

## **Gender Inequality at Work**

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## **Introduction**

A cigarette advertising slogan of the 1980s targeting women stated “You’ve come a long way baby.” By all accounts this is true. The transformation of men’s and women’s work roles stands out among the many technological, economic, social and cultural changes in the last half of the twentieth century. In 1950, only a small minority of women (29%) worked outside the home, but in 2000 nearly three quarters of women did. In 1950 women who were employed worked in a relative handful of nearly exclusively female occupations but by 2000 were spread across nearly the entire spectrum of occupations. Finally, the average woman in 1950 earned 59¢ for every dollar earned by men while in 2000 she earned 73¢. The scope and scale of this change is indeed monumental, and the momentum built up around it has made it seem almost inevitable. But despite this progress, inequality remains – after all, even in 2000 men were still more likely to have access to paid employment, to be employed in better jobs, and to be better paid in those jobs. Additionally, across the three main dimensions we examine – work outside the home, the kinds of jobs men and women do, and the relative pay they receive, this change slowed and even reversed in the last decade of the century.

This report examines changes in work-related gender inequality in the 1990s, placing these changes in the context of trends over the last half of the twentieth century. We address contemporary patterns with data from the 2000 Census as well as change over time with data from the 1950 to 2000 Censuses. Where we need more detailed data, we use the annual Current Population Surveys from 1963 to 2002. Our analyses also examine variations in inequality across race and ethnic groups, education levels, and age cohorts.

An analysis of change over time in work-related gender inequality affords the opportunity to investigate how *systems* of gender stratification shift and stabilize. It allows us to ask about the underlying dynamics of change. Are some features of gender inequality changing more quickly than others, and if so why? The emphasis here is therefore not only descriptive so that we can know the direction and strength of changes (or lack thereof), but also to compare the

trends in labor force participation, occupational integration, and the earnings gap to get at the dynamics of change.

We also ask whether the overall patterns of inequality we identify are felt throughout society or whether it was more concentrated in certain segments, among young middle-class whites for instance. This concern reflects important questions that have been raised by race-class-gender “intersection” theorists who have noted that people’s social histories and their daily struggles are experienced as Asian American working-class women or middle-class African American men.

To further understand what may be driving the patterns of gender inequality, we examine forces suspected of affecting these changes, including educational attainment, work experience, politics, and attitudes. While we do not offer a definitive resolution of why the patterns of inequality are as they are, we do evaluate the most plausible answers.

Three central conclusions emerge from our analysis of changes in gender inequality over time.

- *First, gender inequality in the labor market persists.* While nearly 9 out of 10 men are in the labor force, only 3 out 4 women are working. In addition, women and men continue to be highly concentrated in typically female and typically male jobs, respectively. Women continue to earn substantially less than men for the work they do such that women still earn just 73 cents for every dollar men earn.
- *Second, the declines in gender inequality in the labor market evident since at least 1950 have essentially stalled.* The 1990s were a time of stability and possibly even retrenchment with regards to gender inequality. This may mark the end of an era of profound changes in women’s labor market position. For each of the primary outcomes examined --labor force participation, occupational segregation, earnings-- the situation by the end of the 1990s closely resembled that at the beginning of the 1990s, a pattern of stability not seen in over 50 years.

- *Third, notable variation exists across demographic groups in the pattern and degree of inequality experienced.* For example, blacks and Hispanics lag behind whites in rates of labor force participation, the degree of occupational integration, and the level of earnings, and important differences in labor force participation and earnings have become more pronounced when comparing same gender high school dropouts to college graduates.

Thus, our findings suggest that while we have indeed “come a long way”, there is still a long way to go and our progress seems to be slowing.

In discussing patterns of gender and work, we follow a number of conventions developed by social scientists. For the most part, we focus on the “prime age” population – people between the ages of 25 and 54 – after most people can be expected to have finished their education and before they have begun to retire. We also begin by looking at broad patterns and trends and then disaggregate them along common demographic lines – age, race/ethnicity, education, marital and family status. Sometimes the particular measure selected matters – for instance, whether we investigate any labor force participation or restrict the analysis to full-time employment, or whether we calculate hourly wages for all workers or rely on the reported annual earnings for full-time year-round workers. In general we have selected the most common – and most commonsense – measures to report. Where the selection of a measure makes a difference to the story we tell about trends and patterns of gender inequality, we note the discrepancies.

Otherwise we try to report only a limited set of results, focusing on the broad patterns rather than subtle nuances. Finally, where feasible we have drawn on sources beyond the decennial censuses to corroborate our story.

### **Labor Force Participation**

Women’s increased participation in paid work is a central change in gender relations over the last half of a century. The question is no longer whether the average woman *will* work or

not, but rather *when* during her life course will she work. Most women now work – women at all educational levels, of each racial-ethnic group, and across successive family statuses.

We begin with labor force participation because it is often seen as *the* prime indicator (and cause) of changes in women’s status. As far back as Fredrich Engels’ or Charlotte Perkins Gilman’s writings on the subject in the late 1800s, social scientists and other observers have identified employment outside the home as the starting point for understanding women’s position in society. Social theory often focuses on women’s employment because it determines their access to resources and their ability to make independent decisions. As a more practical matter, it makes sense to study labor force participation first because entry into paid work precedes access to particular occupations and the pay gained from work, topics we address later. A woman who has not entered the labor force cannot become a doctor, lawyer or longshoreman nor will she receive any pay that can be compared to men’s pay.

### *Census 2000 Findings*

By the year 2000, only a small margin separated men’s and women’s presence in the labor force. Nearly three out of four women age 25 to 54 were in the paid labor force, either looking for work or actually working at least part-time. Men’s rates were only slightly higher: 86 percent of men age 25 to 54 claimed to be in the labor force in 2000. The gender differences are somewhat larger for full-time year-round employment. In 1999, 46 percent of women and 68 percent of men aged 25-54 were employed full-time year-round.

--- SEE TEXTBOX 1 ---

--- SEE TEXTBOX 2 ---

### *Labor Force Participation: 1950-2000*

These gender differences are small in historical perspective. Consistent with popular perception, women were much more likely to work outside the home by the end of the 20<sup>th</sup> century. As shown in Figure 1, women age 25-54 increased their labor force participation rate

steadily by between eight and fourteen percentage points each decade from 1950 to 1990. In 1950, only 29 percent of women were in the paid labor force. By 1970, that figure had increased to 49 percent and by 1990 to 74 percent. This upward trend has often been interpreted to signify women's increasing equality with men. The growth in labor force participation is also cited as an underlying cause for other changes in gender relations such as marital power, fertility patterns, and political representation.

----- Figure 1 about here -----

The Census shows no similar increase in women's labor force participation rate during the 1990s. The reported 2000 women's labor force participation rate of 73 percent is not notably different from the 1990 rate. Some of the stagnation in the 1990s is exaggerated by a slight change in wording in the Census 2000 employment question that depressed reports of labor force participation. But the 1990s are also different in the annual CPS where the question wording did not change. Like the Census, the CPS recorded large increases in the past – from 48% in 1970 to 74% in 1990. The CPS rate in 2000 was 78%, unlike the Census slightly higher than the 1990 rate, but still far below what would have been expected from the eight to fourteen percentage point increases of previous decades.

The end of increasing labor force participation for women in the 1990s comes as a surprise. It is too early to say if this lack of change is temporary, perhaps because of the strong 1990s economy allowing a re-emergence of the single paycheck family. In the last section, we address in more detail our thoughts on whether the current plateau will persist into coming decades and what might have caused this erosion of women's progress. First, we need to recognize how the patterns of women's labor force participation, and particularly how the changes in the 1990s, vary across different types of women.

## **Family Status and Women's Labor Force Participation**

The prime *employment years* of 25 to 54 also correspond to the prime *child rearing* years. The concurrent demands of work and family have long shaped the ways in which women and men engage the labor market. Nevertheless, the patterned ways in which families reconcile these demands have changed across the twentieth century. The 1990s were no exception. Tracing the changes in labor force participation separately by family status confirms our impression that the 1990s represent a break from the recent past.

### *Census 2000 Findings*

Married mothers of young children are less likely to be in the labor force than are any other women or men of comparable age. Nevertheless, a majority of even these women were employed or looking for work in 2000. Sixty percent of married mothers with a child less than 6 years old at home were in the labor force. This compares with between 72 percent and 82 percent of women with other family statuses (Table 1). Once all the children are in school, married mothers increase their labor force participation to levels (74%) approaching that of married women with no children at home (76%). These mothers are less likely to work full-time year-round (41%) than married women with no children at home (51%). Part-time or seasonal employment is common among all mothers, but even among mothers with young children at home, full-time year-round employment is the most common option among those in the labor force.

----- Table 1 about here -----

The presence of children at home makes less difference for never married or formerly married mothers. Single women, whether mothers or not, are more likely to be in the labor force than married women. In fact, divorced and separated women with school age children were more likely to be in the labor force than women without children. Never married mothers also had high labor force participation rates in 2000 contrary to the stereotype of idle welfare mothers living off the dole.

### *Labor Force Participation: 1950-2000*

Single and married mothers' labor force participation diverged sharply in the 1990s. Married mothers' labor force participation held constant through the last half of the 1990s – reversing the long prior trend in which they had the fastest increases (Figure 2). In contrast, single mothers' labor force participation increased significantly in the 1990s – also a change from their recent past which showed little change in labor force participation since the late 1970s. Single mothers have always worked more than their married counterparts, but the difference had been narrowing for quite awhile. In the mid 1990s, the two groups went in opposite directions. Single mothers increased their rates of labor force participation to levels almost equal to single women without children. This increase rules out a ceiling effect as an explanation for the stagnation of married women's rates in the 1990s. If there is some upper bound on women's labor force participation, the 1990s increases for single mothers shows we must be still well below that ceiling. Thus, the end of the growth in married mothers' labor force participation is the most unexpected gender turnaround of the 1990s.

----- Figure 2 about here -----

Women with no children at home showed little change in entering the labor force during the 1990s. Women without children work more often than mothers do, but Figure 2 shows that those high levels held constant during the 1990s. Married women without children, like married mothers with children at home, had been increasing their labor force participation through much of the century although at less dramatic rates. Those increases stalled in the 1990s as did the rates of married mothers.

Single women with no children have the highest rates of labor force participation, but that has always been true, and those high rates have not changed much in the last quarter century. Married women had been narrowing the gap with single women, but that ended in the 1990s.

### **Age and Cohort Variation in Labor Force Participation**

### *Age, Period and Cohort Effects*

When demographers examine social change, one of the first things they check is whether these changes come from time period effects common across the whole population or whether the changes result more from the distinctive characteristics of new, entering cohorts replacing quite different older cohorts. To distinguish cohort effects from period effects requires us to identify age effects as well, since in any year, what appear to be cohort differences may just be age effects.

- *Age effects* describe how individuals change over their lifetimes. Retirement is a typical example of an age effect. Social and legal prohibitions also prevent children from entering the labor force, another age effect. Age also has indirect effects on labor force participation by helping to pattern life course events such as marriage and childbearing. These age effects are strong enough that we limit most of our analyses to the “prime years” between 25 and 54. We make an exception in this section in order to capture the full range of age variations.
- *Period effects* tell us about how historical changes in a society affect all individuals in that society. Specific events often lead to changes in gender inequality. The advent of the birth control pill in the early 1960s dramatically affected women’s ability to control fertility, and therefore may have increased their participation in the labor force. The passage of equal employment legislation in the 1960s and 1970s is another example of a possible period effect on gender differences. Sometimes period effects are harder to date exactly but are nevertheless likely to have had broad impacts, for instance, when the women’s movement of the 1970s raised fundamental issues of gender equality.
- *Cohort effects* identify generations of people moving through history together who share common historical experiences that uniquely affect them. The baby boom cohort is perhaps the most common contemporary example familiar to the public. Political scientists often refer to the “Depression generation” who came to political maturity

during the Depression and New Deal and were forever marked by that experience. For gender issues, it may women who “came of age” after the advent of “the pill” and during the feminist revolutions of that time that are particularly important in understanding changes in gender relations. What makes cohort effects so interesting is that a whole society can change without any particular individuals changing what they think or do. For example, if recent cohorts accept more feminist positions than previous cohorts, eventually the society will adopt those positions without any individual having changed her own behavior.

Of course, most changes present some combination of all three of these effects and disentangling them has become something of a high art form. The difficulties arise because of the implicit and therefore easily overlooked relationships between age, period, and cohort differences. If we know any two of these, then the third is completely specified by the other two. Age can always be computed as birth year minus census year and therefore age effects can always be expressed as the difference between cohort and period effects. Or period effects can always be expressed as the combination of cohort differences and aging. Any attempt to disentangle these three effects that does not acknowledge these identities will be misleading. So what we aspire to is simplicity and parsimony in describing the pattern of outcomes while recognizing that alternative descriptions are always possible. Below we attempt to develop those descriptions of the complex patterns of how labor force participation varies across time and cohorts (and therefore, age).

#### *Age patterns in 2000*

The likelihood that an average woman will be in the labor force varies substantially over her life. As we have seen, many women exit the labor force when they become mothers; therefore labor force participation rates have traditionally been lower for women in their late 20s through early 40s than they were for younger women or older women – a characteristic referred to as the double maxima pattern. The 2000 age profiles of women’s and men’s labor force

participation are strikingly similar. Women's labor force participation by age is comparable to men's (albeit at a lower level) – sharply rising from the teen years into early adulthood, remaining fairly stable in the “prime” years, falling sharply after the mid fifties and then trailing off. In 2000, there was some evidence of a *slight* dip in labor force participation rates as women reached their mid 20s to mid 30s. However, women in their early 40s worked at the same rates as women in their early 20s.

#### *Age Patterns in Women's Labor Force Participation Rates: 1950-2000*

Women's agewise labor force participation rates have not always resembled men's so closely. Figure 3 shows a progressive weakening of a double maxima pattern for censuses between 1960 and 2000. The most pronounced periods were 1960 and 1970. In these years, the labor force participation rates of women in their mid 20s to mid 30s were substantially lower than those of younger and older women. By 1980, the double maxima began to flatten reflecting lower fertility and fewer women leaving the labor force at marriage and childbirth. The low point between the double maxima also shifts to somewhat later ages, reflecting the later ages at marriage and first birth. By 2000 there is only slight evidence of the double maxima. The double maxima pattern is also somewhat attenuated in 1950 – but for different reasons than in 2000. In 1950 many fewer women returned to work after their children were in school or left home so the labor force participation rates for women in their 50s never approach the peak of 20-year old women.

----- Figure 3 about here -----

#### *Cohort Differences in Women's Labor Force Participation Rates*

The sort of cross-sectional, point-in-time analysis presented above – while fairly clear – implies a problematic conclusion that the rates for women who are now 55 predicts the future life course for women who are now 25. But perhaps the differences between current 25 year olds

and current 55 year olds reflect permanent differences between generations that will not disappear with time.

Cohort analyses are often offered as a solution to this problem. By using multiple censuses, cohort analyses track the labor force patterns for each generation as it ages across the life span. We do this for women's labor force participation rates for several cohorts in Table 2. Such tables can be tricky to read. When we want to know how labor force participation rates changed for any specific generation as they aged, we read across the rows. This gives us an "age effect" that describes what each generation actually experienced. For instance, when we look at the cohort born between 1935 and 1944, we see their labor force participation rising steadily until they reach retirement age when the rates decline sharply.

