the most concern about the new economy and their prospects for advancement and economic security.

Chapter 2
Conditions of Women in the Workforce

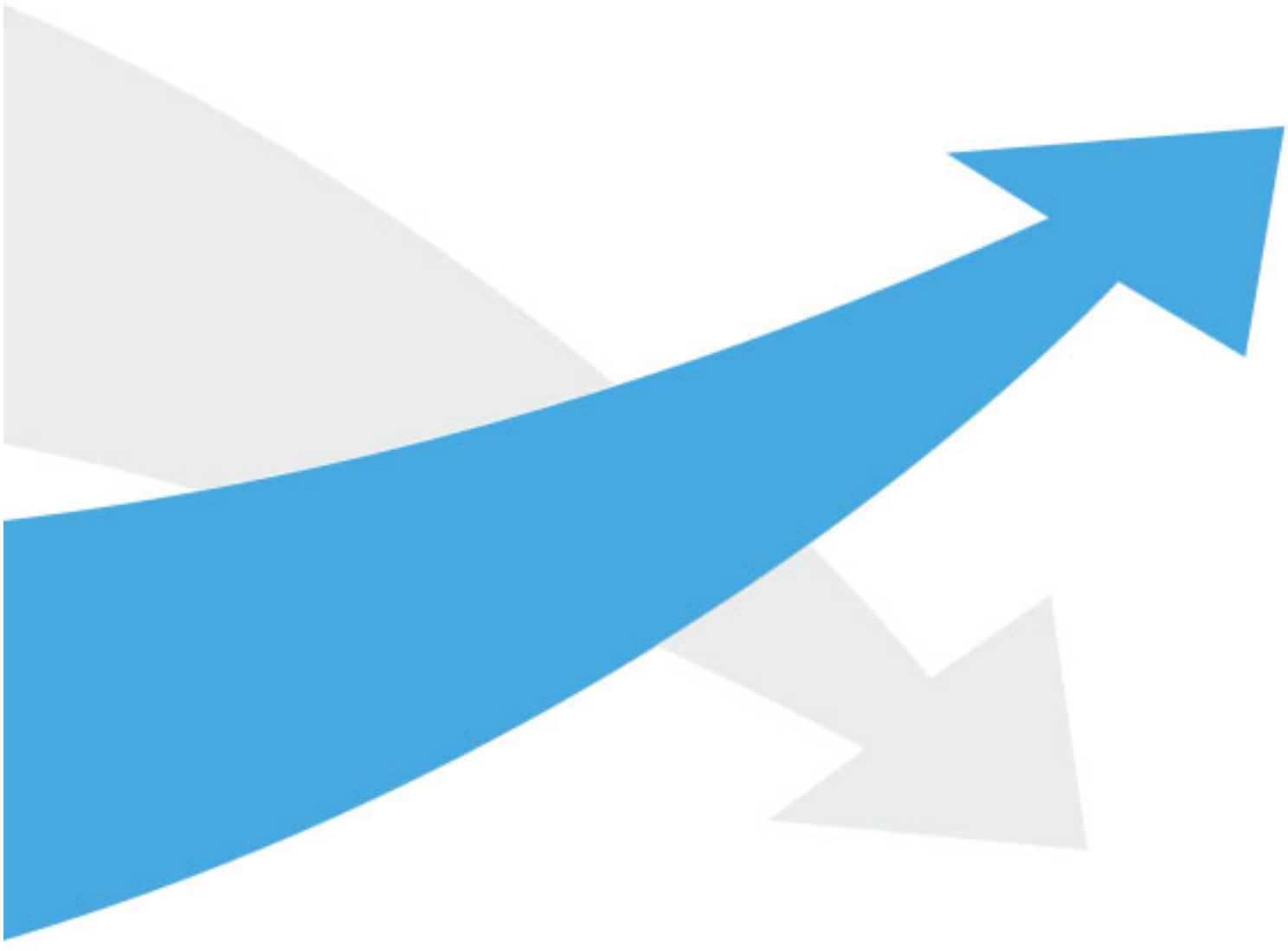


Figure 2.1 U.S. Population, by Race-Ethnicity and Level of Education

	2000 Women	2000 Men	1980 Women
Race-Ethnicity			
African American	13.0	11.2	11.4
Asian American	4.2	3.9	1.9*
Latino	11.1	11.5	5.4
Native American	0.8	0.8	
White	70.9	72.6	81.3
Total	100.0	100.0	100.0
Level of Education			
Less Than a High School Diploma	17.7	19.3	30.0
High School Diploma	31.9	30.6	41.8
Some College or Vocational School	28.0	25.8	15.9
Bachelor's Degree or Four Years of College	15.8	15.9	8.0
More Than College	6.6	8.4	4.3
Total	100.0	100.0	100.0

* Includes Native Americans

The new economy, characterized by new kinds of work and workers, presents new possibilities as well as new challenges for women. To understand how women are faring in today's economy, the Educational Foundation examined the conditions of women's lives and work. This examination focused on four primary factors:

- Individual characteristics, including education and marital status
- Paid labor force participation, including the labor force participation rate, the number of hours worked, and the part-time employment rate
- Prevalence of work-based family policies, including flexible scheduling and telecommuting
- Occupational segregation, including degree of segregation and type of common occupations

The analyses in this chapter examine women overall, by race-ethnicity, and by level of education, and they compare women today with men today and with women from 1980. Except where noted, all tabulations in this chapter use data from the March 1980 and March 2000 *Current Population Survey* (U.S. Bureau of the Census, 1980 & 2000).

To set the stage, Figure 2.1 presents the U.S. population by race-ethnicity and level of education for women in 1980 and 2000 and men in 2000.

Individual Characteristics

Education

As focus group and survey participants suggest, education level and labor-market position are intimately joined (Bianchi, 1995; Wetzel, 1995), because education level affects job choice, earnings, and occupational prestige, for example.

Figure 2.2 Mean Years of Schooling, by Race-Ethnicity

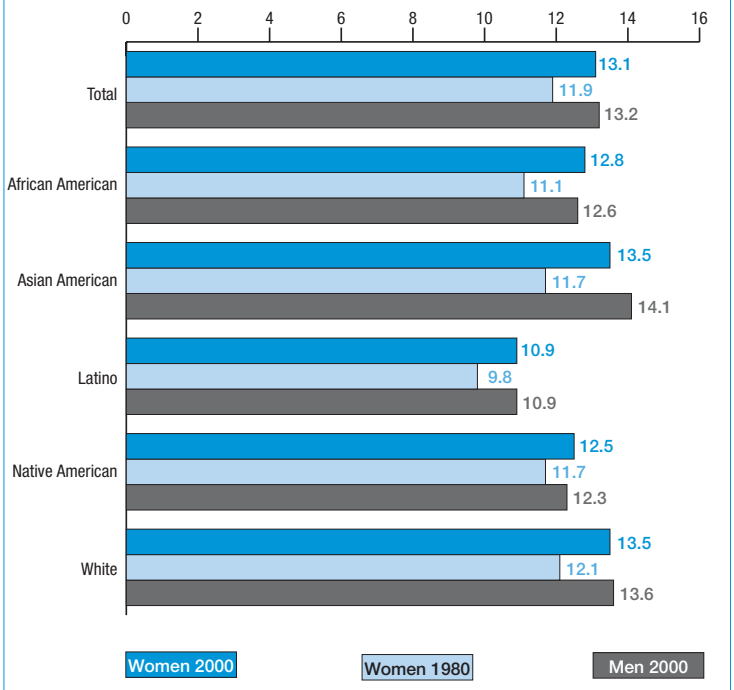


Figure 2.2 shows the average number of completed years of schooling for members of each racial-ethnic group. Overall, women and men today on average have slightly more than a high school education; women in 1980 had slightly less.

Women and men today have similar levels of education overall and within racial-ethnic groups. Asian Americans have the largest gender difference within a racial-ethnic group, where Asian American men average one-half year more of school. Among women, white and Asian American women have the most education; Latinas average less than a high school education, putting them at an important disadvantage in the labor market.

Women's level of education has risen markedly since 1980. American women now graduate from high school at higher rates, have higher rates of college enrollment and bachelor's degree attainment, and receive higher absolute numbers of bachelor's degrees annually than men do (Mortenson, 1999; National Center for Education Statistics, 2000).

Marital Status

Women's labor-market position depends partly on their need to earn income, and the proportion of single women is one indicator of this need. Although married women may also need to earn income, single women do not have the advantage of a spouse's income. The percentage of a particular group that is single thus provides one gauge of women's relative economic need. In this study, single adults are defined as separated, divorced, widowed, or never married. Figures 2.3 and 2.4 show the percentage of single adults by race-ethnicity and level of education.

Figure 2.3 Single Adults, by Race-Ethnicity

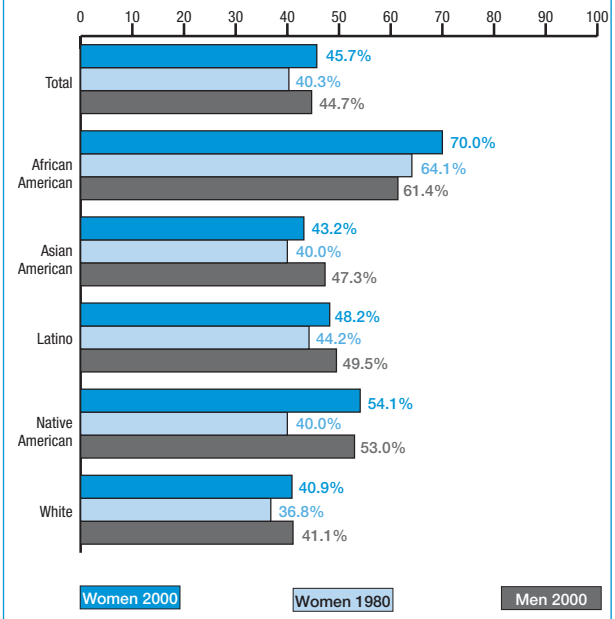
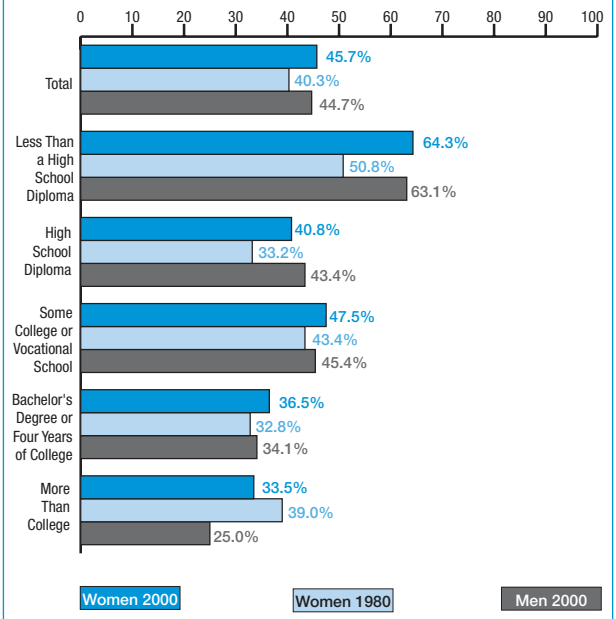


Figure 2.4 Single Adults, by Level of Education



Nearly half of women today are single, as indicated in Figure 2.3, although this rate varies across racial-ethnic and education groups. Seventy percent of African American women are single compared to less than half of Latina, Asian American, and white women. More women today are single than was the case 20 years ago, suggesting a greater need for women today to do well in the labor market.

As shown in Figure 2.4, marital status also varies widely by education. Nearly two-thirds of women with less than a high school education and nearly one-half of women with some college or vocational school are single today. Women with at least a bachelor's degree or four years of college are the most likely to be married; only one-third of women with more than a college education are single.

Participation in the Paid Labor Force

Another measure of how women are faring in today's economy is their degree of participation in the paid labor force. Participation can be measured in several ways. The next three sets of charts examine participation using the labor force participation rate (Figures 2.5 and 2.6), the number of hours worked (Figures 2.7 and 2.8), and the part-time employment rate (Figures 2.9 and 2.10). When combined, the results give a clearer picture of women's participation in the new economy than any single measure could provide.

Labor Force Participation Rate

This report uses the U.S. Department of Labor definition of the labor force participation rate: the number of people who are either employed or have looked for work within the past four weeks, divided by the total population. Figure 2.5 shows the participation rate by race-ethnicity; Figure 2.6 shows the same information by level of education.