----- Table 2 about here -----

When we want to know how cohorts differ from one another, we read down the columns. For instance, if we are interested in how the late baby boomers born between 1955 and 1964 differ from an earlier generation born between 1925 and 1934, we can read down the second column at ages 25-34. This seems to give us a sense of a "cohort effect" since we are comparing different birth cohorts at the same point in their life cycle. Table 2 documents the enormous labor force increases across these cohorts as young adults. For example, 35% of those born between 1925 and 1934 were in the labor force when age 25-34. This is much lower than the 74% of women born between 1955 and 1964 who were in the labor force during the ages of 25 to 34.

However, the increases from 32% in the earliest cohort in our table to 73% in the latest cohort may not be the result of true cohort effects. The problem is that those increases may be just a period effect that is common to all cohorts: women born between 1915 and 1924 reached early adulthood around 1950 when few women were in the labor force at any age. And post baby-boom women born between 1965 and 1974 reached early adulthood around 2000 when labor force participation rates were much higher. Unfortunately, this arrangement of a cohort

table obscures the period effect of changes over time. When we want to know rates for any census year, we have to read along the diagonal – which we've shaded here to represent results from the 2000 census.

If the cohort differences in column 2 of Table 2 represent lasting cohort effects, we would expect those differences to remain over time – even after the earlier cohorts enter the high working times at the end of the century. That doesn't happen. For instance, in early adulthood at 25-34, women born between 1935 and 1944 had 20 percentage point lower participation rates than did the very next cohort (45% versus 65%) – an enormous difference. But by the time of later adulthood at 45-54, they had almost caught up with the cohort that followed (71% versus 74%). That suggests that the early difference was more of a period effect than a lasting cohort effect. The baby boom women just had the advantage of entering the labor market at a time period when women's labor force participation rates were increasing for everybody. Those time period effects can be better seen in panel B of Table 2 which shows how each cohort progressed through each time period rather than through each age range. Here we can see more clearly that every birth cohort increased its labor force participation between 1960 and 1990 (if they had not yet reached retirement age). Even the retirement decline is weaker for the earlier cohorts because they are reaching retirement ages just as labor force participation rates are growing.

These observations suggest that the best way to interpret the increases in women's labor force participation during the last half of the century is as a predominantly time period effect that changed labor supply for all cohorts. The age distributions from Figure 3 are probably the most parsimonious way to describe the changes: each succeeding decade had higher rates of labor force participation, and these period effects were especially important for women age 25-40 since the double maxima pattern was also going away at the same time that the entire curve was rising.

## **Race, Gender, and Labor Force Participation**

Race matters in the United States – it shapes our everyday experience and our life chances in as fundamental a way as gender. In fact, some observers contend that race and gender interact to create unique patterns of gender inequality across racial/ethnic groups. Others note that many of the transformations in gender inequality have been so broad as to cross those racial and ethnic lines. Thus the story that emerges below is simultaneously one of *diversity* and *similarity*.

### *Census 2000 Findings*

Women's labor force participation rates vary widely across racial and ethnic groups. White women have the highest participation rates (75%) of any group except Filipinas (77%, Table 3). Black women's rates (73%) are almost as high as white women's. Hispanic women tend to have lower rates, but there is substantial variability among Hispanics: only 58% of Mexican American women are in the labor force while 69% of Cuban American women are. There is even greater variability among Asian ethnic groups: while Filipinas have the highest rates (77%), South Asian women have the lowest (59%). Native American Indian and Pacific Islander women have rates slightly below white women's. Full-time, year-round employment rates were lower for each group but the pattern across racial and ethnic groups was similar (not shown). White, black, and Pacific Islander women were most likely to work full-time year-round while American Indian and Hispanic women were the least likely.

----- Table 3 about here -----

Although women of many ethnic groups are less likely to be in the labor force than white women, the same racial ethnic groups may have more gender *equality* in participation rates because of the low participation rates among men. Hispanic men's rates (77%), for instance, are almost as far below white men's rates (89%) as Hispanic women's rates are below white women's rates. So the level of gender inequality in labor force participation is not very different comparing Hispanics (79%) and non-Hispanic whites (85%).

Gender differences among African Americans are even more distinctive. While African American women are slightly less likely to be in the labor force than white women, African American men are far less likely than white men. In fact, African American women's labor force participation rates are slightly *higher* than African American men's rates, one of the few instances when the usual gender inequalities are reversed and favor women.

Gender equality among Asian labor force participation rates varies widely across ethnic groups. The high participation rates of Filipina women are close to Filipino men, but the low rates of South Asian women contrast with high rates among South Asian men that approach white men's rates.

The question of gender differences among racial ethnic groups is complicated because two possible comparisons are possible. The above calculations use *within-race* comparisons. They have the disadvantage that a racial ethnic group may be more gender equal than whites, not because women in the group work more but because the men work less. When making comparisons across groups therefore, one must remember that both the numerator and the denominator are changing. An alternative *between-race* comparison keeps a constant comparison group, usually white men because they are the most privileged group. Thus, inequality for black women is greater than for white women when using this between-race measure, but not when using the within race comparison. We use primarily the within race comparisons throughout this monograph, but caution the reader not to draw the often incorrect inference that when gender inequality within a racial or ethnic group is less than among whites it implies those women work more than white women.

#### *Racial and Ethnic Trends in Labor Force Participation: 1950-2000*

The dramatic increases in labor force participation rates between 1950 and 1990 affected women of all racial ethnic groups (Figure 4). For most of the period, black women and Asian women had the highest rates of participation while American Indian women and Hispanic

women reported the lowest rates. The participation rates of white women equaled those of black women and Asian women only as recently as 1990.

----- Figure 4 about here -----

Similarly, the 1990s were a period of stagnation in labor force participation rates for women in all racial ethnic groups. While the change in question wording in the 2000 Census exaggerates the declines in Figure 4 (especially among African Americans and Hispanics), CPS data confirm the stagnation for all groups. Thus, both the increases from 1950 to 1990 and the unexpected plateau in the 1990s were shared across racial ethnic groups.

### **Educational Differences in Labor Force Participation**

Education is frequently seen as preparation for the labor force – as training for employment. Levels and types of education provide entry to occupations and professions. As such, education is often thought of as an “investment” in “human capital” or skills to be brought to market. The more education one has invested in, the more skills one has and the better job one can expect once working. The higher the income one expects, the greater incentive to be in the labor force. But education can also be thought of as a proxy for class, especially in terms of life chances. In either interpretation, education strongly conditions the likelihood that someone will be in the labor force *and* the type of work they do once in the work force.

For married women, education has dual consequences: it increases their value in the labor market and thus raises the incentive to work. On the other hand, educated women tend to marry educated men who have their own higher incomes. For women, this “unearned income” (i.e., income available whether women work or not) is a *disincentive* for employment. For most women the incentive effects of higher education outweigh the disincentives.

*Census 2000 Findings*

In 2000, labor force participation rates increased with each higher educational level for both men and women. 94 percent of male and 82 percent of female college graduates were in the labor force (Figure 5). Similarly, 89% of male and 78% of female high school graduates were in the labor force. However, the rates drop off sharply for high school dropouts (69% for men and 51% for women), but the gender gap between them remains similar.

--- Figure 5 about here ---

#### *Educational Variation in Labor Force Participation: 1950-2000*

Women of all educational levels increased their labor force participation steadily from 1960 to 1990 (Table 4). However, all groups saw a decline in participation from 1990 to 2000. There was also a decline among college women in the 1950s. Only among high school dropouts was there a noticeable growth in labor force participation in the 1950s. However, because education levels were lower then, their increases dominated the declines among college women so that the overall change was an increase (Figure 1). Since the 1950s however, labor force participation rates among high school dropouts, always the lowest, have grown more slowly than for other women so the gap between high school dropouts and those with at least a high school diploma has grown since 1970. For women, education has become an increasingly important predictor of labor force participation.

----- Table 4 about here -----

Among men, labor force participation rates fell for all education groups from 1960 to 2000 (Table 4). This decline was particularly pronounced for high school dropouts. Until 1970, men's labor force participation rates differed little by educational level. By 1980, high school dropouts had fallen behind high school graduates, and the pattern worsened through 2000. The percentage of men who have less than a high school degree has declined substantially over time which means that those who do have less than a high school degree are a selective group of men. For example, some immigrant groups are disproportionately located among those with less than a

high school degree. Overall, education is now as important a predictor of labor force participation for men as it is for women.

Gender differences in labor force participation rates are dominated by the larger changes among women than among men, so the gender inequality ratios are driven more by changes to women's labor force participation than to men's. Table 4 also presents the ratios of women's to men's labor force participation by education level. A ratio of 1.00 indicates men and women have equal labor force participation rates while a ratio below 1.00 indicates women are less likely to be in the labor force than similarly educated men. Since 1960, there has been an upward trend in all participation ratios indicating growing similarity between women and men for all educational groups. The gender revolution in labor force participation spread across educational levels just as it spread across racial divisions.

### **Trends and Patterns in Labor Force Participation**

The data reviewed above present a picture of broad based change – most women today are in the labor force, regardless of variation among racial, age, education, marital and parental status. These levels represent an enormous change from the 1950s when most women were not active in the labor force. At the same time, the rate of increase in women's labor force participation may have slowed in the last decade, and even begun to reverse among married mothers. Our next question is where we are likely to find those women who have entered the labor force in the last fifty years.

### **Trends and Patterns in Men's and Women's Occupations**

Women and men in the labor force do very different kinds of work. In general, the differences in women's and men's work persist, but are much reduced from a half-century ago. The integration of work marks another aspect of stunning change – little more than thirty years ago the idea of women becoming doctors, clergy, bartenders or bus drivers in numbers equal to

men would have seemed naive. But, as the data reveal, this is precisely what has happened. However, as with labor force participation, there is still a considerable gap in the occupations that men and women hold, many have remained decidedly male or female, and, as with labor force participation, there is good evidence that integration has stopped in recent years.

### *Census 2000 Results*

Despite the fact that women make up nearly half of the labor force, men and women work in very distinct occupations. An occupation is a convenient way of categorizing the many different kinds of work that people do, grouping similar kinds of work performed in different settings together. For instance, people who examine other people's physical and psychological condition and make recommendations about their treatment (doctors, psychiatrists, psychoanalysts, chiropractors and nurses) are all "health diagnosing and treating practitioners" just as people who sell things (be they art dealers, insurance agents or gas station attendants) are all in "Sales and Related" occupations. Different coding systems categorize occupations into greater or lesser degrees of detail and make gross or fine distinctions among the types of work done.

The level of occupational detail is important for understanding gender differences since the more detailed the coding system, the more segregated men's and women's work will appear. This can be illustrated by the difference between "teachers" at various levels. If we grouped all teachers together (as we are forced to do below in our over-time comparisons), we would see that 74% of "teachers" are women. But if we break this down by the grade-levels they teach, 97% of preschool, 78% of elementary and middle school, 58% of secondary and 46% of college teachers are women. Thus, greater detail allows a more accurate estimate of how much segregation there is. In fact, some researchers have analyzed cross-classifications of industries and occupations or even organization-level data on job titles, each of which results in higher estimates of the "true" degree of gender segregation.<sup>1</sup>

The Census uses several occupational coding systems with varied degrees of detail nested inside one another. Whenever possible, we use the most detailed occupation coding system possible. In 2000, there were 505 categories, but the micro data file we use collapses that slightly to 475 categories. We calculate the percentage female in each of these occupations; they range from preschool teachers who are 98% female to heavy vehicle mechanics who are less than 1% female. The average (median) woman works in an occupation that is 71% female, while the typical man works in an occupation that is 25% female.

--- SEE TEXTBOX 3 ---

Scholars examining gender segregation have commonly treated occupations in which more than seventy percent of the workers are of one sex as “sex-typed” occupations.<sup>2</sup> By this standard, more than half (52%) of all women work in occupations which are more than 70% female, and 57% of men work in occupations which are more than 70% male. Conversely, only eleven percent of women work in “male” occupations, while seven percent of men work in “female” occupations. That leaves less than half of men (41%) and women (37%) working in “mixed” occupations (those between 31% and 69% female). Among the largest “female” occupations in 2000 were secretaries, cashiers, and elementary and middle-school teachers; while the largest “male” occupations were truck drivers, laborers and material movers, and janitors and building cleaners. The largest “mixed” occupations were retail salespersons, supervisors of retail sales workers and a miscellaneous category of managers.

A principal tool that scholars use to describe patterns of gender segregation is the dissimilarity index (D).<sup>3</sup> This measure can be interpreted as the percentage of women or men who would have to change occupations in order for each occupation to be evenly female, that is to match the gender distribution in the labor force as a whole. Using this set of occupations, more than half (52.0%) of all women or men would have to change occupations in order for all occupations to match the 46.5% female found in the labor force as a whole.

### *Occupational Gender Segregation: 1950-2000*

The Census has changed the occupational classification system almost every decade. The 2000 Census was no exception. These changes reflect, in part, changes in the type of work we do, but also changes in our understanding of that work. These changes in classification cause problems if you want to compare changes in the kinds of work that women and men do. In order to have comparable occupations over these fifty years, we had to recode all the occupations into a standard set of 179 occupations. This smaller set limits the detail about the types of occupations – resulting in underestimates of the levels of segregation.

The rapid entry of women into the labor market in the 1960s, 1970s and 1980s had consequences for the types of jobs they held. In this time, women gained access to many occupations which had previously, whether formally or informally, been closed to them. But their entry into occupations was uneven. Many occupations remain nearly as heavily male or female as they had been in the 1950s. Some even *became* predominantly female over this period. We illustrate these patterns for selected occupations shown in Table 5. Here we can see, for example, that while women have made some inroads into the skilled trades, you are only *slightly* more likely to have a female electrician or mechanic today as in 1950. Similarly, despite much popular attention to the phenomenon of the “male nurse” a patient is nearly as likely today to have a female nurse as they were in 1950, your children are equally likely to have a female teacher in 2000 and 1950,<sup>4</sup> and the secretary in your office is just as likely to be a woman today as she was in 1950.

----- Table 5 about here -----

In other areas, however, changes have been far more substantial. For instance, in 1950 it would be extremely unlikely to find a woman driving a bus or mixing drinks in a bar – but by 2000 the patron entering a bus or bar had about equal odds of encountering a man or woman behind the wheel or the bar. Much the same can be said about real estate agents, accountants, and bill collectors – each of which were transformed to having female majorities by 2000.

Finally, some occupations that in 1950 were fairly evenly split between women and men have now become predominantly female – both medical/dental technicians and bank tellers went from being just under half female in 1950 to being predominantly female by 2000.

Again, the dissimilarity index is useful for summarizing the changes throughout the occupational structure. The smaller set of 179 occupations with which we are able to chart change since 1950 reveals a dissimilarity index of 46.6 for 2000 (Figure 6). This represents a total decline of 14.2 points in the index of dissimilarity between 1950 and 2000 – just under one third of a point each year for fifty years. At that rate, occupational segregation would disappear by the year 2150. The decline, however, is not evenly paced over the period. Most of the change occurred from 1960 to 1990. Both the 1990s (1.8 point decline) and 1950s (1.2 point increase) experienced much lower levels of change.