The labor force participation rate for women has risen during the last two decades while men's has declined, with both trends more evident among some subgroups (Bianchi, 1995; Wilson, 1987). As shown in Figures 2.5 and 2.6, white and African American women and women with more education

Figure 2.5 Adults Participating in the Paid Labor Force, by Race-Ethnicity

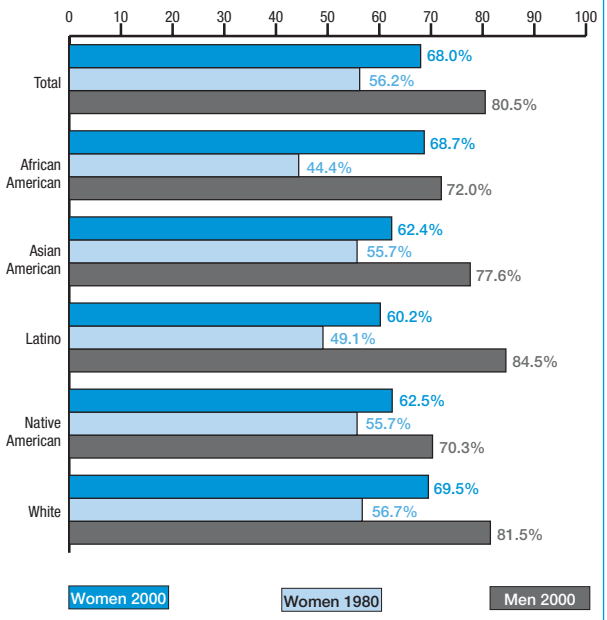
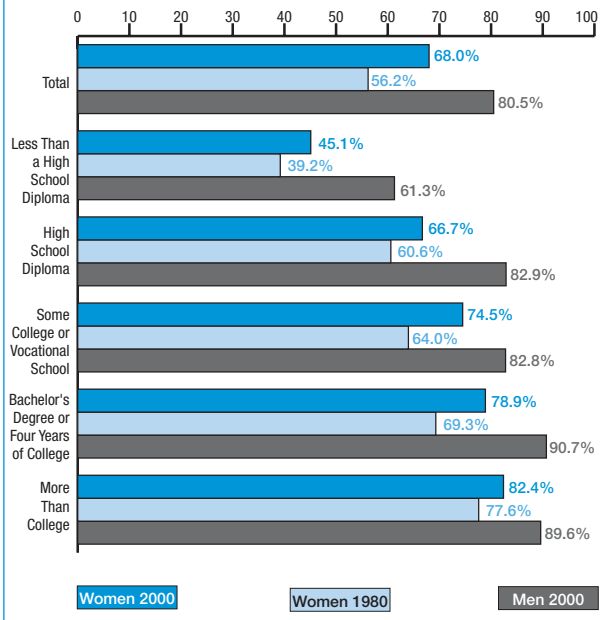


Figure 2.6 Adults Participating in the Paid Labor Force, by Level of Education



participate the most. Women's participation has risen markedly since 1980, however, women still participate less than men do today.

Although two-thirds of women overall participate in the paid labor force, as shown in Figure 2.5, the rate varies among groups of women. More white and African American women participate today than do other racial-ethnic groups. While participation rose substantially for all groups from 1980 to today, it rose most for African American women and least for Native American and Asian American women.

It cannot be assumed from Figure 2.5, however, that Latina, Asian American, and Native American women actually work less, because they probably participate more in informal job markets (Staudt, 1998; Williams & Windebank, 1998). Thus, they may be working similar hours, but the sources of the data in this report do not capture those hours.

Women participate in the labor force less than men do, both overall and within racial-ethnic groups. Gender differences used to be wider (Bianchi, 1995), but they remain noticeable today. Gender differences within racial-ethnic groups are widest for Latinos (with men significantly more likely than women to participate) and narrowest for African Americans (with rates of participation almost equal by gender).

As Figure 2.6 illustrates, women with more education are more likely to participate in the paid labor force. The participation rates of women with different amounts of education dramatically illustrate the importance of education in today's economy: Only 45.1 percent of women with less than a high school diploma participate in the paid labor force compared to two-thirds of women with a high school diploma, three-fourths of women with some college or vocational school or with a bachelor's degree or four years of college, and more than 80 percent of women with more than college.

Women with less than a high school education are the least likely, across racial-ethnic groups, to participate in the paid labor force. While white women

Figure 2.7 Mean Hours of Adult Employment Per Week, by Race-Ethnicity

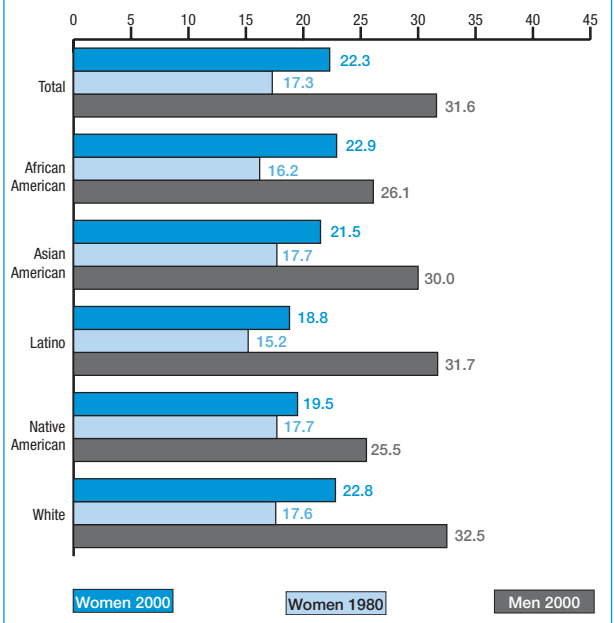
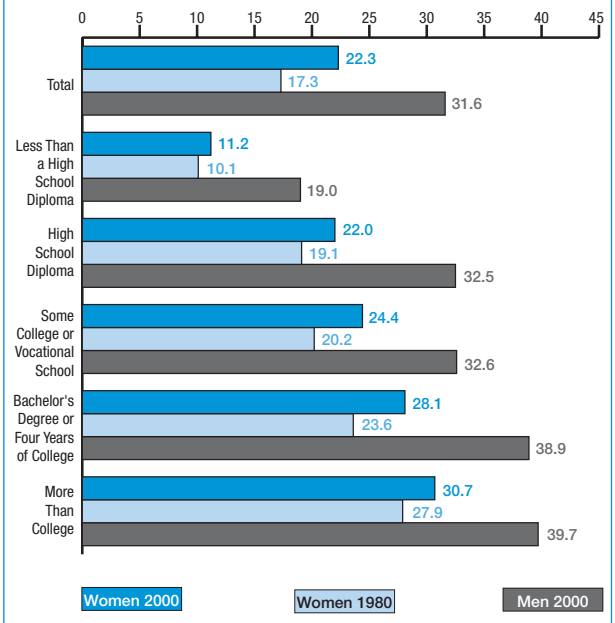


Figure 2.8 Mean Hours of Adult Employment Per Week, by Level of Education



have the highest rates of participation in the paid labor force, this may be true because they also have disproportionately higher levels of education. For example, more college-educated African American women participate than do white women with the same level of education. Yet, because a disproportionately high percentage of African American women have less than a high school diploma (where participation is lowest), overall participation rates for white and African American women are nearly equal. Similarly, Asian American women participate less at most education levels than do white women, but because more Asian American women attain higher education levels (where participation is also higher), the overall rates of participation for white and Asian American women are close.

Hours of Paid Work

The second component of participation in the labor force is the number of hours worked per week. While being employed is the first requirement for any success in the labor market, the number of hours adults work also directly influences their chances to succeed. Full-time employment is critical to earnings levels and is usually linked with jobs that have more security and better benefits. Figures 2.7 and 2.8 show the mean hours of adult employment per week, by race-ethnicity and level of education.

As indicated in Figure 2.7, the pattern for the number of hours employed mirrors the pattern for the labor force participation rate by gender, racial-ethnic group, and level of education. White and African American women tend to work more hours, while Latina and Native American women tend to work fewer hours. On average, women today work fewer hours than men work and more hours than women worked in 1980. In fact, compared to women a generation ago, employed women today work an average of five hours more per week. The increase occurs across racial-ethnic groups and is greatest for African American and white women.

Figure 2.9 Adults Employed Part Time, by Race-Ethnicity

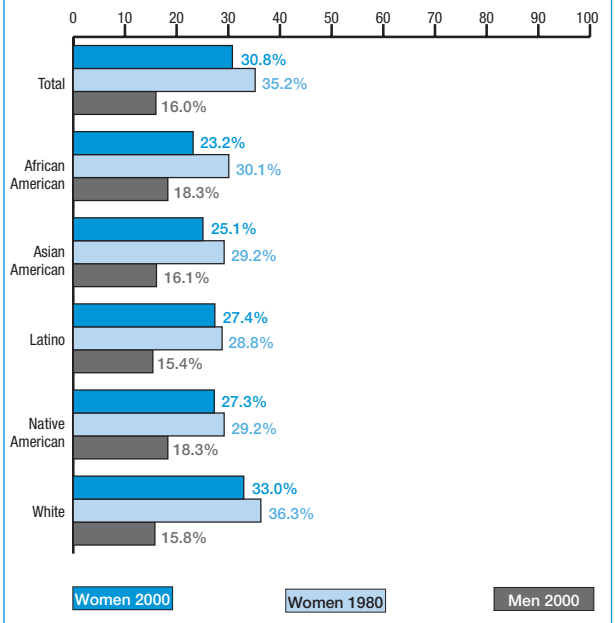


Figure 2.10 Adults Employed Part Time, by Level of Education

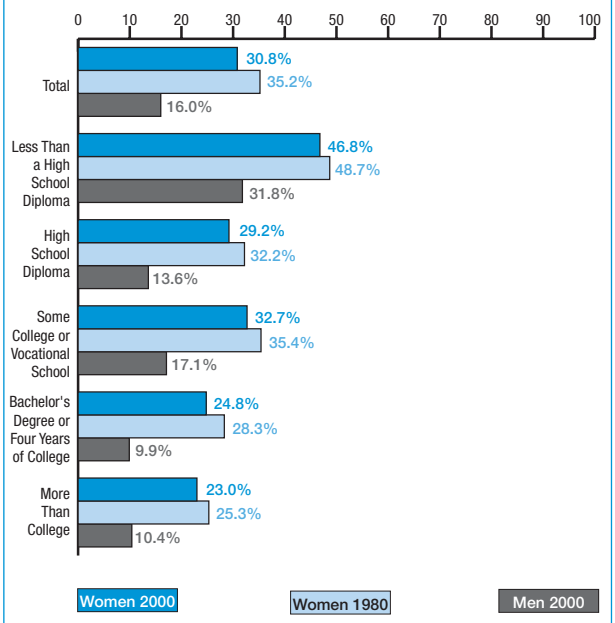


Figure 2.8 shows that women's work hours increase as their level of education increases. A wider range of participation exists across educational groups than across racial-ethnic groups. Women with less than a high school education work the fewest hours, women in the next group (those with a high school diploma) work nearly twice as many hours, and women with more than a college education work nearly three times as many hours. Women in each level of education average fewer hours per week than do men.

Part-Time Work

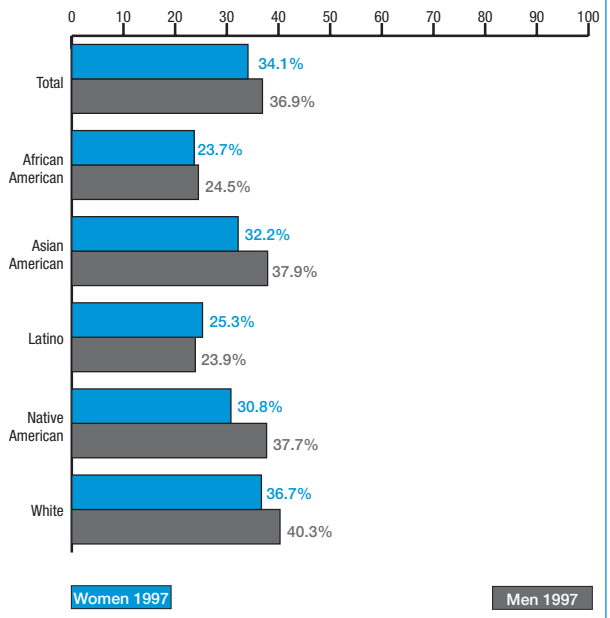
Part-time work is the third component of participation examined here. It can reflect disadvantage (in that it is often associated with less job security, fewer benefits, and underemployment) or advantage (in that it can be associated with additional family income and a choice to work less). These different meanings are reflected in the rates of part-time employment.

Consistent with the results for the labor force participation rate and the number of hours worked, less-educated adults today are more likely to work part time. Similarly, women today are more likely to work part time than men are and less likely to work part time than women were in 1980. In contrast to the earlier results about participation, part-time employment follows a different racial-ethnic pattern: It is most common for white women and least common for African American women.

Figures 2.9 and 2.10 show the percentage of employed adults who work part time (less than 35 hours per week), by race-ethnicity and education level.

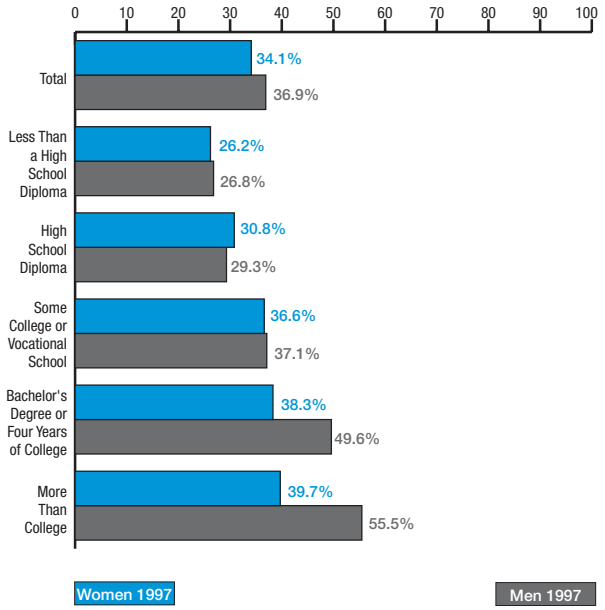
As indicated in Figure 2.9, women today, overall and within racial-ethnic groups, are less likely to work part time than their 1980 counterparts were and more likely to work part time than men are. African American women (the women who work the most hours per week) saw the biggest change in part-time employment; Latinas (who work the least hours per week) saw the least.