----- Figure 6 about here -----

Declines in segregation come from two main sources. The most obvious type of change is the integration of previously segregated jobs (e.g., women becoming doctors and men becoming nurses). Less obvious is the more rapid growth of already integrated occupations (e.g., the growth of the number of cooks) or decline of segregated ones (e.g., declining numbers of miners since 1950 or of telephone operators and secretaries since 1970). Tools to decompose the changes in occupational segregation into these two components have been developed. Table 6 identifies how much of the decade changes represent changes in the gender composition of occupations and how much is just the consequence of differential occupational growth and decline. The declines in segregation from 1960 to 1990 resulted mostly from occupational integration although in the 1960s and 1980s the more rapid growth of integrated occupations also contributed. In the 1990s, *all* of the rather small decrease can be attributed to the growth of integrated occupations. In fact, without changes in the occupational structure, the 2000 Census would have registered an *increase* in occupational segregation. This is consistent with the labor force participation trends that also identified the 1990s as a break from the previous decades.

----- Table 6 about here -----

Another question frequently asked about integration is how much of the change stems from women entering occupations that had been male dominated versus how much from men entering occupations that had been female dominated. That is, are women becoming carpenters and clergy or are men becoming librarians and nurses? The specific occupational changes summarized in Table 5 suggest that most of the change came from women entering previously male occupations. More detailed calculations confirm this conclusion. If we look at the 14.6 points drop between 1960 and 1990, about 11.3 points of that drop are the result of women's changes (i.e., women's 1990 occupational distribution looking more like men's in 1960 than women's did in 1960) and only 2.9 points from men's changes. Another portion is due to the simultaneous changes in men's and women's occupations to look more like each other. So, however interesting the phenomena of male nurses and librarians may be, they don't account for much of the occupational integration. It was the changes in the middle portion of Table 5, occupations that shifted from male dominated to integrated, that drove the decline in occupational segregation.

### **Occupational Segregation by Age, Period, and Cohort**

How much of the decline in occupational segregation between 1960 and 1990 was a period change common to all workers, and how much was the result of newer more integrated cohorts replacing earlier more segregated cohorts? Like labor force participation rates, we can disaggregate the segregation trends into age, period, and cohort trends (Table 7). For segregation, the pattern is much clearer: virtually all the change was a time change in which occupations for everybody in the labor force became more integrated, regardless of their age or birth cohort. Reading across Table 7, occupational segregation dropped for each cohort between 1960 and 1990. The three cohorts whose work lives extended through the entire period all dropped about 10 points in occupational segregation. The stagnation between 1990 and 2000 can also be observed for each cohort, with the possible exception of the recent 1965-75 birth

cohort (but in 1990 this cohort was only 16-24 so levels of segregation may not represent the career jobs that many of this cohort would not have begun until after 1990).

----- Table 7 about here -----

Reading down the columns, there are much smaller differences among birth cohorts. Since 1970, the entering cohorts (born in 1935-44) tend to have a 1-2 points less occupational segregation than the cohorts that came before them. By 2000, the 1935-44 cohort was entering retirement age and was about four points less integrated than the 1965-74 cohort that were beginning their adult careers. So the cohort differences over 30 years are less than half of the period changes that each cohort experienced between 1960 and 1990. Thus the phenomenal changes in occupational segregation witnessed over the last fifty years have been experienced more within than between generations. Everybody's occupations became more gender integrated, and that accounts for most of the change.

There is also little evidence of age effects in these data. As we have indicated, most cohorts became more integrated as they passed through the life course, but that was because most cohorts in these censuses lived through the rapid changes of 1960-1990. If we look at age differences within each census, there are small *increases* with age, especially in the more recent censuses. Those age differences are the result of the small cohort differences that begin to emerge with the 1935-44 cohort.

## **Occupational Segregation by Race and Ethnicity**

### *Census 2000 Findings*

As with labor force participation, occupational segregation varies by race as well as gender. Not only are occupations racially segregated, levels of gender segregation may vary by race. Separate gender segregation indices can be calculated within each race ethnic group and racial segregation indices can be calculated within each gender (Table 8). Two conclusions emerge from these calculations. First, levels of gender segregation – whether compared to same-

race or white men, outstrip within-gender racial ethnic segregation for all groups. Women of color are generally far less segregated from white women than from men of their own race ethnicity. For allocation to occupational types, gender trumps race. Asian women are an exception: their racial segregation levels often approach the levels of gender segregation and among Southeast Asians are even higher.

----- Table 8 about here -----

Second, levels of gender segregation are quite similar across all racial ethnic groups with the exception of Asians and Pacific Islanders, all of whom have substantially lower levels of gender segregation. Other people of color also have lower gender segregation than whites, but the differences are small. Hispanics are about half a point below whites; African Americans and Native Americans, four points below. The lower levels of gender segregation among people of color are not the result of any privileged position of minority women. Rather, the lower segregation is more a result of the fact that minority men are less privileged than white men. Racial ethnic segregation is greater among men than among women. When women's occupations are compared to white men's, women of color are *more* segregated than white women. That should not be surprising. Women of color face both gender and racial ethnic discrimination so they end up in the occupations most dissimilar from white men's.

#### *Occupational Gender Segregation by Race and Ethnicity: 1950-2000*

Changes in gender segregation over the last half century roughly parallel the general gender story: limited change in the 1950s, followed by declines from the 1960s through the 1990s, when declines slowed or ended. Like labor force participation, the changes over the last fifty years cross racial-ethnic divisions fairly consistently. Indeed, changes over time within any one racial-ethnic group are greater than the differences across these same groups (with the exception of Asians). Even Asians have experienced the same changes as other groups since 1970, although at a lower level. African Americans have seen the largest drop: in the 1950s and

1960s their gender segregation was greater than for whites or any other group. Only since 1970 have whites had more gender segregation than other racial ethnic groups.

### **Occupational Segregation Differences by Education and Class**

Education is the major determinant of the types of occupations we can enter. Does it also determine levels of gender segregation? Is gender segregation of occupations more of a working-class phenomenon? Many of the most male dominated occupations in Table 5 are working-class occupations, especially skilled crafts (e.g., mechanics, electricians) and service work (e.g., firefighters, truck drivers). Similarly, many of the female dominated occupations, while white-collar, involve routine work (e.g., secretaries, bank tellers) that has many working-class characteristics. On the other hand, some of the most dramatic changes in the middle of Table 5 are the classic professional positions of doctors and lawyers. And the integration of managers has probably accounted for more of the overall integration of the labor force than any other single occupation. There are important exceptions of course: airplane pilots and nurses remain the most segregated of occupations while bartenders and bus drivers are now more integrated than in the middle of the century.

We investigate the class nature of gender segregation in two ways: by comparing the college educated with workers who have no more than a high school diploma. This locates the class division in characteristics of workers themselves. We also compare occupations directly, separating working-class occupations from middle-class occupations. The middle class includes professionals and managers (including non-retail sales) while the working class includes all other occupations. Both analyses tell similar stories: gender segregation is stronger among the working class and most of the change occurred for the middle class.

*Census 2000 Findings*

We start by sorting the Census by four main levels of education: high school dropouts, those with only a high school diploma, those who went beyond high school and attended a college without getting a bachelor's degree, and those who graduated from college (including those who continued for more advanced degrees). We then calculated the extent of occupational segregation within each group. Only college graduates are distinctive as being in occupations that are less gender segregated than any of the other three groups. Figure 7 shows that this is not a gradual change with more education but an abrupt division between college graduates and those without such a degree. This is a substantial difference: persons who did not graduate from college are in occupations that are almost half again as segregated as college graduates.

----- Figure 7 about here -----

A large part of the reason why college educated women are less segregated from college educated men at work is that they hold middle-class jobs and middle-class occupations are far less segregated now than working-class occupations. In the 2000 Census, the 316 working-class occupations produce a segregation coefficient of 62; for the 155 middle-class occupations, the coefficient is only 40. This confirms the main impression from the list of occupations in Table 5: more middle-class occupations are found in the middle of the table and more working-class occupations at either end.

### *Occupational Segregation by Education and Class, 1950-2000*

While the college educated are less gender segregated than those without college degrees now, has this always been the case? How much of the decline in gender segregation from 1960 to 1990 was limited to the college educated? Separate trends by education show that occupational segregation declined for everybody during the period, but it was most dramatic for the college educated. In 1960 there were only small educational differences but by 1990 the rapid integration of the college educated meant that their occupations were significantly more integrated than the occupations of those without college degrees. The more rapid decline of

gender segregation of the college educated is undoubtedly due to the fact that it was primarily middle-class occupations that were integrating. Figure 8 shows the changes separately for working-class and middle-class occupations. There is almost no decline in segregation for the working class. Middle-class occupations begin slightly more integrated in 1960 but by 1990 a major difference had emerged.

----- Figure 8 about here -----

Social class is obviously important for how integrated our jobs are. This difference is especially notable because gender segregation is almost constant across the other demographic characteristics we have examined. Race, ethnicity, age, and birth year do not seem to matter much for the degree of segregation. Gender inequalities in occupations cross those divisions quite well. Not so for class: it is primarily the college educated and those in middle-class occupations who have enjoyed the benefits of occupational integration that occurred between 1960 and 1990. On the other hand, education and class do not matter much for the rapid changes in women's labor force participation: high school graduate women increased their labor force participation at about the same pace (although at a lower level) as college graduate women. But when women high school graduates got to work in 2000, they found a much more segregated work place than did their college-educated sisters.

### **Changing Work**

The trends and patterns outlined in this section indicate that there has been considerable integration of men's and women's work, but that a substantial amount of segregation persists. Whether we look at individual occupations, overall distributions or summary statistics, it is clear that the barriers that held women out of certain occupations and trapped them in others have been lowered. But it is also clear that men and women continue to occupy "separate spheres" in the world of work. It also appears from this data that the pace of change has slowed. For almost all groups there was less change in integration in the 1990s than in any decade since the 1950s.

Again it remains to be seen if this is a temporary slowing or the beginning of a reversal of the trends of the 1960s, 1970s and 1980s.

### **Earnings**

To some extent changes in both labor force participation and occupational segregation over time are easily observable. We quite literally see more women working today, and working in a wider variety of occupations than in the past. In fact the sight of women in large numbers in previously “male” occupations like police officers and politicians can sometimes mask the persistence of inequality. While perhaps the least directly visible of the three dimensions of work-related gender inequality, differences in men’s and women’s pay may have garnered the most public attention. Each year when the Bureau of Labor Statistics releases results from the March Current Population Survey, a spate of newspaper stories appear on the current state of the “gender gap” in earnings. Sometimes these tell of good news (a narrowing gap) sometimes bad (a widening gap). Cumulatively, as we will see, the last half of a century is good news – but the differences remain and remain large, and the gap between men’s and women’s earnings widened again in the last half of the 1990s.

### *Census 2000 Findings*

Women still earn less than men. The average woman, age 25-54, who worked full-time year-round in 1999 reported earnings of \$28,100. That is only 73% of the \$38,700 reported by the average man, age 25-54 (Table 9). The ratio is somewhat better if we estimate hourly wages for all workers by adjusting annual earnings for the reported usual hours worked and the number of weeks worked last year. Women’s average hourly wage, \$12.44, is 79% of men’s, \$15.72.

----- Table 9 about here -----

--- SEE TEXTBOX 4 ---

### *Gender Differences in Earnings: 1950-2000*

The gender gap in earnings declined during much of the last quarter of the twentieth century. That advance appears to have ended in the mid 1990s. Census data from 1950 through 2000 show the ratio of women's to men's earnings to have hit bottom in 1969 and 1979 at 56% (reminder, the higher the ratio, the smaller the gender gap). In 1989 this jumped to 66% and it continued to improve to 71% in 1999. (The Census and other surveys collect data about last year's earnings, hence the 2000 Census yields estimates for 1999 earnings, the 1990 Census for 1989 earnings, etc.) More detailed annual data from the Current Population Survey (Figure 9) suggest that the increase in the 1990s occurred entirely in the first half of that decade. Since the mid 1990s there has been little improvement in the gender earnings ratio.

----- Figure 9 about here -----

Changes in men's earnings are more closely correlated with changes in the gender ratio than are changes in women's earnings (Figure 10). Women's average earnings have increased steadily since the 1960s. Men's average earnings, on the other hand, increased in the 1960s through the early 1970s but then plateaued and even declined somewhat until the mid 1990s. In the mid 1990s men's earnings again began to increase after two decades of stagnation. Thus, over the last forty years, when men's earnings rise, the gender earnings gap holds constant or even grows. But when men's earnings stagnate or decline, the gender earnings gap closes. Times of progress in gender equality have come mainly when men's earnings stagnate.

----- Figure 10 about here -----

### **Variation in the Gender Earnings Ratio by Age and Cohort**

It is not so simple an exercise to allocate the change in the earnings ratio between period effects that all workers experienced and cohort replacement effects. Unlike occupational integration which was clearly a period effect that happened among all workers with few age or cohort differences, changes in the earnings ratio reflect each of the possible patterns – and none

of the three are simple linear trends. We begin with the age patterns, which are especially strong for the earnings gap, and cannot be ignored in assessing cohort and period effects.

### *Census 2000 Findings: Age*

The gender difference in earnings is dramatically larger among older workers than among younger workers (Figure 11). In 1999, the average 25 year old woman earned 90% of what the average 25 year-old man earned. But 55 year-old women earned only 65% of what 55 year-old men earned. In what are usually the post-retirement years, the gender difference diminishes somewhat so that the age relationship is curvilinear.

----- Figure 11 about here -----

However, the growing gender gap in 1999 between 16 year olds and those in their late fifties does not mean that the gender gap increases over people's careers. When the same individuals are studied over time, the gender earnings gap between the average woman and the average man is quite stable across their work lives. Women earn less than men throughout their careers, but the disadvantage for the average woman doesn't change much after working many years. The age differences in Figure 11 occur for two other reasons, one a "cohort effect," the other an "out of labor force effect". First, the older workers in 1999 were born before the end of World War II; gender gaps for this generation have been higher than for any generation before or after (see below). Second, women interrupt their careers for childcare and family responsibilities more often than men do. This time out of the labor force puts older women at a disadvantage when they return to work. By age 55, the typical woman has accumulated fewer years of work experience than a man. If we compare men and women with the same years of work experience (something we cannot do with Census data), the earnings difference between the average man and the average woman remains fairly constant over their work lives.

Although career earnings trajectories are quite similar for the *average* man and woman, among higher earners these trajectories do diverge. Men's chances of getting into the top fifth of

earners increase faster over time than do women's chances. Some women do reach that level later in their careers, but their rates of advancement into these top levels are slower than men's. As a result, the gender gap in earnings at the 80<sup>th</sup> percentile is higher than at the median (Table 9), and it grows larger with more years in the labor force. The difference between career trajectories at the average and among top earners suggests a *glass ceiling* effect for women's earnings: women are at more of a disadvantage at the top of the earnings distribution than in the middle, and advancement into the top earners falls behind men's as their careers develop.

--- SEE TEXTBOX 5 ---

#### *Gender Differences in Earnings by Age and Cohort: 1950-2000*

The earnings gap decreased between the mid 1970s and the mid 1990s partly because of changes that happened to all cohorts and to a lesser extent because of newer, more gender equal cohorts replacing older less equal cohorts. Table 10 shows changes in the earnings ratios for each cohort as it progressed through the life cycle. The patterns are complex because the earnings ratios reflect independent period, age, and cohort effects. Reading across the rows of panel A demonstrates the strong curvilinear age effects: women fall further behind men through middle age and then catch up slightly nearing and after retirement ages. For instance, women born between 1935 and 1945 began their work lives earning 86% of what men earned; but that fell to just 50% by the middle of their work lives and then rebounded to 65% when they were between 55 and 64. This age pattern is common to most cohorts with some variations resulting primarily from period effects that we discuss below.