Figure 2.11 Adults With a Flextime Option, by Race-Ethnicity



Source data: U.S. Bureau of the Census, *Current Population Survey*, March 1997.

Figure 2.12 Adults With a Flextime Option, by Level of Education



Source data: U.S. Bureau of the Census, *Current Population Survey*, March 1997.

Part-time work varies greatly by education level, as shown in Figure 2.10, and is by far the most common for women with less than a high school education. In contrast to overall participation rates, rates of part-time work decline directly as education rises. The rate of part-time work is highest at the low end of the education scale (nearly half of women with less than a high school education work part time) and lowest at the high end (less than one-fourth of women with a bachelor's degree or four years of college or more work part time).

From 1980 to today, part-time rates declined across all levels of education. Part-time rates fell the most for women with a bachelor's degree or four years of college. They remained almost unchanged for women with less than a high school education.

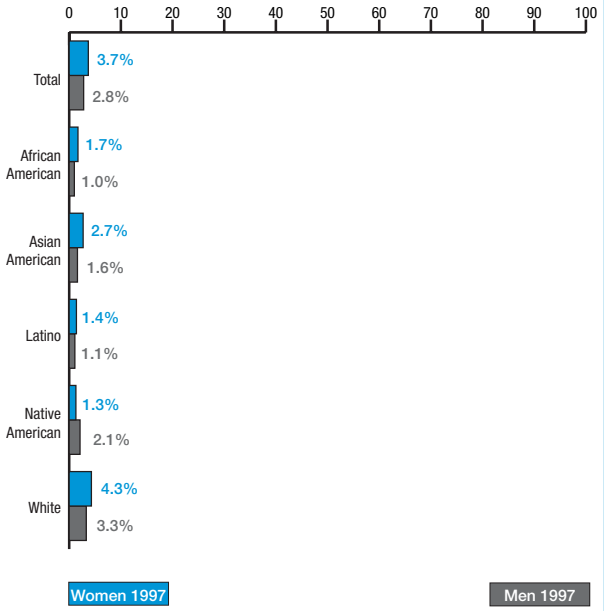
Flexible Work Schedules and Arrangements

Employer policies that offer flextime and telecommuting options are identified with the flexibility and innovation often associated with the new economy. Although used for a variety of reasons, such employer policies are often hailed as family- and women-friendly because they allow job responsibilities to be more responsive to family needs. Family responsibilities continue to fall primarily on women, so flextime (a system that allows employees to choose their own times for starting and finishing work within a broad range of available hours) and telecommuting (the ability to work from home if necessary) can be critical to women's labor-market experiences. To the extent that such policies are available, they are associated with greater opportunity, especially for women.

Flextime

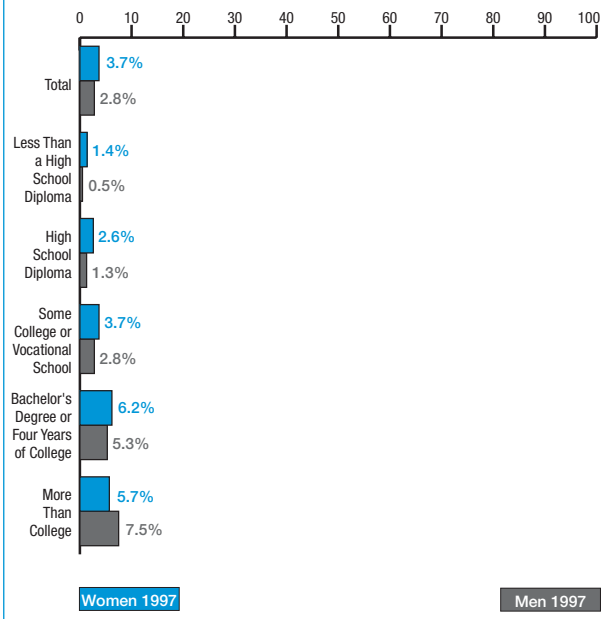
Data presented here are tabulated from the May 1997 *Current Population Survey* (U.S. Bureau of the Census, 1997). Comparable data do not exist for 1980, perhaps because flextime options were not generally available at that time. Figures 2.11 and

Figure 2.13 Telecommuting Adults, by Race-Ethnicity



Source data: U.S. Bureau of the Census, *Current Population Survey*, March 1997.

Figure 2.14 Telecommuting Adults, by Level of Education



Source data: U.S. Bureau of the Census, *Current Population Survey*, March 1997.

2.12 show the percentages of employed adults who are able to alter their work schedule, by race-ethnicity and level of education.

As illustrated in Figure 2.11, one-third of employed women overall have some ability to vary their workday. About one-third of white, Asian American, and Native American women have a flextime option; only about one-quarter of African American women and Latinas report a flextime option.

With the exception of Latinas, women have similar but slightly lower rates of flextime benefits than men do, both overall and within racial-ethnic groups. Racial-ethnic differences are greater than gender differences in flextime availability, with African Americans and Latinos having noticeably lower rates for both women and men.

Gender differences in the availability of flextime are most evident at the higher education levels, as shown in Figure 2.12. Women and men with some college education or less are equally likely to have a flextime option. Among those with a college education or more, men have markedly higher rates of flextime options. More than half of the men with these higher education levels have flextime options compared to less than 40 percent of women.

Telecommuting

Telecommuting results are derived from the May 1997 *Current Population Survey* (U.S. Bureau of the Census, 1997); comparable data do not exist for 1980. Telecommuting is defined as working at home under a formal arrangement with one's employer (versus simply taking work home at the end of the day) in the week prior to the survey. It is still a rare phenomenon, though its importance appears to be growing as new technologies increase its effectiveness and the information economy continues to develop. Figures 2.13 and 2.14 show the percentages of telecommuting adults, by race-ethnicity and education level.

Figure 2.15 The 10 Most Common Occupations for Adults in 2000

Women	Concentration	Men	Concentration
Secretaries, stenographers, typists	5.3%	Truck drivers	4.0%
Bookkeepers	4.0%	Sales supervisors and proprietors	4.0%
Sales supervisors and proprietors	3.1%	Janitors and cleaners	2.3%
Registered nurses	2.8%	Carpenters	2.1%
Elementary school teachers	2.8%	Cooks	1.8%
Nursing aides, orderlies, attendants	2.8%	Computer systems analysts and scientists	1.7%
Bookkeeping, accounting, auditing clerks	2.5%	Laborers (not construction)	1.5%
Waitresses	1.9%	Sales representatives, not retail	1.5%
Receptionists	1.6%	Construction laborers	1.4%
Cooks	1.5%	Auto mechanics	1.2%
Total	28.3%	Total	21.5%

Source: U.S. Bureau of the Census, *Current Population Survey*, March 2000.

As Figure 2.13 shows, white women and Asian American women are the most likely to telecommute, and with the exception of Native Americans, women are more likely to telecommute than men. Still, very few women (less than 4 percent overall) telecommute.

As illustrated in Figure 2.14, telecommuting increases with level of education. Whereas only a few women with less than a high school education work at home, more than four times as many women with a bachelor's degree or four years of college or more do so. At all but the highest education level, women have higher rates of telecommuting than do men.

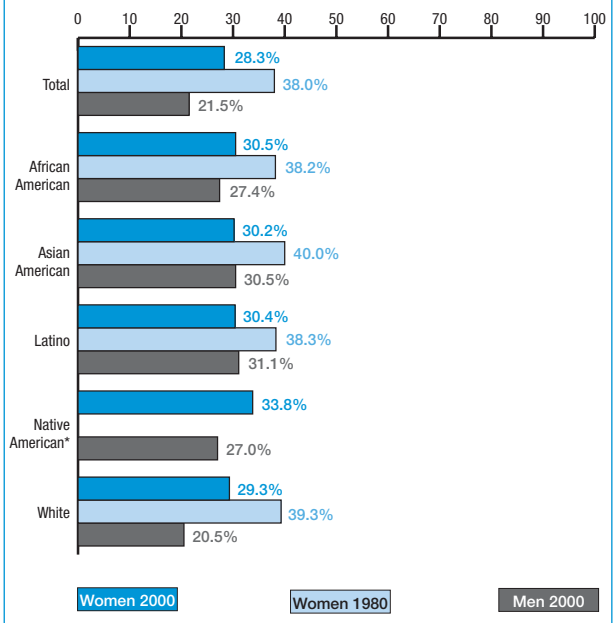
Occupational Segregation

Women's participation in the paid labor force and their access to friendly work-family policies are closely related to the kinds of jobs they tend to have. Resulting from a web of different factors, women's segregation in particular occupations affects their employment prospects and experiences (Cotter, DeFiore, Hermsen, Kowalewski, & Vanneman, 1995 & 1998; Jacobs, 1989; Oppenheimer, 1970; Reskin & Roos, 1990). Occupational segregation refers to the concentration of a group in particular occupations.

Two key elements of occupational segregation help illustrate women's position in the current economy: how concentrated or dispersed women are across occupations and what kinds of occupations they tend to have. The more concentrated workers are in particular occupations, the slower the workers may be as a group to respond to changes in the economy. For example, when male-dominated manufacturing occupations declined in the 1970s and 1980s and female-dominated service occupations grew, men's overall employment rates dropped and women's rose. The gender segregation in the labor market and the concentration of men in manufacturing occupations made it easier for more women to enter the paid labor force than for many men to shift into new occupations.

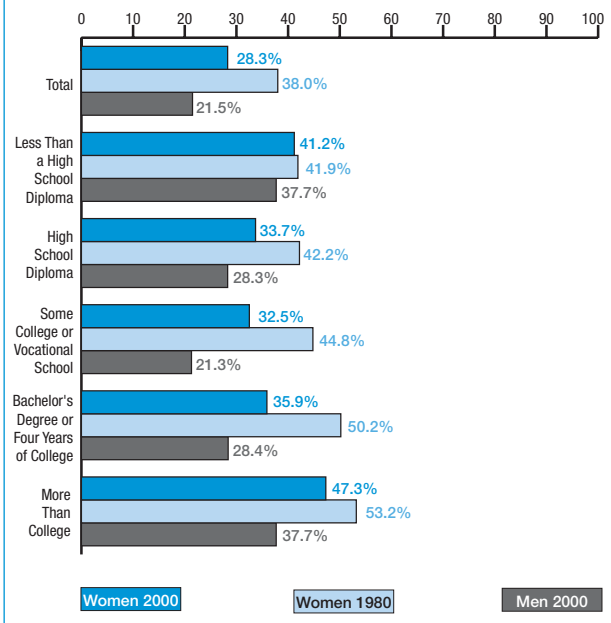
Despite growing career opportunities, the tables that follow show that women's occupational segregation continues. Educational and career opportunities for women have increased greatly since the early 1970s, yet women continue to be highly concentrated in specific occupations and remain more concentrated than men are (28.3 percent of women today are concentrated in the 10 most common occupations for women; only 21.5 percent of men

Figure 2.16 Concentration in the 10 Most Common Occupations, by Race-Ethnicity



* 1980 data not available.

Figure 2.17 Concentration in the 10 Most Common Occupations, by Level of Education



are concentrated in the 10 most common occupations for men). Consequently, women are likely to be slower to respond to changes in the economy.

With the exception of service occupations, women and men tend to be in different types of occupations. Women tend to be in administrative support, service, and, to a lesser degree, sales and managerial and professional specialty occupations, but differences in these distributions occur by race-ethnicity and level of education. Common occupations for women today are similar to common occupations 20 years ago, especially among white and African American women and within education groups.

The U.S. Bureau of the Census identifies more than 500 civilian occupations. Figure 2.15 includes the 10 most common occupations for employed women and men in 2000.

Degree of Concentration

Nearly 30 percent of all women in the paid labor force are concentrated in just 10 occupations. This high concentration reflects both the concentration of women in the labor market and the relative lack of detail with regard to the classification of certain predominantly female occupations.

Occupational segregation by both gender and race-ethnicity contributes to greater concentrations within each racial-ethnic group, demonstrating the racial-ethnic segregation of the labor market as well. Figure 2.16 shows the occupational concentration by race-ethnicity.

As Figure 2.16 indicates, within all racial-ethnic groups 30 percent of women are in the 10 most common occupations for that group. Native American women are slightly more concentrated; white women are slightly less concentrated.

Occupational concentration for women has declined in the past 20 years. In 1980, 38 percent of women worked in 10 occupations compared to 28.3 percent in 2000. This change is evident in each racial-ethnic group as well, with the top

10 occupations containing about 10 percentage points fewer women in 2000 than in 1980.

Figure 2.17 shows that occupational segregation for women is highest for those with the most and least education. Within every education group, concentration is higher than it is for women overall: Slightly more than 40 percent of women in the lowest education group (less than a high school diploma) and almost half of women in the highest education group (more than college) work in just 10 occupations.

Across all levels of education, women today work in a wider array of occupations than did women in 1980. This decline in concentration is evident in every education group except those with less than a high school diploma. About 41 percent of women in this lowest education group were concentrated in the 10 most common occupations in both 1980 and 2000. The change is greatest for women with some college or vocational school or with a bachelor's degree or four years of college.

Types of Occupations

Of the 10 most common occupations for women (see Figure 2.15), three are managerial and professional specialty (bookkeepers, registered nurses, and elementary school teachers), which tend to have the highest income and benefits and the greatest amounts of autonomy. One is in sales (sales supervisors and proprietors), and three are in administrative support (secretaries, bookkeeping clerks, and receptionists). The remaining three are service occupations (nursing aides, waiters/waitresses, and cooks), which have some of the lowest economic returns.

Compared to women overall, Asian American (15.2 percent), Native American (12.3 percent), and white women (11.3 percent) are more concentrated in managerial and professional specialty occupations. Latinas (14.6 percent) and African American women (12.9 percent) are more concentrated in service occupations.

A close association exists between education and occupational prestige as service occupations dominate (25 percent) the jobs for women with less than a high school education. As education rises, service occupations become less common and are replaced first by administrative support occupations and eventually by managerial and professional specialty occupations. Seven of the 10 most common occupations for college graduates and all 10 for women with more than a college education are managerial or professional specialty.

From 1980 to 2000, the distribution for white and African American women remained the most similar, with three occupations changing for white women and four for African American women. In contrast, seven occupations changed for Latinas, who moved away from labor occupations (e.g., packers and wrappers, farm laborers, assemblers) and into service occupations (e.g., nursing aides, maids, household cleaners, janitors). Native American and Asian American women are more likely to work in managerial and professional specialty occupations today than are other racial-ethnic groups, although the largest percentage of Native American women work in administrative support occupations.

Within education groups, women's occupations have not changed significantly since 1980. In each education group, seven of the 10 most common occupations in 2000 matched the 10 most common in 1980. In 1980, five of the 10 most common occupations for women with more than college were education-related occupations (teachers, administrators, and counselors), and 39 percent of women were concentrated in these occupations. Today, six of the 10 most common occupations for women with more than college are education-related occupations, and 32.1 percent of women are concentrated in these occupations.

Finally, although women's labor force participation has become more similar to men's, women continue to be more concentrated in certain occupations than men are. Women's entry into a widening array of occupations during the past two decades has resulted in less segregation in traditionally female occupations. Most women and men,

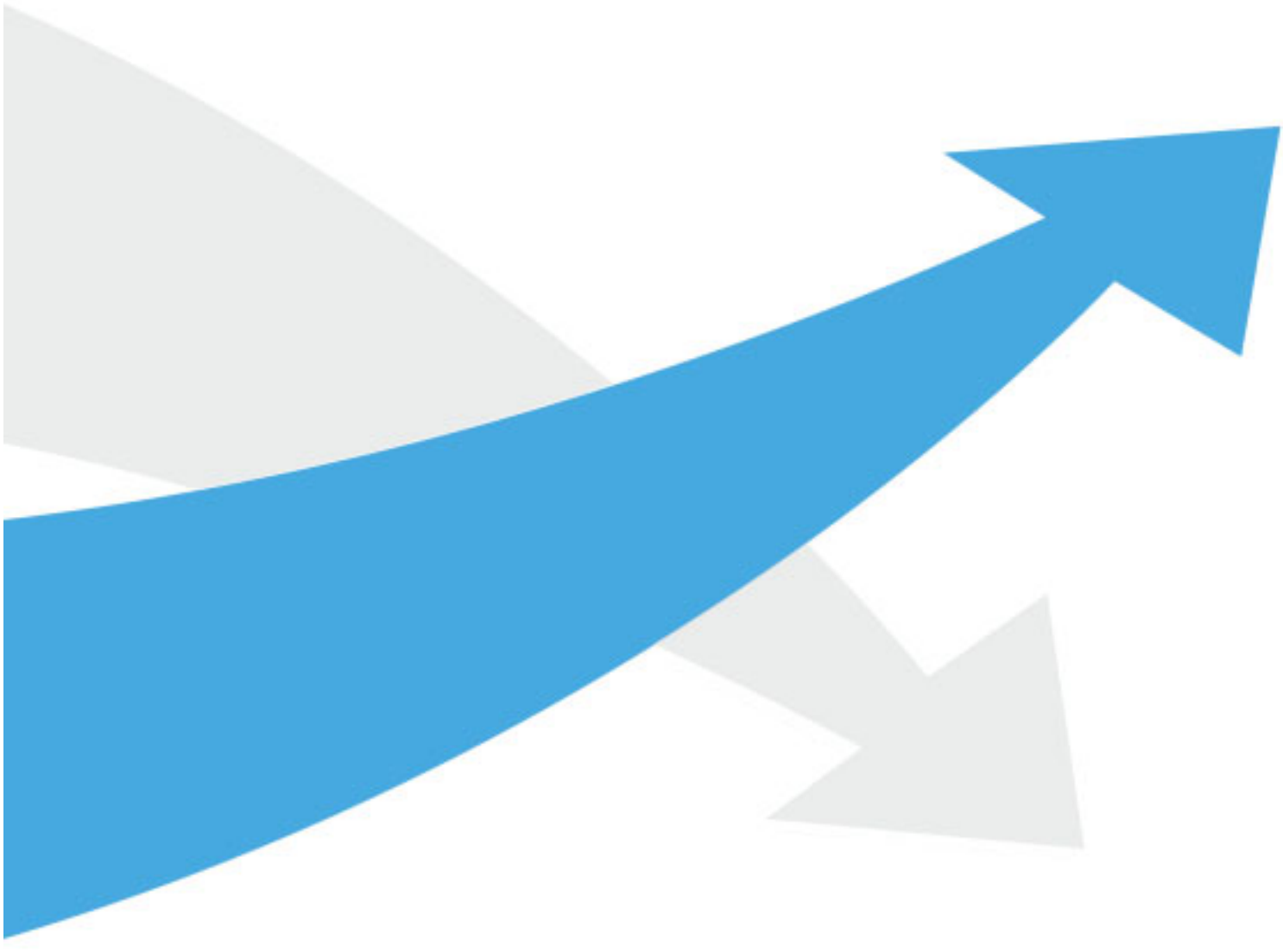
however, continue to work in separate occupations. For example, today the highest proportion of women with a college education are primary and secondary teachers (13.9 percent) and registered nurses (6.9 percent); neither of these appears in the 10 most common occupations for college-educated men. Women and men share only two of the 10 most common occupations: sales supervisors and proprietors and cooks.

Summary

In general, women today appear to be faring better than women did 20 years ago. Women today are not faring as well as men are on many indicators, and some groups of women are faring better than others. Women are becoming better educated, and they tend to live more on their own, although both of these trends vary substantially among groups of women.

Given these findings, it is not surprising that the rates of women's participation in the paid labor force and work hours are also on the rise, though both remain lower than men's. Most of the trends in labor force participation and work-family policies vary substantially by race-ethnicity and education. Finally, women continue to face a labor market that is highly gender-segregated, although less so than it was 20 years ago. Women are more concentrated within occupations than men are, and women are more concentrated within racial-ethnic and education groups than women are overall.

Chapter 3
Women's Work Prospects for the Future



Service occupations and rapidly growing technology and information occupations increasingly characterize the U.S. labor market. Are these changes beneficial to women? How well are women positioned in the current labor market to take advantage of the changes?

This chapter builds on the findings regarding women's current labor-market experiences to suggest where women's labor-market positions may be heading. It does so by examining occupational forecasts published by the U.S. Department of Labor. Specifically, it examines women's presence in the fastest-growing occupations and the occupations with the projected largest growth in terms of numbers of jobs and compares the fields of study of women who recently attended college with the education required by the high-growth occupations. These analyses suggest how women are positioned for the work force of the 21st century.

Except where noted, all tabulations in this chapter use data from the March 2000 *Current Population Survey* (U.S. Bureau of the Census, 2000).

Occupational Outlook

Occupational change is an effective way to measure economic change and how such change affects individual workers. Projections of occupational change indicate where the economy is moving and where new jobs are likely to be. Two types of occupational projections are analyzed here: occupations with the projected fastest growth and occupations with the projected largest growth (Braddock, 1999).

The *fastest-growing occupations* are those projected to have the highest percentage of growth from 1998 to 2008, as shown in Figure 3.1. Whereas the average growth rate for all occupations is expected to be 14.4 percent during this period, the fastest-growing occupations are expected to grow between 41 and 108 percent. These occupations, which are expected to account for less than 18 percent of the overall growth in employment, are often precursors to longer-term changes in the economy. The occupations may have an impact on fewer people in the short term, however, simply because the occupations are generated from relatively small occupational groups.

The *occupations with the projected largest growth* are those expected to have the largest number of new jobs from 1998 to 2008, as shown in Figure 3.8. These occupations are expected to generate between 247,000 and 577,000 new jobs, compared to an average anticipated growth of 40,000 jobs for all occupations during this period. The occupations with the projected largest growth, which are expected to account for nearly half of the projected overall growth in employment, provide more jobs (but often smaller percentages because the projected-largest-growth occupational groups are already huge) than the fastest-growing occupations. Growth in the projected-largest-growth occupations is noticeable more quickly because they involve so many workers. Note that some occupations may be the fastest growing and have the projected largest growth.

The 20 Fastest-Growing Occupations

As reported in Chapter 2, more than one-fourth of women in the paid labor force are concentrated in 10 occupations (see Figure 2.15). Strikingly, not one of the 10 most common occupations for women is included in the 20 fastest-growing occupations listed in Figure 3.1. Only one of the 10 most common occupations for men is included in the 20 fastest-growing.

Figure 3.1 Occupations With the Projected Fastest Growth From 1998 to 2008

Occupation	Projected Growth Percentage	Education and Training Category
Computer engineers	108	Bachelor's degree
Computer support specialists	102	Associate degree
Systems analysts	94	Bachelor's degree
Database administrators	77	Bachelor's degree
Desktop publishing specialists	73	Long-term on-the-job training
Paralegals and legal assistants	62	Associate degree
Medical assistants	58	Moderate-term on-the-job training
Personal care and home health aides	58	Short-term on-the-job training
Social and human service assistants	53	Moderate-term on-the-job training
Physician assistants	48	Bachelor's degree
Data processing equipment repairers	47	Postsecondary vocational training
Residential counselors	46	Bachelor's degree
Electronic semiconductor processors	45	Moderate-term on-the-job training
Medical records and health information technicians	44	Associate degree
Physical therapy assistants and aides	44	Associate degree
Engineering, natural science, and computer and information systems managers	43	Work experience plus bachelor's or higher degree
Respiratory therapists	43	Associate degree
Dental assistants	42	Moderate-term on-the-job training
Surgical technologists	42	Postsecondary vocational training
Securities, commodities, and financial services sales agent	41	Bachelor's degree
		Summary of Educational Requirements for the Projected-Fastest-Growth Occupations
	1 (5%)	Work experience plus bachelor's or higher degree
	6 (30%)	Bachelor's degree
	5 (25%)	Associate degree
	2 (10%)	Postsecondary vocational training
	1 (5%)	Long-term on-the-job training
	4 (20%)	Moderate-term on-the-job training
	1 (5%)	Short-term on-the-job training

Source: Braddock, 1999

Figure 3.2 Women's Share of the 20 Projected-Fastest-Growing and All Occupations, by Race-Ethnicity

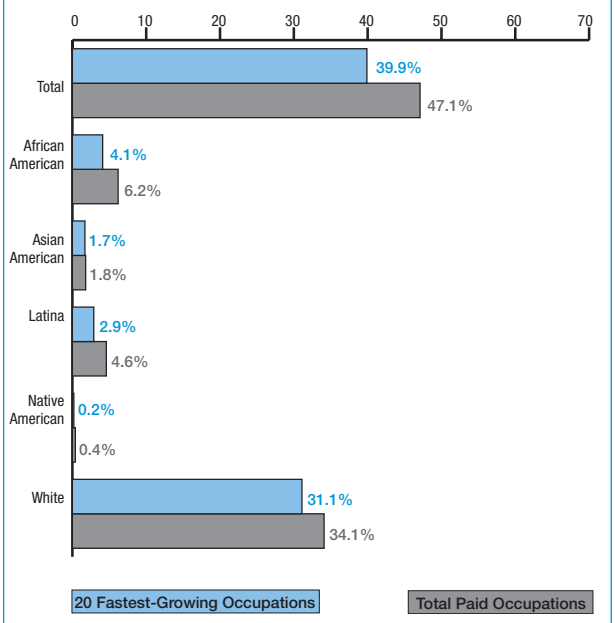
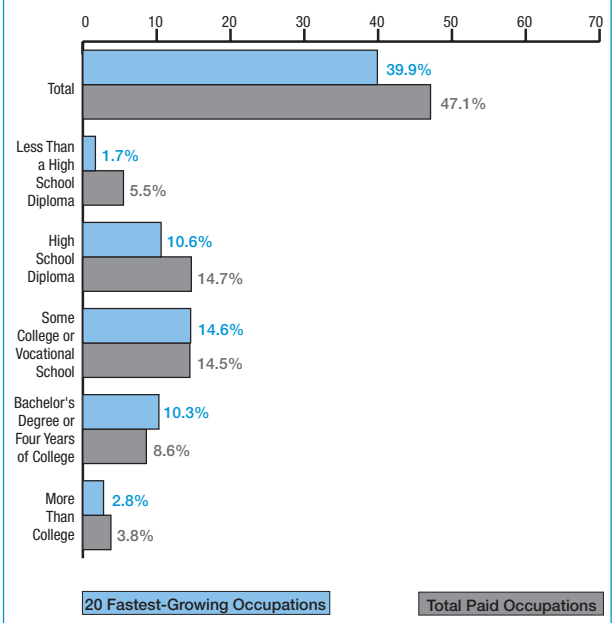


Figure 3.3 Women's Share of the 20 Projected-Fastest-Growing and All Occupations, by Level of Education



Figures 3.2 and 3.3 show women's share of the fastest-growing and all occupations. These figures are particularly significant in contrast to those for the occupations with the projected largest growth (see Figures 3.9 and 3.10).