----- Table 10 about here -----

Reading down the columns of panel A there are, at best, weak cohort differences. Most columns show a curvilinear effect also with the lowest ratios in the middle cohorts. The two cohorts of 1925-34 and 1935-44 have particularly low gender ratios in their middle years with both the cohorts that came before and those after having more equal earnings ratios. But in their

later years, these cohorts no longer look so unequal – primarily because that is when the period effect of the 1980s catches up with them. Moreover the low point in each column is not fixed on the same cohort but tends to move up diagonally with each decade of age. Those minima reflect a period effect: the low point reached in the 1980 Census.

The stronger period effects are more evident in panel B. Most of the cohorts show declining gender ratios from 1950 through 1980. In fact, the 1950 starting point looks surprisingly equal in this table. Only in 1990 do most of the ratios turn upwards. Each of the cohorts between 1915 and 1944 become more equal during the 1980s. The two cohorts that follow (the “baby boomers”) don’t experience the same equalizing trend – but for baby boomers the 1980s were the early parts of their work lives when gender earnings ratios typically decline rapidly. The 1980s gender benefit for the boomers was that their early career declines were relatively modest.

Thus, the interesting result from these analyses is the strength of the period effect of the 1980s that brought rising equality to all cohorts in quite similar measure. Cohort differences are not especially consistent over the five decades although the curvilinear age effect is common to all groups.

## **Variation in the Gender Earnings Ratio by Race and Ethnicity**

### *Census 2000 Findings*

Gender gaps in earnings vary across racial/ethnic groups somewhat more than does occupational segregation. Again, gender inequality is somewhat stronger among whites. The earnings of white women were just 70% those of white men. Women’s earnings are several percentage points closer to men’s earnings among African Americans (83%) and most Hispanics (84%) (Table 11). Although Black and Hispanic women earn less than white women, Black and Hispanic men are even further behind white men so that gender differences are smaller. The gender earnings ratios of Asian Americans, Native Americans, and Pacific Islanders are also

larger than of whites, although there are substantial differences among Asian groups, as there is for occupational segregation and labor force participation.

----- Table 11 about here -----

### *Gender Differences in Earnings by Race and Ethnicity: 1950-2000*

The gender inequality trends for earnings are shared across most racial ethnic groups. The gender earnings gap trends can be described as inverted U-shaped for the 1950-2000 period. Within racial-ethnic groups, the gender earnings gap widened during the 1950s and 1960s, peaked or leveled off in the 1970s, and decreased in the 1980s and 1990s. The one exception is among African Americans: the gender earnings gap decreased substantially during the 1960s and 1970s when there was little change or increased gaps for other racial ethnic groups. Average earnings for African American women increased especially fast in the 1960s and 1970s as many women shifted out of domestic service to higher paying jobs that were now open to them. As a result, by 1980, gender earnings equality for African Americans had shifted from the most unequal of all racial ethnic groups to the most equal. Gender equality continued in the 1980s and at a slightly reduced rate in the 1990s for African Americans as it did for all groups.

### **Variation in the Gender Earnings Ratio by Education**

#### *Census 2000 Findings*

The gender earnings ratio is quite uniform across educational levels. High school dropouts have almost as large a gender ratio (72%) as college graduates (73%). Figure 12 shows women's and men's median earnings for four levels of education. Although more education means higher earnings for both women and men, more education makes almost no difference for the size of the gender ratio across education groups. Moreover, the increase in the gender ratio over the last 25 years is quite similar at each level of education.

----- Figure 12 about here -----

### *Gender Differences in Earnings by Education Level: 1950-2000*

Unlike occupational integration, which has been primarily a middle-class trend, gender earnings equality improved among all levels of education. And, the trends within educational levels have followed an inverted U-shaped pattern similar to those for racial-ethnic groups. The gender earnings gap for among college graduates was its largest in 1960 while for high school dropouts, high school graduates, and those with some college, the gender gap reached its highest point in the 1970s. There is some evidence that gender differences by education have narrowed since 1970 with the largest declines happening in the 1980s. Since 1950 the gender earnings gap has been smaller among college graduates than among high school graduates; that difference became negligible by 1999. Annual CPS data document the same convergence.

### **Variation in the Gender Earnings Gap by Occupational Segregation**

The segregation of women into female-dominated occupations has been long thought to be a principle cause of the gender earnings gap. Female-dominated occupations pay less, the argument goes, regardless of whether men or women work in those occupations. But because women more often work in these female dominant occupations, they earn less on average. The association between occupational segregation and earnings suggests two resolutions. If female occupations paid what male occupations paid, or if occupational segregation could be eliminated so that there were no female dominant occupations, much of the gender earnings gap would be eliminated.

### *Census 2000 Findings*

As in earlier decades, in 2000 women's occupations garnered lower earnings than men's – and regardless of occupation men earned more than women. Median earnings for workers in “men's” occupations (30% female or less) averaged \$38,240, while in mixed occupations (31-69% female) they were slightly higher at \$39,178, but across women's occupations (at least 70% female) the average was substantially lower at \$27,219. But even within the same occupations,

men earned more than women. An examination of the selected occupations presented in Table 5 shows that even where earnings are closest (nurses, librarians, mail carriers and clergy), women earned less than men. For example the average male nurse working full-time, year-round earned \$45,000 while his female counterpart earned \$42,000. But there are also occupations where the differences are quite large (physicians, bus drivers and cashiers) and these examples span the spectrum of occupations – both in terms of gender composition and social class. So, the typical male physician earned \$134,000 while the typical female physician’s earnings were \$86,000, and among male bus drivers the median earnings were \$32,000 compared to women’s \$21,000.

In fact, the connection between occupational gender segregation and the earnings gap is more complex than usually realized. Figure 13 shows median annual earnings for occupations along the full range of occupational gender composition. Although, in general, female dominant occupations pay less than male dominant occupations, there are two important exceptions. First, the most male dominated occupations (e.g., truck drivers and carpenters) pay less than those occupations that are partially integrated (e.g., managers, lawyers, and physicians). Second, the most female dominated occupations (e.g., nurses) pay at least as well if not better than those occupations with more men (e.g., cashiers). These exceptions at the two ends of the gender composition scale mean that the relationship between the gender segregation of occupations and their earnings cannot be summarized by a straight line. This nonlinearity is not well recognized in the extensive research literature on occupational gender segregation and earnings. Some of the nonlinearity can be explained by other factors such as education, but even after extensive statistical controls for the personal characteristics of workers, the nonlinear shape of the relationship remains, although somewhat attenuated (results not shown).

----- Figure 13 about here -----

The nonlinearity is not a new phenomenon; each census since 1950 shows a similar curve with two separate inflexion points. Over this last half century, both the maximum at predominantly male occupations and the minimum at predominantly female occupations have

migrated slightly towards the female end of the occupation, but the general shape of the curve has not changed substantially.

Figure 13 also shows that a substantial gender earnings gap remains even at similar levels of the gender composition of occupations. Men earn more than women even within the same occupation. This is true among predominately male, predominately female, and integrated occupations. For example, as shown in Table 5, the average female electrician earned \$33,000 in 1999 while the average male electrician earned \$39,100. Similarly, the average female secretary earned \$26,000 while her male counterpart earned \$32,000. The gap persists even among integrated occupations where, for example, the typical female lawyer earned \$65,000 and the typical male lawyer earned \$88,000.

But the fact that most men hold jobs on the left (high earnings) side of Figure 13 while most women hold jobs on the right (low earnings) side must explain some of the overall gender earnings gap. How much is due to this gender segregation of occupations? The nonlinearity of the gender segregation - earnings relationship creates difficulties for answering this question. Most prior research has evaluated this question using a linear approximation to the occupation - earnings relationship. The nonlinear shape of the relationship renders any such estimate suspect. Instead, we can use women's average earnings within each detailed occupation to estimate what would be the mean earnings of women if they had the same occupational distribution as men. If women worked in the same set of occupations as men, their mean earnings would increase from \$34,471 to \$37,877; this would be 75% of men's mean earnings (\$50,541) instead of the actual 68%. By these calculations, occupational segregation explains about 21% of the overall earnings gap. (A more realistic experiment of changing both men's and women's occupational distributions to match the overall occupational distribution reduces men's predicted earnings and raises women's predicted earnings to yield an expected earnings ratio of 74% – a gender gap about 18% smaller than the actual observed gap.) Thus, most of the gender earnings gap occurs within occupations although about a fifth is directly attributable to gender segregation.

--- SEE TEXTBOX 6 ---

### **Causes (and Consequences) of Changing Inequality at Work**

The three sections above outlined a series of changes over time following the general pattern of increasing equality between men and women, with particularly dramatic changes in the 1960s, 1970s and 1980s, and more slowly in the 1950s and 1990s. Each of the three major facets of gender and work mentioned above have a series of potential explanations. The next section provides an overview of the general utility of these explanations in accounting for both change over time and persisting differences. We focus on several of the most commonly cited reasons for the changes: shifts in “human capital” and other attributes of women and men: i.e. education, experience, and family status; changes in the normative climate; and changes in the political and legal environment in which men and women work. It is important to note that all of these both affect and are affected by changes in women’s work status. For instance, while increasing levels of approval for women’s participation in the labor market may be a *cause* of increasing levels of employment among women, it is also true that larger numbers of women working have led to greater approval of women’s employment. In assessing these potential explanations we apply three general criteria. First, the cause has to precede the effect. For instance increases in women’s education should come *before* increases in their earnings relative to men. Second, there must be an empirical correlation; they have to vary together in some way. As women gain more education, their average levels of earnings should increase. Third, the cause and effect should not both be the product of a third causal factor. For example, legislation leading to lower levels of discrimination by both schools and employers may have caused both more education for women and more equal pay between men and women.

### **Changes in Men and Women’s Attributes**

Here we address several explanations which look to changes in women and men's characteristics which may make them more attractive to employers, or may indicate a greater commitment to employment, or may show an increased need for women to be employed and bringing in the earnings associated with employment.

## **Education**

Among the most frequently touted explanations for an individual's economic status is education. Our education heavily determines the type and kind of employment we get access to and therefore the amount of pay and prestige we can expect. Thus, analysts seeking explanations of changes in women's status often look first to education. Getting access to a particular occupation involves at least these three hurdles: obtaining training and certification (being admitted into medical school), acceptance by coworkers (hiring in hospitals, private practices, etc) and acceptance by clients/consumers (patients come to practice). Any of these can – and do – serve as an effective roadblock to women's entry into a particular field. The importance of access to certification is most obvious in the professions but it is equally true in the trades – in fact anywhere where the supply of practitioners is limited by stringent training and licensing requirements.<sup>5</sup> The added benefit of examining certification is that relevant data are readily available. Acceptance by fellow workers and clients, on the other hand, is much more difficult to track. The mere fact of being hired as a lawyer in a given firm does not guarantee equal treatment – whether in terms of pay or promotion or partnership. Equally, that a woman is hired onto a carpentry crew does not ensure that she will be allowed to move from apprentice to journeyman, will be given the same amount of overtime or will be allowed to move into positions as crew leaders and site supervisors.

While the 2000 Census reveals generational patterns in gender differences in the completion of college or post-baccalaureate degrees, the gender differences across generations in completing a high school degree are quite similar. There is relatively little (if any) difference

between men's and women's attainment of a high school degree. For men and women aged 45 through those age 85 and above, differences in the rates of high school completion are no more than one percentage point (favoring men). Among younger age groups, however, women hold a slight advantage: 86% of women age 25-34 have completed high school as compared to 82% of their male peers and among those aged 35-44, 87% of women have completed high school while 83% of men have. In short, since early in the twentieth century, men and women have had near-equal access to high school educations, with each subsequent generation becoming more likely to complete high school.

With regard to college, Figure 14 shows more substantial differences among older cohorts, with men being considerably more likely to receive a college education through those cohorts born in the middle of the century. This difference narrows with each subsequent cohort (after the 85+ group for whom there may be issues of the interaction between gender, education and mortality) until among the younger cohorts (35-44 and 25-34) women begin to obtain college educations at a higher rate than men. Much the same can be said about post-baccalaureate degrees, substantial differences among older cohorts that narrow (and even reverse) among the more recent. For example, among those aged 65-74 in 2000, only 5% of women had completed an advanced degree while twice as many men (10%) had. Yet, among those aged 25-44, nearly an equal percentage of men and women (7-9%) had completed an advanced degree.

----- Figure 14 about here -----

While Census data are well-suited to telling us *who* obtained a particular level of education, they are much less able to specify the type or kind of education. For this we turn to data from the National Center for Education Statistics of the United States Department of Education (NCES). This data show much the same story as the Census – a growing share of Associate's, Bachelor's and Master's, Doctoral and Professional degrees were granted to women between 1950 and 2000 (Figure 15). Moreover, more than half of all degrees went to women

after the late 1970s for Associate's and the early 1980s for Bachelor's and Master's degrees. Even among Doctoral and Professional degrees women are approaching parity.

----- Figure 15 about here -----

So, on its face, the argument that access to or investment in education accounts for the substantial and persistent differences in employment, occupation and earnings appears flawed. However, it may be that it is not just the difference in the amount of education but also in the type or kind of education women and men have invested in that may make the difference. Here, we can examine trend data from the NCES showing college majors by sex. Women have made considerable inroads into many – if not all – fields of study. Of particular note are women's entry into Agriculture and natural resources, Business and management, and Law and legal studies. There are also some fields that became substantially less female – library and archival sciences (probably because of Internet technologies), and some which remained heavily female (Education, Languages, Health Sciences). As with occupations, a segregation statistic calculated from these shows a substantial decline – dropping from 47.3% to 27.8% of women or men having to switch majors in order for women and men to be evenly distributed across majors. (It is notable that these overall segregation measures are lower than what is observed for occupations. Much of this is due to the coarser classification scheme for field of degree. However, the much larger decline, 19.5 points for majors v. 8.8 points for occupations, may well indicate more substantial change over the period). Much of this change took place in the period between 1971 and 1985, and a slowing of the patterns of integration has been found in the subsequent period.<sup>6</sup>

Beyond the bachelor's degree, we can examine women's progress with regard to graduate, medical, dental, legal and theological degrees more specifically. In 1950 women made up just 10% of PhD/ED and MD degrees. In each of the other fields they were less than five percent of the recipients. But for each, rapid change took place in the 1970s and 1980s so that by 2000 women were receiving more than forty percent of all medical, dental, legal and

academic degrees. As with entry into occupations, however, the pace of change slowed in the 1990s, marking the smallest percentage-point gains for all fields since the 1960s. For these occupations, then, the “first hurdle” to access may have been passed: women in large numbers have obtained the formal educational credentials that should provide entry into these types of work. Moreover, as cohorts of medical, dental and law students move forward their occupations will become more and more balanced, net of gender differences in dropping out of the profession. As we noted above, however, the distribution of men and women *within* the legal, medical and other professions remains uneven.

### ***Assessing the Fit of Education as an Explanation***

The trends reviewed above generally fit together – as women’s educational attainment increased their levels of labor force participation increased, access to occupations increased and earnings relative to men increased. But, examination in more detail reveals that this is only part of the story. As we saw with regard to education and labor force participation, women’s labor force participation shows similar patterns across all levels of education save the lowest. The fact that more women are now among the groups with highest levels of education and employment therefore can account for *some* but not all of the increase in women’s labor force participation. Similarly, though more women today earn high levels of education, the fact that the *difference* in men’s and women’s attainment has not changed much suggests that education is not primarily responsible for the narrowing of the earnings gap. In fact, as noted the gaps have narrowed the most (or equally) within rather than between levels of education.

### **Experience**

Along with education, experience is taken as one of the primary characteristics that make employees valuable to employers. In part this is because much of the skill acquired to do a particular job is gained by having done that job. The experienced plumber (or surgeon) has

encountered the same situation, or something akin to it, before and hence knows how to respond. The novice, on the other hand, may have sufficient knowledge and information about how to handle the problem, but never having actually done it may take longer or do an inferior job of the repair. Thus, differences in experience are often thought to be responsible for differences in men's and women's pay. In addition, they are thought to contribute to differences in occupation and even labor force participation. Being in the labor force longer makes individuals less likely to drop out (and not dropping out, of course, increases their time in the labor force). Longer time in the labor force also opens access to occupations, particularly through promotion based on tenure and experience.

Scholars wishing to assess changes in experience must rely on longitudinal data which follow individuals over time. Complicating matters, those who wish to assess changes in experience must use data that track different generations over time. While several such sources exist, there are few studies which assess these changes. One suggests that between 1979 and 1988 the gender difference in full-time experience dropped from 7.5 to 4.6 years. This substantial decline was associated with approximately a third of the decline in the gender gap in earnings.<sup>7</sup> Some evidence also ties changes in work experience to changes in labor force attachment. Unfortunately, more contemporary estimates of changes in experience and their effects are not yet available.

### **Home Economics: Families, Employment and Income**

One commonsense answer to the question of why women are more likely today to be working than in the past is that their earnings are more necessary to support a family. This possibility rings true for many of us and would appear at first glance to meet the tests outlined above. There are several ways in which changes in family life may have led to changes in women's work. First, the family itself has changed. More women today are raising children alone, there are more couples without children and more women remain single longer. Looking

again at Table 1 we can see that an increase in women in those categories with higher levels of labor force participation could well lead to higher overall rates of labor force activity for women, greater access to occupations and more equal earnings. Yet, it is among married mothers that the greatest changes in employment took place, so changes in family structure can't account for all of the increase in women's employment. Moreover, single mothers' labor force participation, which had begun high, stagnated from the late 1970s to the early 1990s, only increasing in the late 1990s while *overall* rates of women's labor force participation leveled off or declined.

A second source of this change, then, may have to do with men's earnings. A conventional account of this goes as follows: As husbands' and fathers' incomes stagnated and declined, wives and mothers were "forced" into the labor force. As those husbands' and fathers' earnings rebounded in the 1990s, wives and mothers pulled back from participating in the labor force. So, how much of the rise and plateauing of women's labor force participation is due to changes in incomes for husbands? An important determinant of labor force participation is the extent of other family income beyond a person's own earnings. The more family income that a person already has without being employed, permits her or him not to work and enjoy the leisure instead (or especially for parents, devote more time to unpaid work at home). In the 1990s, men's median earnings increased for the first time in decades, so for the first time in a long while, married mothers' opportunities to stay home increased. In an analysis not shown here, we find that even after controls for other income, women's labor force participation rates still plateaued during the 1990s, although the trend is attenuated. Thus, while changes in men's earnings may account for *some* of the changes in women's labor force participation, it is clear that most of it comes from other sources.

### **Macro-Level Changes**

The three issues addressed above relate to the ways that characteristics of individual men, women and families have changed that may have led to the increases in equality seen in the

1960s, 1970s and 1980s, and why these may have led to the stalling seen in the 1990s. The next set of potential causes look more to changes in social structural conditions that are thought to have contributed to these changes.

### **A Changing Economic Structure**

In many ways the industrial revolution can be thought of as a root source of contemporary forms of work-related gender inequality. In a time when most of the population was engaged in agriculture there was a lesser degree of differentiation in the type of work men and women did, as well as in the distinction between those who were in or out of the “labor force”. With industrialization came increasing distinctions between work done in and out of the labor force. Some scholars have suggested that as the “demand” for women’s labor in industrial societies declined, so did their status – but as demand increases with the emergence of service-sector employment women’s status increased.<sup>8</sup>

In identifying a demand for *female* labor as central to explaining gender stratification, these theorists assume (1) that there is a gender segregation of tasks in society that specifies some tasks as exclusively or generally performed by women, (2) that the importance of these female tasks varies over time and across societies in association with exogenous factors such as technology, and (3) that this variation determines the relative autonomy or subordination of women across a wide range of political, economic, demographic, and ideological outcomes. Empirical assessments of this theory show some support for the effect of the demand for female labor, particularly in relation to labor market outcomes and education but less so for effects on family, politics or normative structures.<sup>9</sup> It is unclear at this point whether changes in occupational structure may have been related to change in progress toward gender equality in the 1990s.

### **Technology**

Along with inducing changes in the occupational structure, technological change may have had other effects on women's status. One way in which this may have happened is the introduction of many "labor saving devices" which may have reduced the amount of work required to maintain a home, thus freeing up women for employment outside the home. The research on such developments suggests that while technology may have reduced *some* kinds of domestic work it actually *increased* other kinds.<sup>10</sup> Another set of technological developments, namely changes in reproductive technology, has had more unambiguous effects. Women's increasing ability to control whether and when they have children has undoubtedly affected their presence in the labor force and likely as well their access to occupations and even relative pay.<sup>11</sup> Control over fertility may also be the ultimate "labor saving device" as increasing numbers of children in the household have a strong negative effect on both labor force participation and on pay for women who are employed.

### **Politics and Policy**

Another set of potential explanations for changes in women's status in the world of employment is the political. We offer a brief overview of three aspects of this: women's access to political office, public policy oriented toward gender equality at work, and litigation that has challenged (or supported) workplace inequality. For convenience, we focus on the Federal level, but many states and localities have similar policies aimed at lessening workplace inequality. At the beginning of the period under consideration, many employers had explicit rules regarding appropriate positions and pay for women. They included formal and informal restrictions on positions, separate male and female sections in "help wanted" advertisements, differential pay scales for men and women in the same jobs within firms, pay scales set in accordance with the gender composition of jobs, and "marriage bars" which banned employment of married, let alone pregnant, women. (In fact one of the authors' grandmother neglected to inform the school district where she taught that she'd gotten married to avoid dismissal in the middle of the school

year.) Such rules were legal and binding into the 1960s, and thereafter more informal rules served to limit women's pay and positions.

### *Officeholding*

The political representation of women by women may have consequences for gender equality. Female elected officials may pursue legislation and public policies that address the unequal status of women in American society with a more concerted effort than would their male peers. This increased attention to women's issues may in turn contribute to normative changes in the larger society.

Although ideal for some issues, the Census is a fairly poor source for telling us about women's presence and progress in the political arena. (The 2000 Census identifies 15,406 people's occupations as "legislators" – 5,461 or 35% of them are women. In the 1990 Census 42% of the 12,716 legislators were women.) But even a casual observer knows that there are many more women in prominent political offices today than in the 1950s or 1960s. Before the 1980s there were few women in political office, though many were involved in politics either as volunteers or as advisors to and supporters of husband's careers. Moreover, many of the women who held office prior to the 1970s did so by the so-called "widows model" assuming seats vacated by deceased husbands and (less frequently) fathers.<sup>12</sup> The late 1980s and 1990s marked women's entry into high-level elective office at both the state and national level. During this period the proportion of U.S. House members who are women rose from 5% in 1987 to nearly 14% in 2003 while the Senate went from 2% female to 13% (Figure 16). In the states, women now hold 25% of elected executive offices, which include everything from Governor and Lt. Governor (the most common position for women) to Secretary of State, Attorney General, Education Commissioner and Chief Agricultural Officer. Nonetheless, the 1990s did see a leveling off of women's officeholding at the state level. A possible consequence of this plateauing is that in the future we will see fewer women holding office at the national level as

state level office holding is a primary pipeline to national office. Thus, women's presence in political office marks progress, just as increased access to many powerful and traditionally male occupations, but is not a likely candidate for explaining improvements in women's economic position.

----- Figure 16 about here -----

### *Legislation and Litigation*

Despite earlier efforts by parties both in and outside government, a listing of the major national legislation affecting gender inequality in the workplace more or less begins with the Equal Pay Act of 1963 which mandated equal pay for men and women doing the same work. As noted below, much comes to depend on the definition of "same". Is this only applicable to people holding the same job titles or to those doing substantively similar or comparable work? Next, the Civil Rights Act of 1964, particularly Title VII, prohibited employment discrimination on the basis of race or sex. The 1972 Equal Pay Act Amendments extended the coverage of the Equal Pay Act to federal, state and local agencies, educational institutions and to employers with 15 or more employees (it had been 25 or more). In addition, it expanded the Equal Employment Opportunity Commission's (EEOC) ability to file suit and extended the time period in which complaints could be filed. In 1978 the Pregnancy Disability Act banned discrimination based on pregnancy or childbirth, essentially equating these with any other disability which might cause a worker to be temporarily unable to work. The final piece of federal legislation, the Family and Medical Leave Act, introduced in Congress in 1985, passed in 1990, vetoed by President George Bush and later signed into law by President Bill Clinton in 1993, allows employees of companies having more than 50 workers to take up to 12 weeks of unpaid leave to care for a newborn or newly adopted child, or to care for a family member with a serious illness. Employers must allow such workers to return to their original or an equivalent job.

Perhaps as telling are the laws that never were. Notable among these is the Equal Rights Amendment which was first introduced in 1923, passed in Congress in 1972 and failed to be ratified by the states and expired in 1982. However, there have been pieces of legislation that have failed. In an empirical analysis of Congressional sponsorship of bills by Burstein, Bricher, and Einwohner, three categories of work, family and gender legislation were identified: separate spheres, equal opportunity and work-family balance.<sup>13</sup> Separate spheres legislation includes that which would allow pay differences, restrict access to occupations, provide leave for mothers but not fathers, etc. Of a total of 13 such bills introduced between 1945 and 1990, only 3 were enacted, one each in the 1940s, 1950s and 1980s. Equal opportunity bills which would require equal treatment in access to and rewards for positions were more numerous over the entire period (63 bills) and more successful with 29 laws enacted. Moreover, these laws were most common in the middle period with 3 enacted in the 1940s, 8 in the 1950s, 6 in the 1960s, 11 in the 1970s and just 1 in the 1980s. The third type of bill, work-family balance seek to make parents – both fathers and mothers – more readily able to care for children and other family responsibilities through mechanisms like flexible schedules, leave time, and child care. All nine such bills, including the two that were enacted, were introduced in the 1980s.

These laws have been paired with a set of actions from the Executive branch, notably Lyndon Johnson's 1965 Executive Order 11246 which banned discrimination on the basis of race, color, sex or religion on the part of government employers, contractors, subcontractors or unions *and* required them to "...take affirmative action to ensure that applicants are employed and employees are treated during employment without regard to their race, color, religion, sex, or national origin".<sup>14</sup> This has led to the set of policies and procedures known collectively as Affirmative Action which span employees of Federal contractors, employees of federal agencies, employees and contractors for many state and local government, private employers under court-ordered remediation plans and private employers who voluntarily adopt standards and guidelines

for diversifying their workplaces. In total, estimates range from one third to one half of the labor force works in organizations that practice some form of affirmative action.<sup>15</sup>

A third “act” to this story is the executive enforcement and judicial interpretation of these laws. The guarantee of equality in the workplace is not effective if undermined by either weak enforcement or application of the law.

At the Federal level the Equal Opportunity Employment Commission is the agency with primary responsibility for enforcing non-discrimination laws. One of the major mechanisms used by the EEOC is gathering complaints from workers and seeking to settle these complaints, either through mediation or litigation. There were few such claims into the mid 1980s, but then a steep rise in complaints between 1985 and 1988, slower and uneven increases from the late 1980s to the early 1990s, and then a burst of filings from 1991-1995, leveling off thereafter. Approximately one-third of all claims to the EEOC have been sex based claims since the mid-1980s. Thus, even though the number of sex based claims has increased over time, so to have complaints based on other factors, including age and race.

Judicial interpretation of these, and other, laws greatly affects the process and progress of work-related gender inequality. An enormous body of case law has developed around these issues. Generally speaking in the courts, employees who file suit against employers under any of the above-named legislations and regulations must prove either “disparate treatment” or “disparate impact” based on one of the protected categories.<sup>16</sup> In disparate treatment cases it must be proven by a preponderance of the evidence that the employee was paid less, promoted less, or not hired *because of his/her sex* (or race, or religion, etc). That is, the employee must prove that the employer *intended* to discriminate. With disparate impact cases, the argument becomes that the apparently neutral policies or practices of an organization serve to disadvantage one of the protected groups. For instance, the strength test for firefighters gives men an advantage over women in hiring. If it can be shown that the standards or procedures for establishing “qualifications”, i.e. how strong a firefighter must be, are unrelated to the given job,

then disparate impact has been shown. The trend in judicial interpretation has been in favor of disparate treatment rather than impact. Moreover, the pattern of case law shows a move to a narrow and away from an expansive interpretation of the laws.

Among the critical issues regarding the 1963 Equal Pay Act and subsequent legislation and litigation is the question of what constitutes “similar” work. This is the issue in the debates and litigation over “comparable worth” – a position that jobs which are similar not in content or function but more broadly in requisite skill and training, complexity and conditions should have equal remuneration. Though showing some promise in the late 1970s and early 1980s, especially after the 1981 case *County of Washington v. Gunther*, the legal strategy seems to have fallen out of favor with the courts after the early 1980s.<sup>17</sup>

### *Effects of Law, Policy and Politics*

Given the range of law, jurisprudence and policy listed above, estimating the effect of these political changes on gender inequality is neither straightforward nor easy. However, some attempts to do so have suggested that, despite inadequate enforcement and narrowing interpretations, the legislative and executive actions have had a substantial and considerable effect on discrimination against women, particularly on occupational segregation and pay differences.<sup>18</sup> At the same time, a number of studies suggest effects of maternity leave policies on women’s labor force participation and earnings to be fairly small.<sup>19</sup>

### **Norms and Attitudes**

Another candidate in the search for causes are the broad cultural changes that sociologists might call “normative shifts.” These are the shared notions of what is appropriate behavior for women and men. There is little doubt that these changed in the second half of the twentieth century – but there is still some question about whether they were primarily causes or consequences of changes in gender inequality. Public opinion didn’t shift towards women’s

equality until the 1970s. During the 1960s when the polls reported Americans were increasingly willing to vote for a well-qualified Catholic, Jew, or even African American for President, the willingness to vote for a woman for President remained unchanged at about half of the electorate. Like the gender earnings gap, public opinion seemed stuck at a constant level. Only in the 1970s did attitudes begin to shift in a more egalitarian direction.<sup>20</sup>

The General Social Survey has asked a variety of questions tapping public attitudes towards gender roles since the mid 1970s. A broad scale created from responses to seven of these questions provides the most reliable indicator of the public's changing thoughts about women's political, household, and work roles.<sup>21</sup> Figure 17 shows the substantial shift in public opinion about gender roles from the late 1970s through the mid 1990s. But 1994 was the apogee of egalitarian thought about gender roles. After 1994, public opinion again plateaued.

Much of the egalitarian shift in public opinion from the late 1970s to the mid 1990s resulted from more liberal recent cohorts replacing more conservative older cohorts. This cohort replacement effect continues even now to push average public opinion towards more liberal gender roles. Thus, the overall slight conservative shift seen in Figure 17 for the last decade masks a much stronger conservative shift within each cohort. Most individuals have become more conservative in the last ten years; this has been offset somewhat because younger generations have entered the public arena far more liberal than their grandparents. But after they entered, since the mid 1990s they have become more conservative as has the rest of America.