As shown in Figure 3.2, women overall and across all racial-ethnic groups have similar but slightly lower levels of participation in the fastest-growing occupations than in all occupations. Women in the fastest-growing occupations are most likely to be white, with other racial-ethnic groups scarcely represented.

Women working in the fastest-growing occupations are the least likely to have the highest or lowest levels of education, as Figure 3.3 illustrates. Only women with some college or vocational school or with a bachelor's degree or four years of college are represented more in the fastest-growing occupations than in all occupations.

Figures 3.4 and 3.5 show the percentage of adults employed in the 20 fastest-growing occupations, by race-ethnicity and level of education.

As Figure 3.4 shows, women are slightly less likely to be employed in the fastest-growing occupations than men are. Men's higher representation in these occupations is evident only for Asian Americans and whites. Latina, Native American, and African American women are actually more likely to work in the fastest-growing occupations than men are.

Figure 3.5 illustrates that among those with a bachelor's degree or four years of college or more, men are far more likely than women to work in the fastest-growing occupations. In contrast,

Figure 3.4 Adults Employed in the 20 Projected-Fastest-Growing Occupations, by Race-Ethnicity

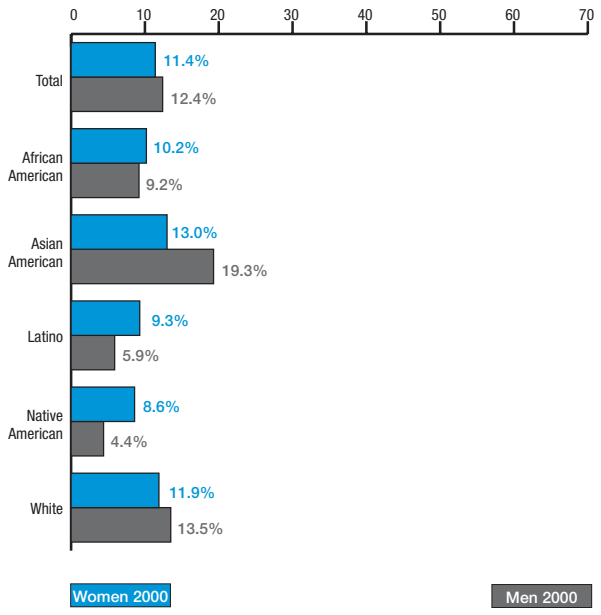
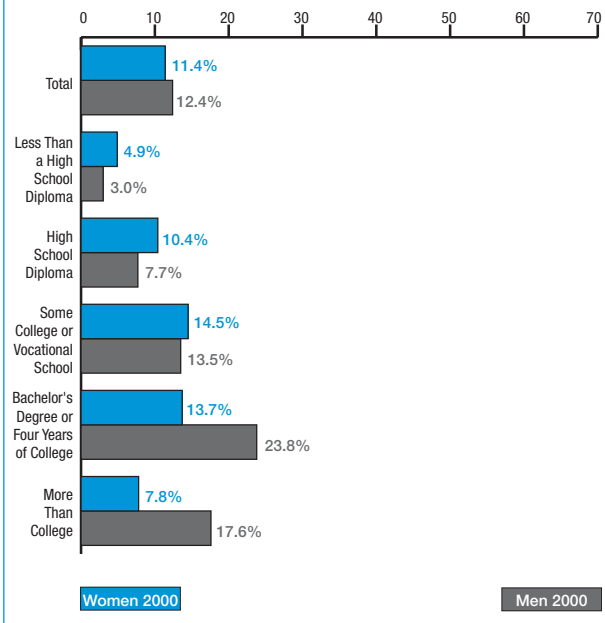


Figure 3.5 Adults Employed in the 20 Projected-Fastest-Growing Occupations, by Level of Education



among those with less than a college education, women are more likely to work in the fastest-growing occupations. These gender differences suggest two possibilities. First, compared to men, women in the fastest-growing occupations more frequently occupy lower-status *occupations*. Second, women and men may be in the same occupations but have *jobs* of different statuses. Even at this level of detail, occupations mask specificities and differences in jobs within each occupation (e.g., by rank, specific tasks, industrial setting). Women and men entering the same occupations may still have important job differences.

The 13 Fastest-Growing Occupations With Higher-Than-Average Wages

Thirteen of the 20 fastest-growing occupations listed in Figure 3.1 have above-average earnings: computer engineers; computer support specialists; systems analysts; database administrators; desktop publishing specialists; paralegals and legal assistants; physician assistants; data processing equipment repairers; electronic semiconductor processors; engineering, natural science, and computer and information systems managers; respiratory therapists; surgical technologists; and securities, commodities, and financial services sales agents. Figures 3.6 and 3.7 show the percentage of adults employed in the 13 fastest-growing occupations with higher-than-average wages, by race-ethnicity and level of education.

Figure 3.6 indicates that women are less likely than men to work in one of the better-paying, fast-growing occupations. Asian American and white men are by far the most likely racial-ethnic groups

Figure 3.6 Adults Employed in the 13 Projected-Fastest-Growing Occupations With Higher-Than-Average Wages, by Race-Ethnicity

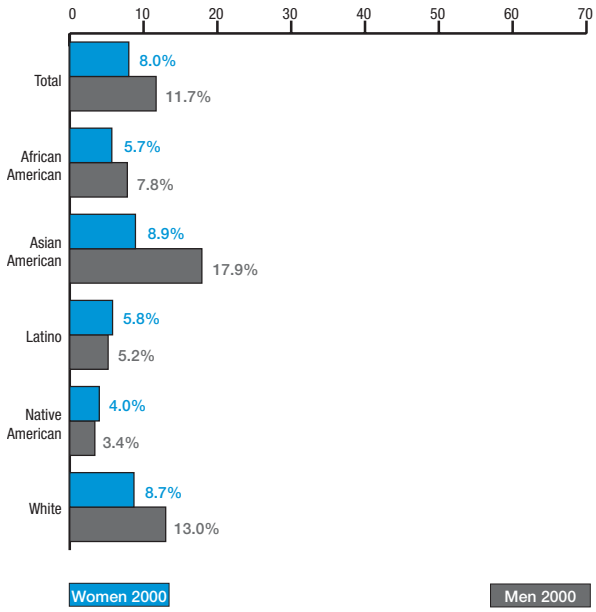
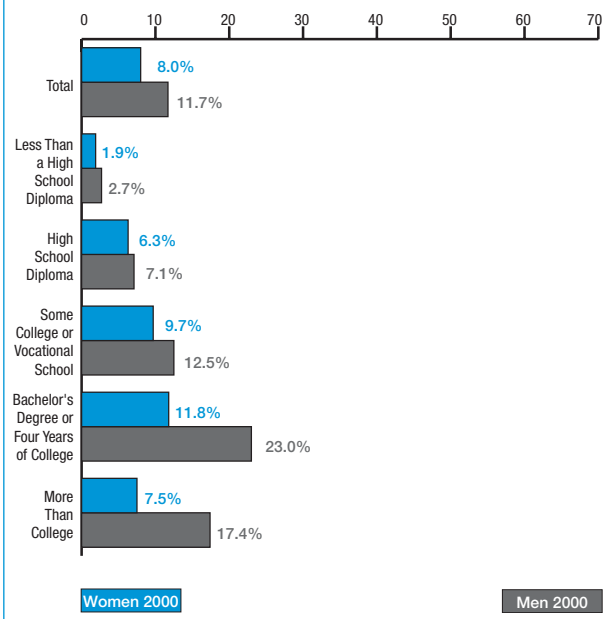


Figure 3.7 Adults Employed in the 13 Projected-Fastest-Growing Occupations With Higher-Than-Average Wages, by Level of Education



to work in these occupations. Within racial-ethnic groups, only Latina and Native American women are employed in the higher-paying occupations more than are their male counterparts, although the overall percentages of participation for these racial-ethnic groups is considerably lower than for some other groups.

As shown in Figure 3.7, educational differences among women are greater in the higher-paying occupations than in the 20 fastest-growing occupations. Women with a bachelor's degree or four years of college are the most likely to work in the higher-paying occupations. They are six times more likely to work in these occupations than are women with less than high school (the least likely).

Men are more likely than women to work in the higher-paying occupations at all levels of education. Men with a bachelor's degree or four years of college or with more than college are the most likely to work in the higher-paying occupations. Nearly one-fourth of men with a bachelor's degree or four years of college are employed in these occupations today compared to 11.8 percent of women with a bachelor's degree or four years of college and 8 percent of women overall.

The 20 Occupations With the Projected Largest Growth

The 20 occupations projected to have the largest number of new jobs from 1998 to 2008 are listed in Figure 3.8. In contrast to the 20 fastest-growing occupations, five of the 20 occupations with the projected largest growth are included in the top 10 occupations for women and three in the top 10 occupations for men (see Figure 2.15).

Figure 3.8 Occupations With the Projected Largest Growth From 1998 to 2008

Occupation	Projected Increase (Thousands of Jobs)	Education and Training Category
Systems analysts	577	Bachelor's degree
Retail salespersons	563	Short-term on-the-job training
Cashiers	556	Short-term on-the-job training
General managers and top executives	551	Work experience plus bachelor's or higher degree
Truck drivers	493	Short-term on-the-job training
General office clerks	463	Short-term on-the-job training
Registered nurses	451	Associate degree
Computer support specialists	439	Associate degree
Personal care and home health aides	433	Short-term on-the-job training
Teacher assistants	375	Short-term on-the-job training
Janitors and cleaners, including maids and housekeeping cleaners	365	Short-term on-the-job training
Nursing aides, orderlies, and attendants	325	Short-term on-the-job training
Computer engineers	323	Bachelor's degree
Secondary school teachers	322	Bachelor's degree
Office and administrative support supervisors and managers	313	Work experience in a related occupation
Receptionists and information clerks	305	Short-term on-the-job training
Waiters/waitresses	303	Short-term on-the-job training
Guards	294	Short-term on-the-job training
Marketing and salesperson supervisors	263	Work experience in a related occupation
Food counter, fountain, and related workers	247	Short-term on-the-job training
		Summary of Educational Requirements for the Projected-Largest-Growth Occupations
	1 (5%)	Work experience plus bachelor's or higher degree
	3 (15%)	Bachelor's degree
	2 (10%)	Associate degree
	2 (10%)	Work experience in a related occupation
	12 (60%)	Short-term on-the-job training

Source: Braddock, 1999.

Figure 3.9 Women's Share of the 20 Projected-Largest-Growth and All Occupations, by Race-Ethnicity

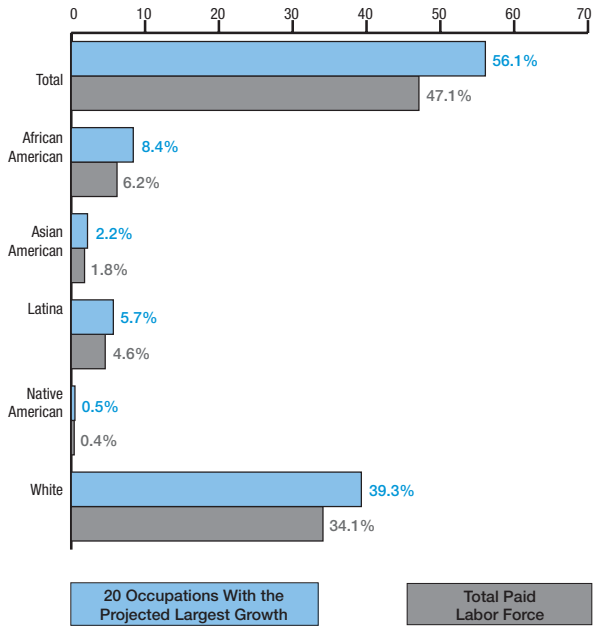
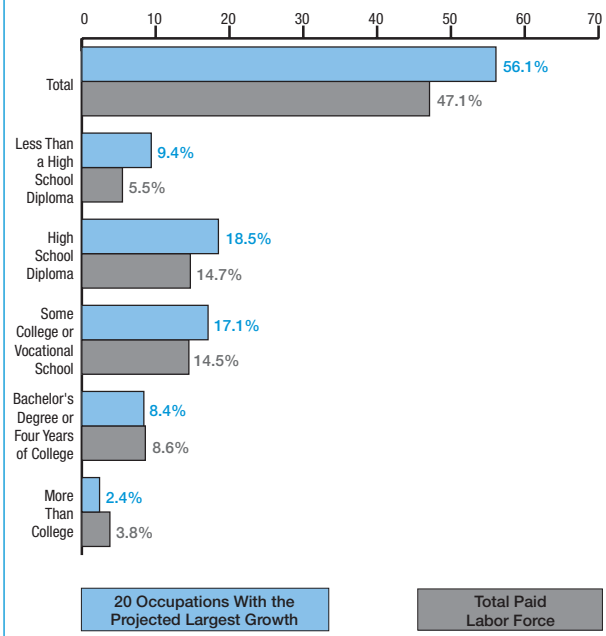


Figure 3.10 Women's Share of the 20 Projected-Largest-Growth and All Occupations, by Level of Education



Figures 3.9 and 3.10 show the percentage of women employed in the 20 occupations with the projected largest growth and in all occupations, by race-ethnicity and level of education.