----- Figure 17 about here -----

The importance of cohort differences can be seen in Figure 18. In any one survey, each cohort born before World War II expressed more egalitarian gender attitudes than the cohort that came before it. In addition, from the late 1970s to the mid 1990s, each cohort itself became more liberal, but these within cohort changes over time were modest compared to the differences among cohorts. Two recent developments have changed this picture. First, the trend towards more liberal cohorts ended with the Baby Boom. There are no discernible cohort differences

among people born after World War II. These cohorts are still more liberal than their elders (and more liberal than the earlier cohorts were at the same age), but the steady liberal progression across each cohort born in the first half of the century has ended. Second, the conservative period effect since the mid 1990s is evident for each of the cohorts born since 1925. Take away the liberalizing cohort replacement effect, and it is easier to see that most individuals have endorsed more conservative gender attitudes since the mid 1990s.

----- Figure 18 about here -----

The conservative trends in public opinion mirror the declining proportion of married mothers who work. We cannot tell whether changing attitudes contributed to the decline of mothers' working or whether the changing attitudes merely reflect changes in the actual social structure induced by other causes. But the similarity in the timing is striking. In fact, the mid 1990s was also the end of the trend towards gender equality in earnings; the shift towards occupational integration also stalled in the 1990s; and the growth of women in local and state elective office ended in the mid 1990s. The variety of changes that experienced a similar turning point then suggests a broad cultural base to the changes of the last decade. The cultural explanation certainly seems more plausible than human capital or fertility explanations.

## **Conclusion**

The scope of change in the second half of the twentieth century is nothing short of incredible. At mid-century it was expected that women would spend much of their adult lives out of the labor force, it was expected that employers would specify whether they wished to hire a man (or perhaps a woman) for a particular job, and it was accepted that women would be paid less than men, even for doing the same job. In the ensuing decades all of this changed. Today most women work outside the home, even when their children are quite young, and employer discrimination in hiring and pay has been banned. Despite these changes, as we have shown, gender inequality persists. Women remain less likely than men to be active in the labor force,

more than half of them are in jobs which are predominantly female, and they still get paid less, even in the same kind of work.

In this concluding section we first summarize the findings regarding broad patterns of labor force participation, occupational segregation, and earnings focusing on the current state of gender inequality, change from the 1950s to 2000s, and the pattern of change in the past decade. We will also look at these changes within the specific demographic subgroups we examined (race, age/cohort, and education).

### *General Patterns*

The findings outlined above showed that in 2000 women were still somewhat less likely than men to be active in the labor force – 73% of women and 86% of men aged 25-54 were in the labor force in 2000, with 46% of women and 68% of men working full time year round. While men had shown small declines in labor force participation since the 1950s, women exhibit rapid increases in labor force participation each decade up to the 1990s in which they showed a stagnation or retrenchment in labor force participation. These trends are even more exaggerated for married women and especially those with children, among whom both the rise in participation and its retrenchment in the 1990s are most pronounced. On the other hand, labor force participation of single mothers increased greatly in the late 1990s after having remained stable from the late 1970s to the mid 1990s. While women have made great strides gaining entry into previously closed areas of employment, the occupations men and women hold remain largely segregated with the typical man working in an occupation where just over a third of his peers are women and the typical woman working in an occupation which is 71% female. The overall level of segregation today – in which just under half of women or men would have to change occupations to eliminate segregation – is substantially less than what was observed at mid-century when a shift of nearly two thirds would have been required. Finally, the difference in earnings for men and women remains large, with women earning only 73 cents for every

dollar earned by their male counterparts. But this too marks progress – in 1950 the figure was 59 cents. In part this is because women’s inflation-adjusted earnings have increased steadily since the 1950s while men’s increased through the early 1970s and then stagnated or fell until the mid 1990s. The narrowing of the gender pay gap was a combination of women’s steady progress and men’s uneven advances. Thus, broadly, gender differences in engagement with paid work, the type of work they do and the pay they receive for that work remain at the beginning of the 21<sup>st</sup> century and after having narrowed since the middle of the century the pace of change appears to have slowed in the last decade.

### *Age, Period and Cohort Effects*

One of the consistent themes examined here is how these patterns and trends play out across age groups, and to what extent the changes we observe are attributable to episodic changes (period effects) or generational shifts (cohort effects). Patterns of labor force participation over the life course were shown to be differentiated by gender – men’s remaining fairly constant through the “prime years” of 25 to 54 and women’s dropping down in the prime childbearing and rearing years – but the degree of differentiation was shown to be declining across cohorts to the extent that it was nearly indiscernible by 1990 or 2000. Both men’s and women’s earnings increased with age – but because men’s rise faster the gender gap grows across the life course. In addition, over time there were both cohort and period effects: women born in later cohorts started closer to men’s earnings and experienced faster growth in earnings over time, losing less ground to their male counterparts than had women of earlier cohorts. Segregation, however, appears to have declined fairly uniformly across cohorts, indicating that the changes that took place were largely period effects – each cohort experienced about the same amount of change decade to decade, though newer cohorts entered the labor market somewhat less segregated than the one before them. Thus, we find that, across these three dimensions,

period effects have broad impact across cohorts, but the cohort changes in gender differences accentuate these shifts.

### *Race and Ethnicity*

To a large degree the story of persistent inequality despite substantial progress holds true for women regardless of race and ethnicity. All women today have rates of labor force participation, occupational distributions and earnings that are closer to those of both same-race and white men than they were in 1950. But none have attained parity with men on any of the three. Gender differences in earnings and labor force participation comparing men and women of color appear smaller than the differences among whites, but this is mostly due to the lower levels of earnings or labor force participation of men in those groups. Only Asians show levels of within-race occupational segregation which is notably different from the pattern observed for whites.

### *Education*

Education goes a long way toward determining how one fares in the labor market in the United States and this has been increasingly so for the past half century. It does little, however, to explain gender inequality. Education raises levels of earnings and labor force participation for both women and men. Thus, levels of gender inequality for these two dimensions were fairly similar across levels of education. The patterns of change over time were also similar across levels of education, leading to convergence on both of these dimensions. However, occupational gender segregation did vary by education with college graduates having been notably less segregated than those of other educational levels.

### *Assessing and Interpreting Change*

The results reviewed above show the remarkable breadth of change in gender inequality in the United States since the 1950s. In fact it is very unlikely that an observer in 1950 would have predicted that by the end of the 1960s nearly half of all women would be in the labor force, that about a third of bus drivers and bill collectors would be women, and that women's earnings would be as close to men's as they are. At the time the status quo seemed normal, natural, or even inevitable.<sup>22</sup> A short time later, say by the end of the 1970s, a writer might be tempted to think that progress toward gender equality was so rapid and fully established as to be inevitable. Indeed, change in gender roles did seem inevitable to those living through it. For example, in 1980, 78% of women believed women's roles would continue to change in the years to come and 84% thought it likely that by the year 2000 almost all women who could work would work. Even in the 1990s the majority women thought changes in gender relations would "occur as a matter of course".<sup>23</sup> The sustained changes in gender relations over the last half of the twentieth century have undoubtedly lead to a belief that gender equality was in fact inevitable.

Either of the above extremes should make any social scientist nervous about predicting the future based on current conditions. If we were to take, for instance, the trends established in the 1970s, we would predict (starting from the 1970 values) that women and men would attain parity in labor force participation by 2001, occupational integration in 2113 but would never have equal earnings because the wage gap did not narrow in the 1970s. If the 1980s was our reference point, however, equality in labor force participation would come in 2006, occupations in 2086 and earnings in 2023. But if we took the 1990s as our model, labor force participation rates would not converge until 2035, occupational integration in 2252, and we would have to wait until 2051 to see parity in men's and women's earnings. With reason, then, we are cautious both about the progress documented here and in interpreting the signs of a pause or setback in that progress which is indicated by at least some of the findings about the 1990s.

The forms, causes and consequences of the shifts observed from the 1950s through the 1980s are by now fairly well known and well documented elsewhere. We proceed by addressing

the following questions about the slowing and setback of the 1990s: *Is it real? Is it permanent or temporary? Is it a period or cohort effect? What caused the change? Is it significant?*

*Is it real?* One of the first reactions of those with whom we have discussed these findings is to wonder whether these might simply be artifacts of the data. This is a natural sort of skepticism social scientists make use of to ensure that their results are valid and reliable. Indeed as noted above there were some changes to question wording about employment between the 1990 and 2000 Censuses which may contribute to the lower estimates of labor force participation. We too were skeptical when we first saw these figures. But as evidence – on different dimensions and from different sources – began to mount we became increasingly convinced that this might reflect some real change in the society. The fact that it crosses the three dimensions, that it is reflected in some changes beyond the world of work (see the data on attitudes) and appears to mirror findings in some other sources gives us some confidence in the findings. But, the changes are not uniform across all three dimensions, and with earnings have at least as much to do with men's earnings as women's. In addition, a number of indicators of gender inequality such as education and political representation show signs of continued progress toward equality. For the time being then, we give a tentative answer that the stagnation is probably real.

*Is it permanent or temporary?* and *Is it a period effect or a cohort effect?* We see these two questions as linked. This is not to say that generational changes are permanent and historical ones temporary (or vice versa). Nor would it be realistic to think of any such change as truly *permanent*. After all observers of the 1950s surely thought those conditions to be set in stone and destined to last forever. But a relatively long-term shift is different from one which lasts less than a decade. A change in response to historical events felt by all generations is different from one experienced primarily by those who are young (or old) at a given point in time. For instance, if the stagnation in women's labor force participation in the 1990s was just a response to an abnormally good economy which allowed some women to "opt out" of the labor force in

favor of family (a temporary period effect), then a return to work in the face of the more economically troubled times of the last few years would be expected. But if the patterns of young mothers leaving the labor force represent instead a more profound cultural shift, say a rejection by women of this generation of the pattern of “career then family” or “career and family” modeled by the women of the Baby Boom generation then the change takes on a different meaning as a permanent cohort effect.<sup>24</sup> Additionally, though, even if it is simply a result of “good times” this pattern of career interruption may have effects which reverberate through the lives of women of that generation in terms of pay and promotions and access to occupations. There is no way for us to know yet whether these changes ceased before we began to write this manuscript or if observers will mark the 1990s as a turning point in gender equality.

*What caused the change?* As we revealed above, it is unlikely that a definitive answer to this question could ever be offered – at least not one that didn’t begin by saying “it’s complicated.” It is unlikely that a single factor which led to these changes would ever be identified. At the same time, our review offers some clues and tempting leads on suspects. Given that increases in both education and experience continued right through the 1990s, even at accelerated rates, it seems unlikely that human capital will account for much of the change in this period. The rebound in men’s wages associated with the strong economy is a more promising, though still partial, explanation. Politics and policy may hold some promise too. Two of the major legislative efforts of the 1990s may have had profound impacts on women’s employment. The first, the Family and Medical Leave Act, may have had the effect of reducing women’s employment by allowing families to have one worker (usually the wife or mother) leave the labor force for up to three months of unpaid leave. The other legislation, the Personal Opportunity and Work Reconciliation Act, put strict time limitations on welfare receipt and mandated work requirements for single mothers. Both of these pieces of legislation may have impacted women’s choices about work.

*What would a shift in momentum or direction mean?* This final question may be the most difficult of all. It hinges somewhat on the answers to the questions above. We'll spin out a few scenarios – all of which assume that the changes are in fact real:

1. *Real but relatively unimportant.* While the shifts of the 1990s may be real, they are also fairly small. A close look at some of the other trend data shows periods that, at the time, may also have looked like reversals or retrenchment. Some of the appearance of reversal may simply have to do with timing – in a few years the apparent stagnation might look like a simple blip on the graphs. Still, the growing gap in labor force participation among married and single mothers may mean that children in these two types of families will have experienced childhood quite differently, with possible long term consequences.
2. *Temporary change driven by a good economy.* This sort of change would only have short term effects on all women – and little effect on men – but some potentially powerful and pervasive effects on women whose careers were in their formative stages in the 1990s. These women are the ones who would have entered the labor force with strong expectations for career attainment and then “opted out” in favor of family in the mid 1990s. They may well be able to “opt back in” and seamlessly return to the careers they abandoned or scaled back on, but more likely they will see lower earnings trajectories, shorter career ladders and limited access to the higher echelons of the world of work. Such a situation can be observed with women born between the two World Wars who, in comparison to cohorts before and after them, experienced higher levels of gender inequality in pay over their entire life course. These are the women about (and by and for) whom *The Feminine Mystique* was written, but they are also the women who pressed for the Equal Pay Act of 1963 and the Civil Rights Act of 1964, and led the women's liberation movements of the 1960s and 1970s.
3. *Permanent shifts due to cultural change.* By many accounts something changed in the culture in the 1960s and 1970s that made it possible for many, even most, women to

imagine working, not just in jobs but in careers. It led increasing numbers of women and men to respond to pollsters that they “approve ... of a married woman earning money in business or industry if she has a husband capable of supporting her” (General Social Survey Question). But some observers suggest that something may have changed again in the late 1980s and 1990s, a “backlash” against the upheaval in work and family life.<sup>25</sup> While it seems improbable that the gains of the last fifty years could be erased, it is possible. Looking only at the difference between the 1920s and the 1950s provides ample illustration of the way that gender *became* more significant in the labor market.<sup>26</sup>

4. *The baby boomers were different.* If the question is changed – from why are the 1990s different to why were the 1960s, 1970s and 1980s different – then we might be tempted to say that the Baby Boomers – those born between 1945 and 1965 were just different. Many of the mothers of the Baby Boomers briefly worked, often in nontraditional jobs, during World War II. Even though many of these women left the labor force for a time to raise children, their brief work experience undoubtedly had an impact on the employment hopes, desires, and expectations for women of the Baby Boom cohort. In addition, the Baby Boomer’s model for work and family (career then family, career and family) significantly differentiates them from cohorts before and perhaps after them. Their actions led to massive changes in gender, work and family (along with other institutions) that by now have quieted. Other generations may show patterns more similar to earlier ones, or may simply replicate the patterns of the Baby Boomers.
5. *The limits of change.* A final possibility is that the 1990s represent neither a temporary resting place nor a turning point for change but a new semi-stable balance. By the middle of the 1990s all of the cumulative change of the 1960s, 1970s and 1980s had reached its end and this is the new equilibrium. Those women who chose to work, worked while those who preferred to stay at home with children did so. Those women who chose to enter mixed occupations did – but some also chose “female” and a few even “male”

occupations. The notable emphasis on “choice” in the preceding sentences is important. It implies that these changes are a result of individual actions, of expressions of preferences, rather than responses to constraints or to external conditions. Such “rhetoric of choice” is the dominant mode of thinking not just in social science but in society as well.<sup>27</sup> But it has limitations and inadequacies. In a *New York Times Magazine* article in late 2003, the author reports on a group of five women, all Princeton graduates, who for one reason or another have “chosen” to interrupt career for family.<sup>28</sup> Careful reading reveals not just choice – affirmation of child rearing as rewarding and fulfilling work – but also constraint: each of the women faced rising burdens and barriers in their careers.

The scenarios we have outlined above each call for different responses. In all, we believe that the next several years may enable a clearer picture of whether the apparent retrenchment of the 1990s is in fact real. Once that question is settled perhaps brighter light can be cast about its causes, and, therefore, more accurate assessments of responses to these changes can be prescribed.