In contrast to the 20 fastest-growing occupations (39.9 percent) and occupations overall (47.1 percent), the projected-largest-growth occupations shown in Figure 3.9 include a higher percentage of women (56.1 percent). The greater presence of women in these occupations holds across all racial-ethnic groups as well. The projected-largest-growth occupations have more white, African American, and Latina women and about the same shares of Native American and Asian American women as do occupations in general.

As indicated in Figure 3.10, the projected-largest-growth occupations are more likely to be filled by women with less than a college education than are occupations in general.

Figures 3.11 and 3.12 show the percentage of adults employed in the 20 occupations with the projected largest growth, by race-ethnicity and level of education.

More than one-fourth of women work in the 20 occupations with the projected largest growth, as shown in Figure 3.11, more than twice as many as work in the 20 fastest-growing occupations (see Figure 3.4). Rates differ somewhat by race-ethnicity, although not so widely as in the 20 fastest-growing occupations. Native American and African American women are the most likely to work in the projected-largest-growth occupations, while white women are the least likely, almost a reverse of the order in the 20 fastest-growing occupations. Overall and across all racial-ethnic groups, women

Figure 3.11 Adults Employed in the 20 Projected-Largest-Growth Occupations, by Race-Ethnicity

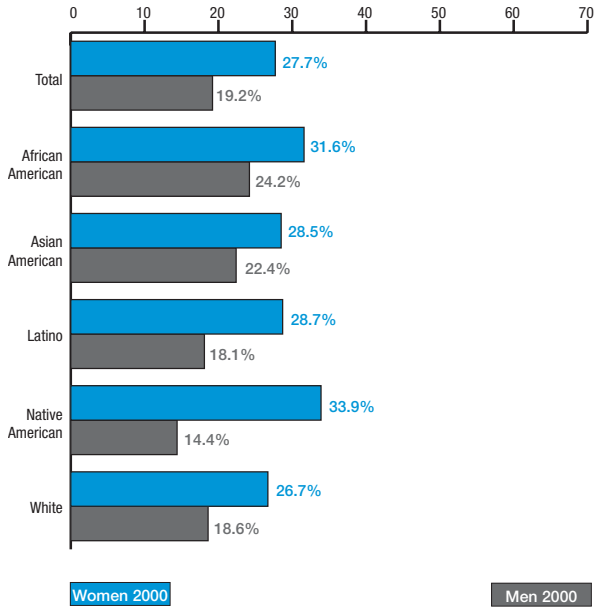
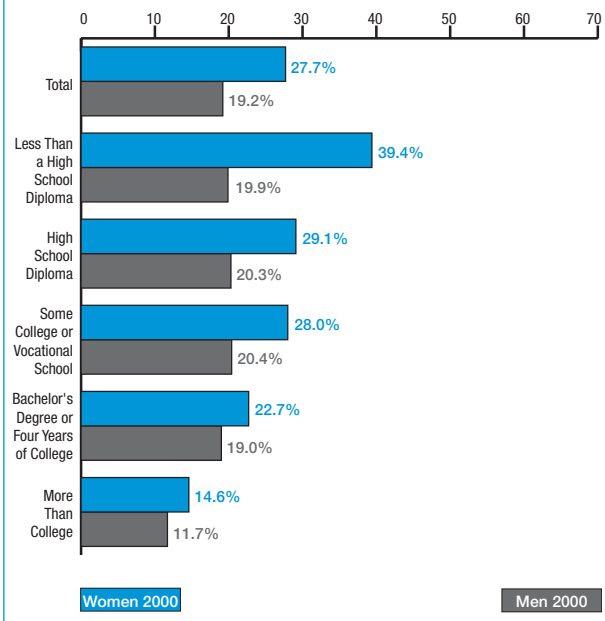


Figure 3.12 Adults Employed in the 20 Projected-Largest-Growth Occupations, by Level of Education



are more likely than men to work in occupations with the projected largest growth.

As Figure 3.12 illustrates, women with less education are more likely to work in the projected-largest-growth occupations. In notable contrast to the fastest-growing occupations, which employ 4.9 percent of women with less than a high school education and 7.8 percent of women with more than college, the projected-largest-growth occupations employ 39.4 percent of women with less than a high school education but only 14.6 percent of women with more than college.

Women are more likely than men to work in the projected-largest-growth occupations at each education level. The gender difference is greater for those with less education and smaller for those with more education. Among those with less than a high school diploma, twice as many women work in these occupations than men do; among those with more than a college education, only one-fourth more women work in these occupations than men do.

The Nine Projected-Largest-Growth Occupations With Higher-Than-Average Wages

An examination of the projected-largest-growth occupations that offer higher-than-average wages reveals a different story. Only nine of the 20 projected-largest-growth occupations have wages higher than the median wage for all occupations: systems analysts, general managers and top executives, truck drivers, registered nurses, computer support specialists, computer engineers, secondary school teachers, office and administrative support supervisors and managers, and marketing and salesperson supervisors. Of these

Figure 3.13 Adults Employed in the Nine Projected-Largest-Growth Occupations With Higher-Than-Average Wages, by Race-Ethnicity

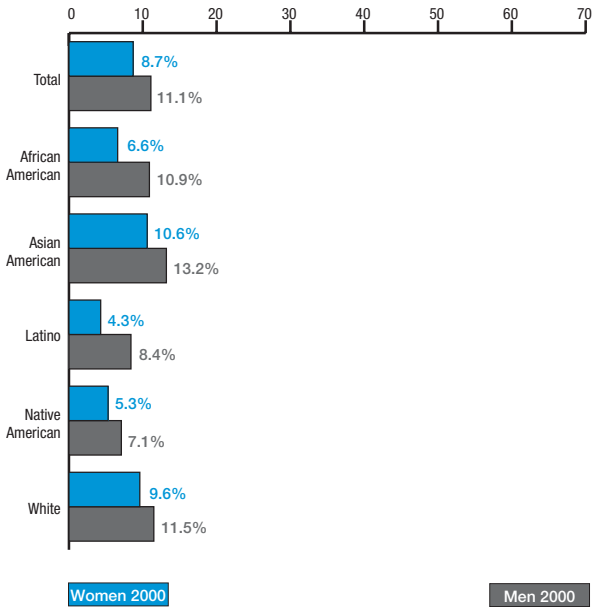
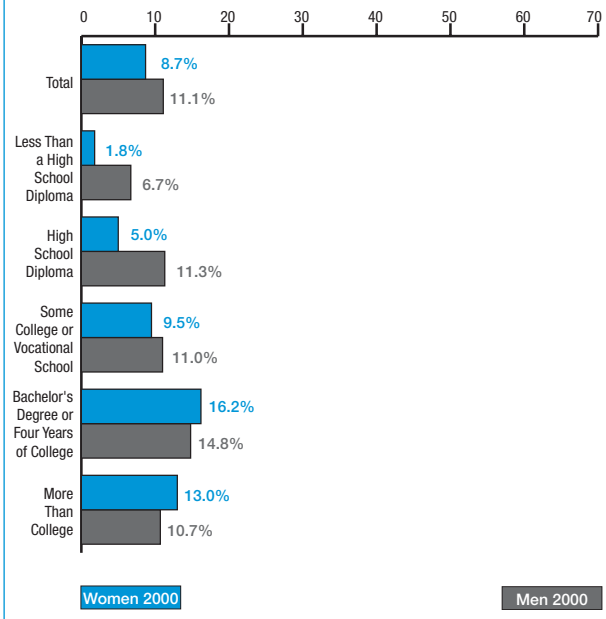


Figure 3.14 Adults Employed in the Nine Projected-Largest-Growth Occupations With Higher-Than-Average Wages, by Level of Education



occupations, just two—systems analysts and computer support specialists—are also found in the 13 fastest-growing occupations with higher-than-average wages.

Figures 3.13 and 3.14 show the percentage of adults employed in the nine projected-largest-growth occupations with higher-than-average wages, by race-ethnicity and level of education.

Figure 3.13 shows that racial-ethnic differences for women are larger in occupations with higher-than-average wages than in the 20 projected-largest-growth occupations. In contrast to the 20 projected-largest-growth occupations, which employ 27.7 percent of women (see Figure 3.11), the nine occupations with higher-than-average wages employ only 8.7 percent of women. Asian American and white women are the most likely to work in these better-paying occupations, and they are about twice as likely to work in these occupations than are Native American women and Latinas.

Overall and within each racial-ethnic group, women are less likely to work in these high-paying occupations than men are. The gender disparity is largest for Latinos and African Americans. The percentages of women and men likely to work in the 13 fastest-growing occupations with higher-than-average wages (see Figure 3.6) and the nine projected-largest-growth occupations with higher-than-average wages are remarkably similar (8 and 8.7 percent of women and 11.7 and 11.1 percent of men).

As shown in Figure 3.14, women with a bachelor's degree or four years of college or more are more likely to work in these better-paying occupations than are women with less education. In

contrast to the 20 occupations with the projected largest growth, better-educated women are more likely to work in occupations that have above-average wages.

Gender differences depend on education level. In the lower education groups, fewer women work in these occupations than do men. Women with at least a bachelor's degree or four years of college are better represented in these occupations than are men with similar education levels.

Field of Study

Most high-growth occupations and nearly all that pay above-average wages require some schooling beyond high school. As Figures 3.1 and 3.8 illustrate, 60 percent of the 20 fastest-growing occupations require some schooling beyond high school; 30 percent of the 20 occupations with the projected largest growth require it.

The data collected for this study show that the vast majority of women today (82.3 percent) have more than a high school education. Latinas are an important exception, and their average education of less than high school puts them at a serious disadvantage for better-paying new jobs. In addition to the amount of schooling, however, the substantive area of education also contributes to the ability of workers to capitalize on new jobs. People who have studied in fields related to the growing occupations, particularly those that pay more, will be better positioned as the number of jobs increases.

The fields of study that represent the fastest-growing and projected-largest-growth occupations today include computer and information sciences, education, engineering, health services, and law. Although fields of study were organized differently in 1980, they also included data processing technologies, paramedical technologies, mechanical and engineering technologies, and natural science technologies. These general fields of study provide an important indicator of women's preparation for employment in the current and future economy, compared to men's preparation and to that of women in 1980. (See Appendix A for a list of all fields of study.)

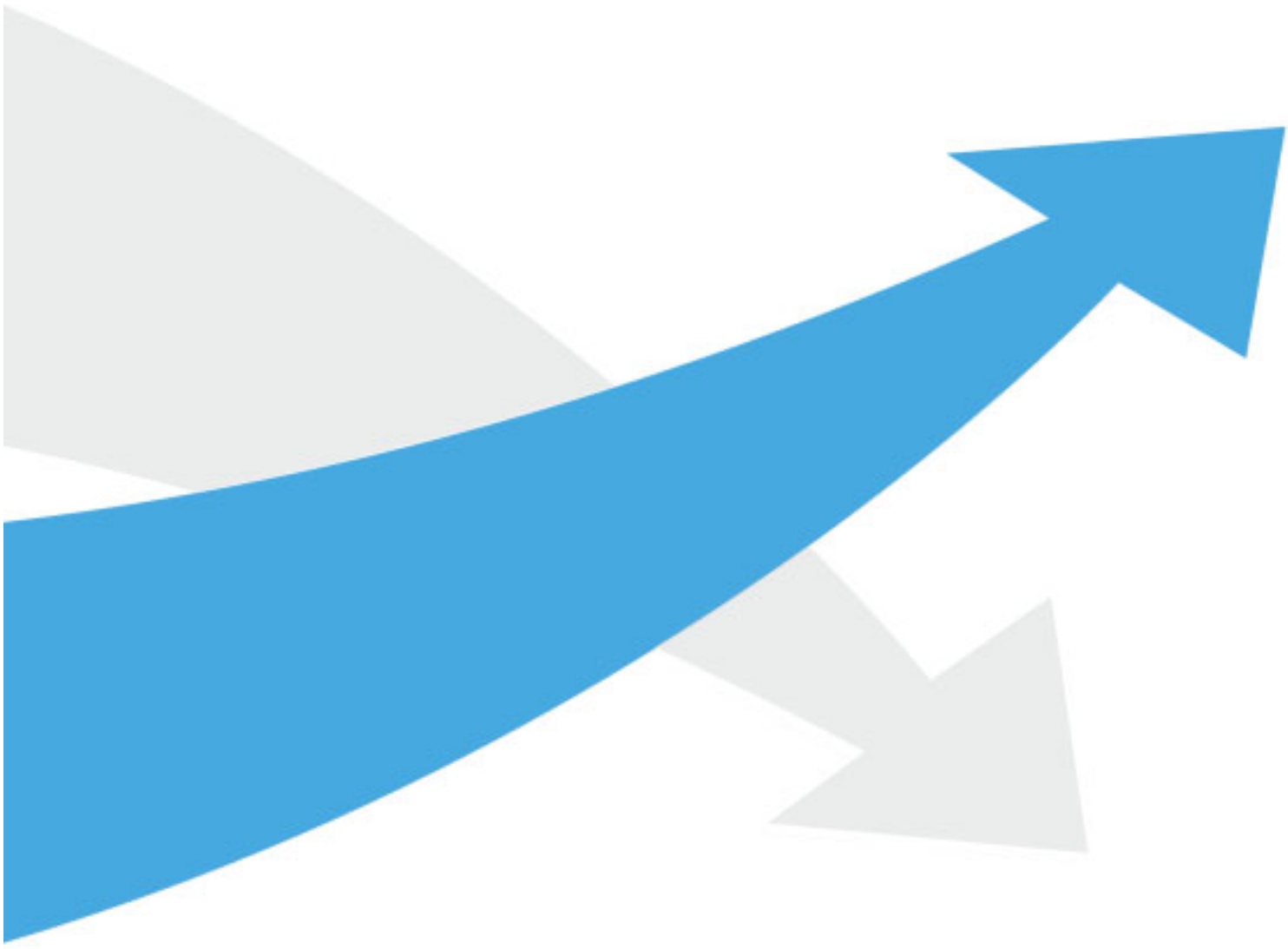
More than one-fourth (26.7 percent) of women in 1998 majored in a field closely linked with high-growth occupations. In 1998, 50 percent more men (41.9 percent) majored in a high-growth field than did women. Women were less likely to major in high-growth fields in 1998 than in 1980 (37.8 percent) (U.S. Bureau of Labor Statistics, 1980, 1998).

Summary

When the results of women's employment in the fastest-growing and projected-largest-growth occupations are combined with their major fields of study, some trends emerge. With regard simply to getting a job, the future looks positive for many women and even better for women than it does for men. African American, Latina, and Native American women, as well as women with less education, appear particularly well-positioned to fill many of the new jobs projected for the near future.

This enthusiasm needs to be tempered, however, because less-advantaged groups are underrepresented in the higher-paying occupations. The quality of many of the jobs women in general are likely to fill, especially women who already hold lower labor-market positions, is questionable. In short, the resources women bring to the market combined with the continued growth of service occupations bodes well for women in terms of finding a job. At the same time, women are less represented in and less prepared for the growth of information-related occupations than for lower-status service occupations. Men appear better positioned to access the emerging information segment of the labor market, which comprises much of the better-paying part of the new economy.

Chapter 4
Conclusions and Recommendations



This report describes the current U.S. economy and work force and analyzes national-level data on women in the labor market. It uses both individual and labor-market indicators to understand how women are faring in the new economy. It examines women's position in the labor market, overall and by racial-ethnic and education groups, and compares these positions with the positions of men today and of women from a generation ago.

This chapter revisits the findings and draws conclusions about women's positions in the economy today and their prospects for the near future. Alongside some exciting and hopeful news about women at work, troublesome findings surface. In response, this chapter offers recommendations for policy, research, and community action to improve the conditions of women's work today as well as women's prospects for future economic security.

How Are Women Faring in the Economy Today?

The findings regarding women's status in the economy today indicate that women overall are faring relatively well in many respects. They have more education and work opportunities than ever before, and they are beginning to see positive work-family policies in the workplace. At the same time, women remain at a disadvantage in the work force when compared to men. Moreover, all women are not experiencing the same levels of opportunity and advancement in work—opportunity and advancement are stronger for some groups, such as white women and women with more education, than for others.

For women, the racial-ethnic inequalities that exist in the broader society are evident in the labor market as well. White women tend to enjoy a somewhat better labor-market position than do women in other racial-ethnic groups, at least as reflected by their greater participation in the market, their higher prevalence of work-based family policies, and their wider range of occupations.

For other racial-ethnic groups, positions and prospects for work are less solid. African American women have strong participation in the labor market, perhaps because they are also the most likely to be single, and three of their top 10 occupations are professional or managerial. Few African American women, however, report the presence or use of work-based family policies. Asian American and Native American women's positions are mixed, falling between the other groups of women on nearly all indicators. Latinas, who occupy the weakest position, have the lowest levels of education and work-based family policies and only one professional or managerial occupation in their 10 most common occupations.

The findings make clear the importance of education as a factor for labor-market prospects. Women with more education tend to have greater labor-market participation, a higher prevalence of work-based family policies, and a broader occupational range than do women with less education. Although this trend undoubtedly reflects age and employment experience to a lesser extent (because the less-educated women are usually the youngest), education is clearly critical to faring well in the new economy.

Compared to men, women continue to have poor prospects in today's economy in many ways. Women's participation in the work force continues to grow. Still, the extent that work-family policies will increase and have a positive impact on women, particularly mothers of young children, remains to be seen. While slightly more women than men telecommute, this option appears more available to men and women in high-status, higher-paying jobs. In addition, more women than men report having flextime benefits.

The results are also mixed on women's occupational choices and opportunities. Women remain more concentrated and segregated in their occupations than men do, but with increasing levels of education overall, women are also more likely to hold professional or managerial occupations.

Finally, women's prospects today appear to be brighter than their prospects were a generation ago. When compared to women in 1980, women today have higher levels of education, participate in the economy more, and occupy a wider range of occupations. Women are also more likely to be single today, suggesting that they may have more need for a strong economic position.

What Are Women's Work Prospects for the Future?

This report investigates women's prospects in the near future by analyzing their representation in the occupations that are projected to grow the most. As with today's labor-market prospects, those for the future vary by gender, race-ethnicity, and education level.

Among women, white and Asian American women appear to have the best prospects for job growth: They are the most likely to work in the 20 fastest-growing occupations and in those fastest-growing and projected-largest-growing occupations that have above-average wages. The prospects for African American women appear somewhat less positive: They should be well-positioned to get a job in occupations with the projected largest growth, although not so well-positioned for obtaining one with above-average wages. Latina and Native American women appear to have the lowest prospects for the emerging economy: They are likely to get a job in a high-growth occupation, especially in occupations with the projected largest growth, but they are the least likely to get a job in occupations with above-average wages.

Women with some college or vocational school or with a bachelor's degree or four years of college appear to have the brightest prospects for obtaining a job in the fastest-growing occupations and in occupations with above-average wages. Women with a high school diploma or less or with more than college have more mixed prospects. Those with less education have good prospects to obtain jobs in occupations with the projected largest growth but are much less likely to get jobs in any of the better-paying ones. Those with more than college are less likely to obtain jobs in the occupations with the projected largest growth but more likely to obtain jobs in all high-growth occupations with above-average wages.

Finally, compared to men, the prospects for women appear mixed for the near future. Women are better positioned to obtain a job in some high-growth occupations, but men are better positioned to obtain the highest-status and best-paying jobs. This is true both for women and men overall and within most racial-ethnic and education subgroups.

Recommendations

The American Association of University Women has been committed to education and equity for girls and women since its inception and is encouraged by much of the data presented here. AAUW also finds areas of continuing concern that require reflection and the development of a strong agenda for change. Some recommendations for educators, policy-makers, and leaders in national and community forums include the following:

Increase educational access and opportunity for women and girls in underrepresented racial-ethnic communities.

First, and most critically, the sometimes dramatic differences in educational preparation and job prospects among women must be remedied. Women's educational gains overall often eclipse lower educational gains for particular groups of women and girls—Latinas, for example. National and community-based organizations and schools must strive to ensure greater access and opportunities for the groups of women and girls currently the least likely to participate in postsecondary education.

Promote the benefits of education in computer science, engineering, mathematics, and technology to women and girls, and create opportunities and incentives for women and girls to pursue these fields.

One of the most striking findings in this report is that women overall are not pursuing fields of study that will position them for high-end jobs in the

new economy. Women in colleges and universities need more information about how their fields of study affect their long-term job and earnings prospects, especially as students assume more debt to pay for their education. While it is obviously not a goal to have all students pursuing growing fields of study simply to achieve higher earning potential, students do need a more sophisticated understanding of how education and the economy interact. Many students understand the value of a bachelor's degree but do not have all the information they need to make the best decisions once they are in college. The new economy places a premium on postsecondary education. Communities and schools have an important message to communicate to all high school students concerning the necessity of continuing and lifelong education in an economy driven by information and technology.

Enhance women's education and training in financial management and economic self-sufficiency, particularly for single working mothers.

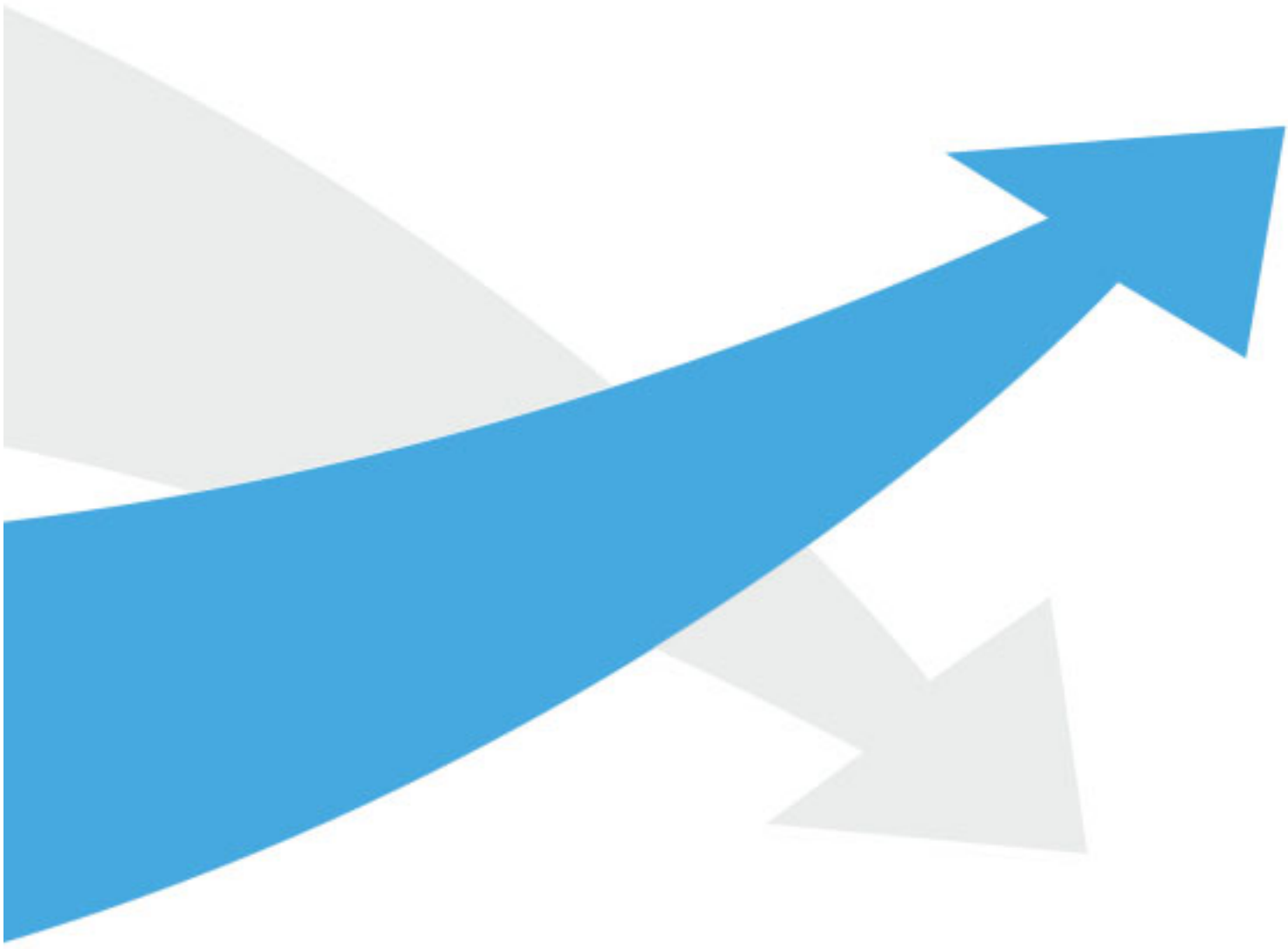
Educating women about the economy and financial management is increasingly important. Participants in focus groups and surveys report high levels of insecurity and anxiety about the changing skills and information needed to succeed in today's economy. As this report describes, more women are spending more of their lives single and thus responsible for their economic well-being. Choices made early on about education, debt, occupational training, and savings or retirement investments reverberate throughout women's lives. Enhancing the number and quality of programs and opportunities to provide women with this information would help prepare women for economic independence and security.