## **Textbox 1**

### Measures of Employment

How to measure employment? For most people, the answer is probably straightforward – either you have a job or you don't. However, social scientists use many different measures to draw distinctions about one's relationship to the labor market. Several of these measures are discussed here and corresponding data are presented in Table Textbox 1.

----- Table Textbox 1 about here -----

*In the labor force:* This measure, the labor force participation rate, accounts for individuals who are currently employed or seeking employment. That is, this indicator tells us the percentage of people who want or already have a job. The advantage of this measure is that it indicates how widespread the desire for paid work is, an issue particularly important when considering how women's roles have changed over time. In 2000, nearly 74% of women and 86% of men were in the labor force. Of those in the labor force, some were unemployed and seeking work; between 4% and 5% of women and men in the labor force were classified as such. Estimates of labor force participation are larger than any other estimates in Table Textbox 1 as this is the most inclusive measure of employment available.

*Usual hours and number of weeks worked:* Because the labor participation rate is a gross measure of employment, it tells us little about how much those who are employed actually work. For this information, one would need to examine the distribution of hours and weeks worked. A measure of usual hours worked tells us whether someone typically works part-time or full-time, an important consideration when evaluating women's work patterns as women are more likely than men to work part-time. An indicator based on the number of weeks worked in a year accounts for the potential instability of employment and the movement of people in and out of

jobs. As with hours worked, women work fewer weeks per year than do men.

*Full-time, year-round employment:* Information on usual hours worked and weeks worked in the past year can be used to construct a measure of full-time (35+ hours/wk), year-round (50+ weeks/yr) employment. Estimates of full-time year-round employment are considerably lower than those for labor force participation as these estimates are based on stringent restrictions. Gender differences in employment, however, are substantially higher when considering full-time year-round employment, reflecting the fact that women are more likely than men to be out of the labor force, unemployed, or working part-time or part-year than are men. In 1999, nearly 46% of women and 68% of men were employed full time year round.

*Out of the labor force:* Individuals who are not employed or actively seeking work are considered out of the labor force. In 2000, approximately 27% of women and 14% of adult men were out of the labor force. Some of these people had work limiting disabilities, others simply chose not to work, and still others became discouraged and stopped seeking work when their earlier job searches failed.

## **Textbox 2**

### *Cross-National Patterns of Women's Labor Force Participation*

There is marked variation across countries in women's access to paid employment as well as the types of work women do. Indeed, comparisons across countries can be difficult to make because of different types of economies and levels of economic development across countries. In many countries women participate in unpaid agricultural work and thus would not appear in estimates of labor force participation. In other countries, the division of labor is not as complex as seen in countries such as the United States and France and hence, there may be fewer opportunities available for women to enter the labor force. The most common measure used to

characterize women's employment across countries is the labor force participation rate. Rates for several countries are shown in Table Textbox 2.

----- Table Textbox 2 about here -----

Women's labor force rates are generally higher in the developed countries of Western Europe and North America, and lower in the Middle East and North Africa. Countries in Latin America, Asia, and Eastern Europe report rates near the middle of the distribution. At the high end are countries such as Sweden, the Netherlands, and France where over 60% of women are in the labor force. At the low end are countries like Iran, Jordan, and Syria where fewer than 2 in 10 women are in the labor force. However, within each region there is substantial variation. For example, the female labor force participation rate in Sweden (67%) is nearly double that in Italy (35%). Similarly, while nearly 2 out of 3 women in Thailand are in the labor force, only about 1 in 6 women in Pakistan are.

The labor force participation of women in most Western European, Latin American, and Asian countries increased during the 1990s. However, women in the transition economies of Eastern Europe (e.g. Hungary, Poland, Russia) as well as women in Sub-Saharan Africa and the Middle East experienced declining labor force participation during the same period.<sup>29</sup>

Similar to women in the United States, women around the world are more likely than men to work part-time. Again, though, the differences across countries are quite substantial. Women are more likely to work part-time in places such as Australia, Norway, Switzerland, and the United Kingdom where over 40% of employed women are part-time workers. Part-time employment is less common in places like the Czech Republic, Greece, and Hungary (ILO, 2003: 43), which happen to also be places with relatively low female labor force participation rates.

### **Textbox 3**

#### ***Stereotypers and Software Engineers: Changing Measures and Measuring Change***

As with many other things, the Census' attempts to describe Americans' occupations is complicated by the fact of change. The central problem is whether to attempt to provide the most accurate picture of what, who and where we are today, or to allow comparisons to yesterday. For our purposes, we are faced with the problem of trying to describe the contemporary differences between the jobs men and women have and to compare men's and women's presence in occupations over time. The first Census to ask about occupations was in 1850 (but only for men). As you might imagine, trying to compare the occupations listed for 1850 with those we might see today is complicated. Even though we only compare 1950 to the present, there still have been substantial changes. Two points – 1970 and 2000 – represent the most substantial changes.

In light of changes in the types of work we do, the Census Bureau thoroughly revised its system of classifying occupations for the 2000 Census – the most substantial changes since the system was developed in the 1940s. Casual inspection of the new codes suggests that between 1990 and 2000 some occupations seem to have disappeared (example: charwomen) where others have been created (example: computer software engineers). In truth there are still charwomen – they cleaned the last hotel room you stayed in – and there were software engineers in 1990, they just had a different occupational classification. In some cases, they were grouped with some larger occupation (cleaners) and in others they were split among several more detailed occupations.

### **Textbox 4**

#### ***Averages: Medians, Means, and Percentiles***

The definition of “average” earnings has important consequences for calculating the gender gap in earnings. Median earnings are the most common definition: at the median, half of

all workers earn more and half earn less. The median can be thought of as the earnings for the average man or woman.

But as Figure Textbox 4 makes clear, the distribution of earnings has a long tail at the top end so a small proportion of workers earn many times the median earnings. This large tail pulls up the mean earnings, another definition of average earnings. Mean earnings are the sum of everybody's earnings divided by the number of people. Because there are more men than women in the upper tail of the earnings distribution, using the mean rather than the median will increase men's average earnings more than women's. As a result, the gender gap at mean earnings is usually bigger than the gender gap at median earnings.

----- Figure Textbox 4 about here -----

Another common method of handling the lopsided nature of the earnings distribution in Figure Textbox 4 (what statisticians call the skew in the distribution) is to analyze the logarithm of people's earnings. This statistical transformation turns the earnings distributions in Figure Textbox 4 into bell-shaped curves that are more symmetric around the mean. The mean of the logarithm of women's earnings, for instance, is 10.205, which when transformed back into dollars becomes \$27,049. This average is called the geometric mean. As Table 9 illustrates, the geometric means of men's and women's earnings are very close to their median earnings.

Using the logarithm of earnings has two other major advantages. The bell-shaped distribution of log earnings resembles more closely the "normal" curve that underlies most statistical testing. So, detailed statistical analyses of samples from the Census (or especially from smaller surveys) are more likely to lead to accurate conclusions about the entire population when they use the logarithm of earnings rather than simple earnings. Group differences in log earnings can also be interpreted as proportional differences, the more common way we think about differences in income. For instance, it is more common, and probably more meaningful, to note that women's average earnings increased by xx% over the decade, rather than to say they increased by \$x,xxx. For both these reasons, the more detailed statistical analyses of earnings

reported in this bulletin are based on analyses of log earnings.

Regardless of which measure of “average” earnings is chosen, gender differences in these averages do not always reflect how big gender difference are at lower or upper ends of the earnings distribution. Discussions of “glass ceilings”, for instance, usually imply gender differences that exist among top earners. What we know about gender differences in average earnings may or may not apply to these top earners. One way to study gender differences at the two ends of the earnings distributions is to compare the relative size of the earnings gap at low and high points along the earnings distribution. For instance, the last row of Table 9 compares the 80<sup>th</sup> percentile of men’s and women’s earnings. Just as women’s median earnings are the level at which half (50%) of women earn less than that level, the 80<sup>th</sup> percentile of earnings reflects the level at which 80% of women earn less than that level. As Table 9 demonstrates, the gender gaps at these higher levels are larger than at the middle of the distributions (which are, in turn, larger than at the 20<sup>th</sup> percentiles -- near the bottom of the distributions).

Most women are clustered at the lower end of the earnings distribution. Figure Textbox 4 shows how women not only have lower average earnings than men, but the variation across women is also narrower. Many men have low earnings too, but there are also many men who earn very large amounts. Men dominate at these higher levels of earnings. At \$40,000 there are 68% more men than women; at \$100,000 there are 4.3 times as many men.

Gender earnings ratios are usually calculated for the “average” man and woman. Because of the greater proportion of men with high earnings, these “average” gender ratios understate the size of the gender gap for high income workers and overstate the size of the gap for low income workers. While we will concentrate on the gender gaps at the average as the best single indicator of gender inequalities in earnings, as do most analysts, we also will note when comparisons at low or high levels suggest a different pattern from the average.

## **Textbox 5**

### ***Glass Ceilings***

In a 1986 *Wall Street Journal* article on women in the workforce, Carol Hymowitz and Timothy Schellhardt coined the term “glass ceiling” to describe the experience of female executives who seemed unable to reach the highest levels of corporate success. Since that time a large number of academic, journalistic and government reports have addressed the problem. The Federal Glass Ceiling Commission, founded in 1991, defined the glass ceiling as the “unseen, yet unbreachable barrier that keeps minorities and women from rising to the upper rungs of the corporate ladder, regardless of their qualifications or achievements”.<sup>30</sup> Typical signs of a glass ceiling are the lack of women on corporate boards of directors, their relative absence from positions as CEO or president of large companies, and their relative scarcity at the top of government and educational institutions. For instance, a report from the organization Catalyst showed that in 2002 women held just 13.6% of the nearly six thousand seats on Fortune 500 boards.<sup>31</sup>

As useful as the idea of a glass ceiling may be, it has been increasingly used to describe so broad a variety of circumstances that it has become difficult to discern a difference between a “glass ceiling” and generic forms of gender inequality. In addition, scholars generated a series of related metaphors, including *glass escalators* to denote men’s rapid upward mobility in female occupations, *sticky floors* to point out the way that women and minorities often were relegated to the lowest rungs on corporate ladders, *glass walls* to describe the way that women and minorities were sectioned off into certain parts of organizations like human resources or public relations and even *concrete ceilings* to emphasize the total absence of women of color from positions in corporate governance. In an effort address this problem we developed a set of four criteria to

distinguish glass ceilings from other forms of gender or racial inequality. These included:

1. A glass ceiling inequality represents a gender or racial difference that is not explained by other job-relevant characteristics of the employee.
2. A glass ceiling inequality represents a gender or racial difference that is greater at higher levels of an outcome than at lower levels of an outcome.
3. A glass ceiling inequality represents a gender or racial inequality in the chances of advancement into higher levels, not merely the proportions currently at those higher levels.
4. A glass ceiling inequality represents a gender or racial inequality that increases over the course of a career.

Results of studies using these criteria to analyze individual work histories suggested that there are glass ceilings for women and minorities, and that for minority women the glass ceiling falls quite low with respect to both earnings and advancement to managerial status.<sup>32</sup> At high earnings levels, defined in this research as chances of reaching white men's 75<sup>th</sup> percentile in earnings, the gap between white men's and women's chances grows larger over the career. This is depicted in Figure Textbox 5 which shows the percentage of each gender/racial group that reaches the 75<sup>th</sup> percentile of white men's earnings over the course of their careers. By definition, 25% of white men are at this level at any given point in time, but a smaller number (10%) are at it at the beginning of their careers and a larger number at the end (30%). For white women, less start at this high level of earnings, and the rate at which they attain high earnings is much slower than white men's so the gap between white women and white men grows over the course of their careers. This gap grows only at the higher level of earnings, not at moderate or low levels. African American women see no increase in their chances of attaining high earnings

and the gap compared to white men grows substantially over their careers. Both of these findings suggest a glass ceiling in earnings for women. In contrast, there is less evidence of such a glass ceiling for African American men. While African American men are less likely than white men to achieve each of the earnings benchmarks, the gap does not grow larger later in their careers nor is it especially stronger at high earnings levels than at low earnings levels. The research on advancement to managerial status shows that relative to white men, chances for advancement among white women, black women and black men fall further behind, even among the most recent college educated workers.

----- Figure Textbox 5 about here -----

**Textbox 6**  
***Spatial Variation in Gender Inequality***

While much of our focus in this manuscript is on change over time, spatial variation is often ignored. The places we live are quite varied and one of the ways those places vary is in their levels of gender inequality -- variation that can sometimes be as great or greater than the differences observed over time. For instance, the occupational segregation statistics displayed in Table Textbox 6 are lowest in Austin-San Marcos, TX at 0.41 and highest in Houston-Galveston, TX at 0.51 – a ten point difference which is just less than the change from 1970 to 2000. The ratio of women’s earnings to men’s ranges from a low of 64% in Detroit to a high of 82% in Fresno, CA, as much as the change from 1968 to 2000. Similarly, women’s labor force participation rates range from a low of 66% in Los Angeles to a high of 83% in Minneapolis-St. Paul, MN, more than the total change seen in the 1970s. The variations presented here are in fact smaller than the total variations across places, in part because smaller metropolitan areas have greater variation, especially higher levels of gender inequality though there are few substantial

differences in gender inequality between metropolitan and nonmetropolitan areas as a whole.<sup>33</sup>

Attention to spatial variation is important because most Americans work in local rather than national labor markets. We look for jobs within occupations in particular cities or regions rather than anywhere in the country. Thus, some of us may be working in places with labor markets in which men and women are more equal, some in labor markets with less equality. The underlying dynamics of these differences across places are not limited to gender inequality, and their origins and interrelationships are the subject of recent research.<sup>34</sup> Some of the variation can be traced to compositional differences in the populations of these places – we would expect lower levels of labor force participation in areas with concentrations of people less likely to be in the labor force. Thus the larger Hispanic population in Los Angeles relative to Minneapolis may account for some of the difference in women’s labor force participation. But part may also be explained by differences in the occupational or industrial compositions. Austin’s high tech and government sector employment may be more “female friendly” than the energy industry of Houston. Some of the difference may be cultural – norms about appropriate male and female roles may vary across different parts of the country. In any case, it is notable that conditions are far from uniform across the United States.

----- Table Textbox 6 -----

### **Further Reading**

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Christine L. Williams, *Still a Man's World: Men Who Do "Women's Work"* (Berkeley, CA: University of California Press, 1995).

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<sup>1</sup> Trond Petersen and Laurie A. Morgan, "Separate and Unequal: Occupation Establishment Sex Segregation and the Gender Wage Gap," *American Journal of Sociology* 101 (September 1995): 329-65.

<sup>2</sup> Jerry A. Jacobs, *Revolving Doors: Sex Segregation and Women's Careers* (Stanford, CA: Stanford University Press, 1989).

<sup>3</sup> Otis Dudley Duncan and Beverly Duncan, "A Methodological Analysis of Segregation Indexes," *American Sociological Review* 20 (April 1955): 210-17.

<sup>4</sup> This may be a little misleading because this occupational classification lumps all teachers – from kindergarten through college into the same occupation. From the 1950s through the 1990s there *have* been increases in the proportion of women among college faculty and some increases in male elementary/secondary school teachers.

<sup>5</sup> Kim A. Weeden, "Why Do Some Occupations Pay More than Others? Social Closure and Earnings Inequality in the United States," *American Journal of Sociology* 108 (July 2002): 55-102.

<sup>6</sup> Jerry A. Jacobs, "Gender and Academic Specialties: Trends Among Recipients of College Degrees during the 1980s," *Sociology of Education* 68 (April 1995): 81-98.