Promote equitable access to flexible work arrangements and additional research on work-family policies and programs.

Women today are working more hours for longer periods of their lives and struggling to juggle work with family. At the same time, today's information-based work and advancements in technology offer great potential for new ways to balance work and family responsibilities. While the culture and conditions of today's workplace are reportedly changing to provide more balance between work and family, the demand for flexible work arrangements and for work-family policies far exceeds the available supply. Most critically, these options do not appear to reach the women most in need, including women with low levels of education and single mothers of young children. More research on alternative work arrangements, child care, elder care, and work-family balance in general is needed to ensure that all women, particularly those most in need, have access to new and alternative ways of working.

This report has explored and presented the dilemmas and pitfalls faced by women in the work force and adds to the broad base of knowledge and research on gender equity and the occupational, educational, and economic status of women. AAUW hopes this report will suggest avenues for future research and promote practical national and local strategies for improving access and opportunity for women in today's changing work force and economy.

Appendix: Methodology



The data and analyses for this report are drawn from national-level data, including U.S. Census Bureau data, a national telephone survey, and focus groups. By including these various sources, this report provides a more complete analysis of women's labor force participation than if it had used only one of the research methodologies.

National Survey and Focus Group Data

Lake Snell Perry & Associates Inc. designed and conducted a national telephone survey that reached 2,050 adults. The base sample consisted of 1,200 interviews—800 with women and 400 with men. Additional samples included 125 Latinas, 125 African American women, 150 Asian women, 200 professionals born between 1964 and 1975, and 125 women and 125 men working in service industry jobs associated with the new economy. The survey was conducted from Nov. 14 to Nov. 27, 2001.

Lake Snell Perry & Associates also conducted 13 national focus groups, which included both women and men as a point of comparison. These groups were held in areas associated with both the new (service sector and information technology focused) economy and the old (manufacturing) economy, including San Jose, California; Boston, Massachusetts; Detroit, Michigan; Kansas City, Missouri; Greensboro, North Carolina; and Fairfax, Virginia. Participants represented varying ages, race-ethnicities, educational backgrounds, and occupations.

National-Level Data

Rand prepared the data sets, creating tabulations for contemporary women, contemporary men, and women from 1980. Within each of these groups, data were also tabulated by race-ethnicity and level of education for comparisons along those dimensions. Racial-ethnic groups include Anglo white, non-Hispanic African American, Latino, non-Hispanic Native American, and Asian American.

Rand tabulated data on field of study, used to assess women's future labor-market prospects, from the 1980 *National Longitudinal Survey of Young Women* (U.S. Bureau of Labor Statistics) and from the 1998 *National Longitudinal Survey of Youth* (U.S. Bureau of Labor Statistics). The data on work-based family policies came from the May 1997 *Current Population Survey* (U.S. Bureau of the Census). All remaining tabulations were derived from the March 1980 and March 2000 *Current Population Survey* (U.S. Bureau of the Census).

Limitations of the national-level data prevented separate tabulations of some racial-ethnic groups for some analyses. For the 1980 *Current Population Survey* tabulations, data limitations required Native Americans and Asian Americans to be considered together, and the 1980 *National Longitudinal Survey of Young Women* tabulations examine only African Americans, Latinas, and whites.

Educational levels are defined as less than a high school diploma, high school diploma, some college or vocational school, bachelor's degree or four years of college, and more than college. The March 1980 *Current Population Survey* specifies degree received, and the May 1997 and March 2000 *Current Population Survey* specify years of completed school. Finally, the analyses included only persons from ages 16 to 70 to maintain the labor-market focus.

Field of study, used to analyze women's future prospects, was measured in the following manner. From the list of 24 fields in the major field of study section of the following table, Rand identified fields of study representing the occupations with projected high growth. In 1998, these were computer and information sciences, education, engineering, health professions, and law; in 1980, they also included data processing technologies, health services and paramedical technologies, mechanical and engineering technologies, and natural science technologies. Note that in both years, the potential fields of study are relatively general and thus likely to overestimate the number of people concentrating in a field related to the high-growth occupations. After identifying relevant fields, Rand tabulated the number of persons majoring in these fields among respondents in their 30s who were currently or recently (within three years) enrolled in college. Although data on all college students would be preferable, the *National Longitudinal Survey* allowed only a comparison of women in 1980 with women today. Respondents in those surveys were in their 30s in 1980 and 1998.

Data Sources and Management		
Analysis	**Data Source***	**Variable**
Years of schooling	CPS: March 1980, March 2000	Highest grade completed
Marital status	CPS: March 1980, March 2000	Married, spouse present Married, spouse absent Widowed Divorced Separated Never married
Paid labor force participation	CPS: March 1980, March 2000	In labor force: Employed full time Employed part time Unemployed, looking for work Unemployed, on layoff Not in labor force: Unpaid and working less than 15 hours Unavailable Other (retired)
Number of hours	CPS: March 1980, March 2000	Number of hours worked last week at all jobs
Part-time employment	CPS: March 1980, March 2000	Number of hours worked last week at all jobs (less than 35)
Flextime	CPS: May 1997	Flexible hours that allow respondent to vary or make changes in beginning and ending work times
Telecommuting	CPS: May 1997	Formal arrangement with employer to be paid for work respondent does at home, versus just taking work home from the job
Occupational segregation	CPS: March 1980, March 2000	Occupation of job last week
Fastest-growing occupations	Braddock 1999 CPS: March 1980, March 2000	Occupation of job last week
Largest-growth occupations	Braddock 1999 CPS: March 1980, March 2000	Occupation of job last week

*** Legend**
CPS U.S. Bureau of the Census, *Current Population Survey*.
NLSY U.S. Bureau of Labor Statistics, *National Longitudinal Survey of Youth*.
NLSYW U.S. Bureau of Labor Statistics, *National Longitudinal Survey of Young Women*.

(Continued on p. 48)

Data Sources and Measurement *(continued)*		
Analysis	**Data Source***	**Variable**
Major field of study	NLSYW: 1980 NLSY: 1998	Field of study of college degree None, General Studies Agriculture and Natural Resources Architecture and Environmental Design Area Studies Biological Sciences Business and Management Communications Computer and Information Sciences Education Engineering Fine and Applied Arts Foreign Languages Health Professions Home Economics Interdisciplinary Studies Law Letters Library Science Mathematics Military Sciences Physical Sciences Psychology Public Affairs and Services Social Sciences Theology

*** Legend**
CPS U.S. Bureau of the Census, *Current Population Survey.*
NLSY U.S. Bureau of Labor Statistics, *National Longitudinal Survey of Youth.*
NLSYW U.S. Bureau of Labor Statistics, *National Longitudinal Survey of Young Women.*

AAUW Equity Library

Beyond the "Gender Wars": A Conversation About Girls, Boys, and Education

Report of the key insights presented during a symposium convened by the AAUW Educational Foundation in September 2000 to foster a discussion among scholars who study both girls' and boys' experiences in and out of school. Participants share their insights about gender identity and difference, challenge popular views of girls' and boys' behavior, and explore the meaning of equitable education for the 21st century.

AS49 ■ 60 pages/2001 ■ $9.95

Gaining a Foothold: Women's Transitions Through Work and College

Examines how and why women make changes in their lives through education. Profiles three groups—women going from high school to college, from high school to work, and from work to college—using qualitative and quantitative methods. Findings include an analysis of women's educational decisions, aspirations, and barriers.

AS37 ■ 100 pages/1999 ■ $12.95

Gender Gaps: Where Schools Still Fail Our Children

Measures schools' mixed progress toward gender equity and excellence since the 1992 publication of *How Schools Shortchange Girls: The AAUW Report*. Research compares student course enrollments, tests, grades, risks, and resiliency by race and class as well as gender. It finds some gains in girls' achievement, some areas where boys—not girls—lag, and some areas, like technology, where needs have not yet been addressed.

AS35 ■ 150 pages/1998 ■ $13.95

Executive Summary

AS36 ■ 24 pages/1998 ■ $7.95

Unless otherwise noted, reports are published by the AAUW Educational Foundation.

Girls in the Middle: Working to Succeed in School

Engaging study of middle school girls and the strategies they use to meet the challenges of adolescence. Report links girls' success to school reforms like team teaching and cooperative learning, especially where these are used to address gender issues.

AS29 ■ 128 pages/1996 ■ $14.95

Growing Smart: What's Working for Girls in School

Comprehensive academic review of more than 500 reports identifies approaches that promote girls' achievement and healthy development. Culturally conscious report urges experimentation with single-sex programs, cooperative learning, and other nontraditional approaches.

AS26 ■ 97 pages/1995 ■ $35.95

Executive Summary and Action Guide

AS25 ■ 48 pages/1995 ■ $12.95

Hostile Hallways: Bullying, Teasing, and Sexual Harassment in School (2001)

One student in five fears being hurt or bothered in school; four students in five personally experience sexual harassment. These are among the findings of this nationally representative survey of 2,064 eighth- through 11th-graders. The report investigates sexual harassment in public schools, comparing the findings with AAUW's original survey in 1993 and exploring differences in responses by gender, race/ethnicity, grade level, and area (urban or suburban/rural). Conducted by Harris Interactive.

AS50 ■ 56 pages/2001 ■ $9.95

Hostile Hallways: The AAUW Survey on Sexual Harassment in America's Schools (1993)

The first national study of sexual harassment in public schools. Includes gender and racial/ethnic data breakdowns. Conducted by Louis Harris and Associates.

AS17 ■ 28 pages/1993 ■ $11.95

How Schools Shortchange Girls: The AAUW Report

A startling examination of how girls are disadvantaged in U.S. public schools. Includes recommendations for educators and policy-makers as well as concrete strategies for change.

AS22 ■ 224 pages/Marlowe, 1995 ■ $12.95

Executive Summary

AS14 ■ 8 pages/1992 ■ $8.95

A License for Bias: Sex Discrimination, Schools, and Title IX

Examines uneven efforts to implement the 1972 civil rights law that protects some 70 million students and employees from sex discrimination in schools and universities.

AS48 ■ 84 pages/AAUW Legal Advocacy Fund, 2000 ■ $12.95

SchoolGirls: Young Women, Self-Esteem, and the Confidence Gap

Riveting book by journalist Peggy Orenstein in association with AAUW shows how girls in two racially and economically diverse California communities suffer the painful plunge in self-esteem documented in *Shortchanging Girls, Shortchanging America*.

AS27 ■ 384 pages/Doubleday, 1994 ■ $12.95

Separated by Sex: A Critical Look at Single-Sex Education for Girls

The foremost educational scholars on single-sex education in grades K-12 compare findings on whether girls learn better apart from boys. The report, including a literature review and a summary of a forum convened by the AAUW Educational Foundation, challenges the popular idea that single-sex education is better for girls.

AS34 ■ 99 pages/1998 ■ $12.95

Shortchanging Girls, Shortchanging America Executive Summary

Summary of the 1991 poll that assesses self-esteem, educational experiences, and career aspirations of girls and boys ages 9 through 15. Revised edition reviews poll's impact, offers action strategies, and highlights survey results with charts and graphs.

AS20 ■ 20 pages/AAUW, 1994 ■ $11.95

¡Sí, Se Puede! Yes, We Can: Latinas in School

Comprehensive look at the status of Latina girls in the U.S. public education system. Explores conflicts between institutional expectations and the realities of student lives and discusses the social, cultural, and community factors that affect Hispanic education.

AS46 (English) ■ 84 pages/2001 ■ $12.95

AS47 (Spanish) ■ 90 pages/2001 ■ $12.95

Tech-Savvy: Educating Girls in the New Computer Age

Explores girls' and teachers' perspectives on today's computer culture and technology use at school, home, and work. Presents recommendations for broadening access to computers for girls and others who don't fit the "male hacker/computer geek" stereotype.

AS45 ■ 84 pages/2000 ■ $12.95

The Third Shift: Women Learning Online

Through distance education, technology offers new opportunities for women to achieve educational goals. This report explores why women pursue education; how they balance work, family, and education; and what would make distance learning easier for them. Includes recommendations for improvements.

AS51 ■ 80 pages/2001 ■ $12.95

Voices of a Generation: Teenage Girls on Sex, School, and Self

Compares the comments of roughly 2,100 girls nationwide on peer pressure, sexuality, the media, and school. The girls participated in AAUW teen forums called Sister-to-Sister Summits. The report explores differences by race, ethnicity, and age, and offers the girls' action proposals to solve common problems.

AS39 ■ 95 pages/1999 ■ $14.95

Women at Work

Combines interview and survey data with recent U.S. census statistics to explore how women are faring in today's work force and what their prospects are for future job success and security.

AS55 ■ Report ■ 56 pages/2003 ■ $15.95

AS56 ■ Action Guide ■ 20 pages/forthcoming ■ $6.95

AS57 ■ Set (Report and Action Guide) ■ $19.95

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