<sup>7</sup> Francine D Blau and Lawrence M. Kahn, "Swimming Upstream: Trends in the Gender Wage Differential in the 1980s," *Journal of Labor Economics* 15 (January 1997): 1-42.

<sup>8</sup> Rae Lesser Blumberg, "A General Theory of Gender Stratification," in *Sociological Theory*, ed. Randall Collins (San Francisco: Jossey-Bass, 1984). Janet Saltzman Chafetz, *Sex and Advantage: A Comparative, Macro-Structural Theory of Sex Stratification* (Totowa, NJ: Rowman and Allenheld, 1984). Valerie K. Oppenheimer, *The Female Labor Force in the United States* (Berkeley, CA: University of California Press, 1970).

<sup>9</sup> Dawn Michelle Baunach and Sandra L. Barnes, "Competition, Race, and the Measurement of Female Labor Activity," *Sociological Inquiry* 73 (August 2003): 413-40. David A. Cotter, JoAnn M. DeFiore, Joan M. Hermsen, Brenda Marsteller Kowalewski, and Reeve Vanneman, "The Demand for Female Labor," *American Journal of Sociology* 103 (May 1998): 1673-1712.

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- <sup>10</sup> Ruth Cowan, *More Work For Mother: The Ironies Of Household Technology From The Open Hearth To The Microwave* (New York: Basic Books, 1983).
- <sup>11</sup> Claudia Goldin and Lawrence F. Katz, "The Power of the Pill: Oral Contraceptives and Women's Career and Marriage Decisions," *Journal of Political Economy* 110 (August 2000): 730-70.
- <sup>12</sup> Brigid C. Harrison, *Women in American Politics: An Introduction*. (Belmont, CA: Thompson, 2003).
- <sup>13</sup> Paul, R. Burstein, Marie Bricher, and Rachel L. Einwohner, "Policy Alternatives and Political Change: Work, Family and Gender on the Congressional Agenda, 1945-1990," *American Sociological Review* 60 (February 1995): 67-83.
- <sup>14</sup> Equal Employment Opportunity Commission, "Executive Order No. 11246," accessed online at [www.eeoc.gov/abouteeoc/35th/thelaw/eo-11246.html](http://www.eeoc.gov/abouteeoc/35th/thelaw/eo-11246.html) on April 4, 2004.
- <sup>15</sup> Barbara, Barbara, *The Realities of Affirmative Action in Employment* (Washington, DC: American Sociological Association, 1998).
- <sup>16</sup> Robert L. Nelson and William P. Bridges, *Legalizing Gender Inequality* (Cambridge, UK: Cambridge University Press, 1999). Paula England, *Comparable Worth: Theories and Evidence* (New York: Aldine de Gruyter, 1992).
- <sup>17</sup> Nelson and Bridges, *Legalizing Gender Inequality*. England, *Comparable Worth*.
- <sup>18</sup> Barbara F. Reskin, "Employment Discrimination and Its Remedies," in *Sourcebook of Labor Markets: Evolving Structures and Processes*, ed. Ivar Berg and Arne L. Kalleberg (New York: Kluwer/Plenum, 2001).
- <sup>19</sup> Jacob Alex Klerman and Arleen Leibowitz, "Labor Supply Effects of State Maternity Legislation," in *Gender and Family Issues in the Workplace*, ed. Francine Blau and Ronald Ehernberg (New York: Russell Sage Foundation, 1997).
- <sup>20</sup> Myra Marx Ferree, "A Woman for President? Changing Responses: 1958-1972," *Public Opinion Quarterly* 38 (Autumn 1974): 390-99.
- <sup>21</sup> The number and content of the questions varied over time so an exactly equal measure cannot be constructed over time. Fortunately, the same seven gender role questions were asked in 1977 and between 1985 and 2002. Answers to these questions are correlated highly enough to suggest that they tap different aspects of a common attitude towards more traditional or more egalitarian gender roles. To extend the comparison to years when only some of these questions were asked, responses to the questions were first standardized according to the means and standard deviations of the surveys in which all seven were asked.
- <sup>22</sup> Talcott Parsons, "The Kinship System of the Contemporary United States," *Essays in Sociological Theory* (New York: Free Press, 1954).
- <sup>23</sup> Based on authors' analyses of the 1980 and 1990 Virginia Slims American Women's Opinion Polls.
- <sup>24</sup> Claudia Goldin, "Career and Family: College Women Look to the Past," in *Gender and Family Issues in the Workplace*, ed. Francine Blau and Ronald Ehernberg (New York: Russell Sage Foundation, 1997).
- <sup>25</sup> Susan Faludi, *Backlash: The Undeclared War Against American Women* (New York: Doubleday, 1991).
- <sup>26</sup> Claudia Goldin, "The Rising (and then Declining) Significance of Gender." NBER Working Paper no. 8915,

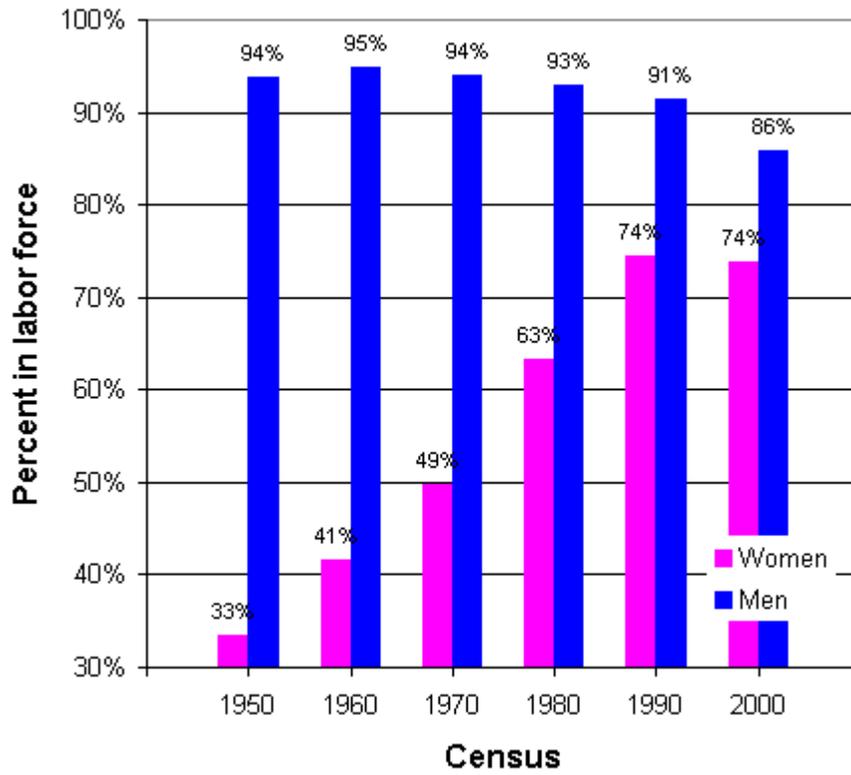
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accessed online at [www.economics.harvard.edu/~goldin/papers.html](http://www.economics.harvard.edu/~goldin/papers.html) on April 4, 2004.

- <sup>27</sup> Joan Williams, *Unbending Gender: Why Family and Work Conflict and What to do About It* (New York: Oxford University Press, 2002).
- <sup>28</sup> Lisa Belkin, "The Opt-Out Revolution," *New York Times Magazine* October 26, 2003.
- <sup>29</sup> International Labor Office, "Time for Equality at Work," accessed online at [www.ilo.org/declaration](http://www.ilo.org/declaration) on April 4, 2004.
- <sup>30</sup> Federal Glass Ceiling Commission, *Solid Investment: Making Full Use of the Nation's Human Capital* (U.S. Department of Labor, 1995: 4).
- <sup>31</sup> Catalyst, Inc., *Women of Color in Corporate Management: Opportunities and Barriers* (New York: Catalyst, 1999).
- <sup>32</sup> David A. Cotter, Joan M. Hermsen, Seth Ovardia and Reeve Vanneman, "The Glass Ceiling Effect," *Social Forces* 80 (December 2001): 655-81. David J. Maume, "Is the Glass Ceiling a Unique Form of Inequality? A Random-effects Model of Managerial Attainment," Paper presented at the Southern Sociological Society, New Orleans, LA, 2003.
- <sup>33</sup> David A. Cotter, JoAnn M. DeFiore, Joan M. Hermsen, Brenda Marsteller Kowalewski, and Reeve Vanneman, "Nonmetropolitan and Metropolitan Gender Inequality," *Rural Sociology* 61 (1996): 272-88.
- <sup>34</sup> David A. Cotter, Joan M. Hermsen and Reeve Vanneman, "Systems of Gender, Race, and Class Inequality: Multilevel Analyses," *Social Forces* 78 (December 1999): 433-60. Leslie McCall, *Complex Inequality: Gender, Class and Race in the New Economy* (New York: Routledge, 2001).

Figure 1

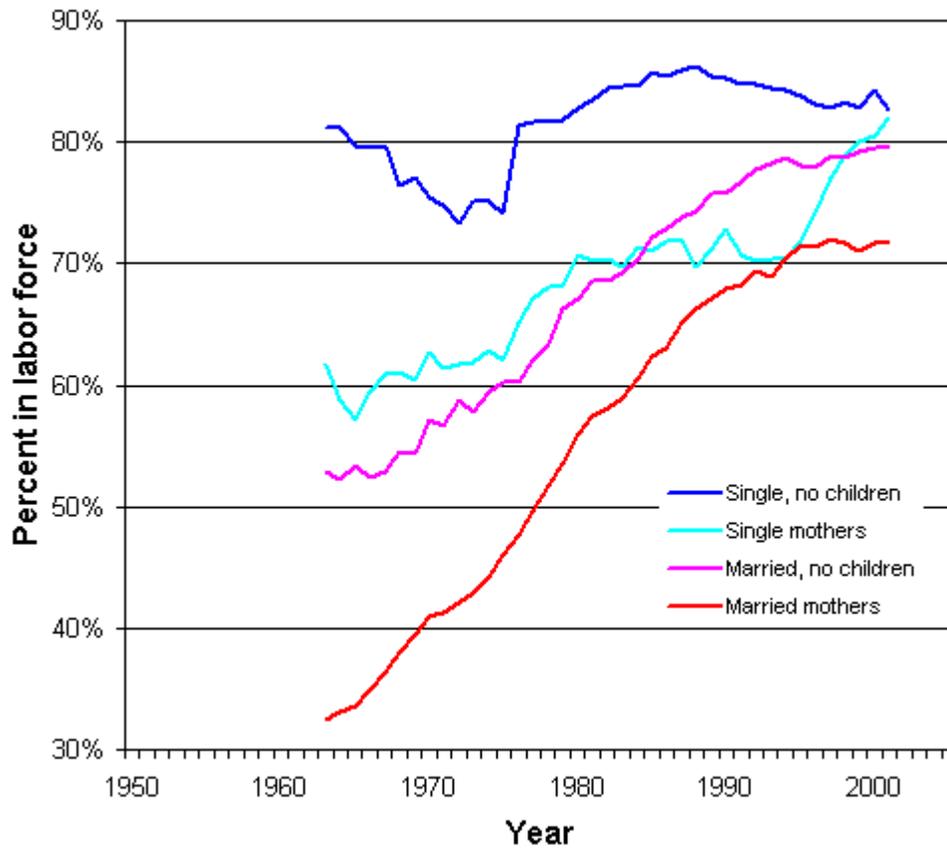
Labor force participation by gender, ages 25-54, 1950-2000



Source: IPUMS ([www.ipums.umn.edu/usa/](http://www.ipums.umn.edu/usa/))

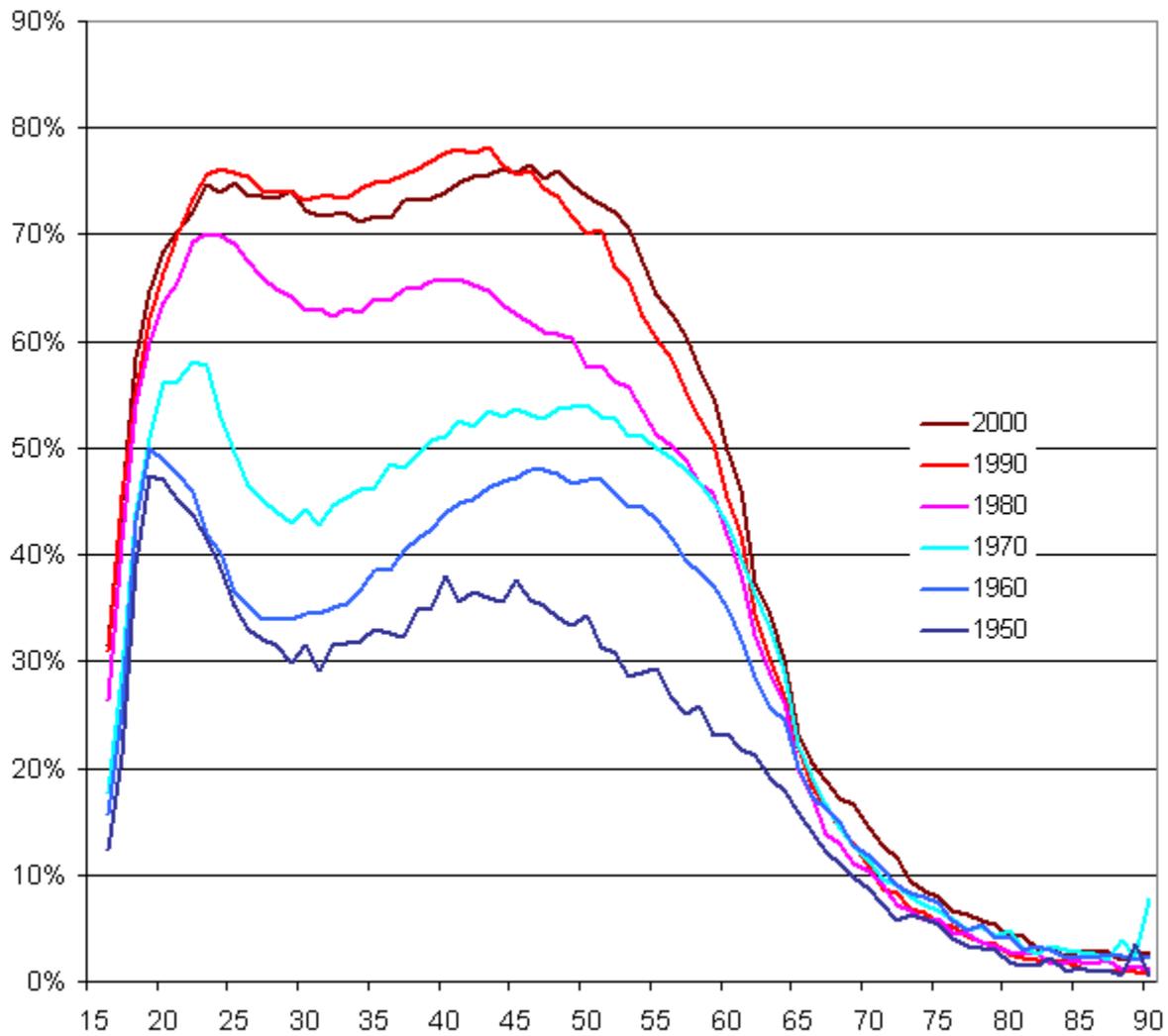
Figure 2

Labor force participation rates of women by family status, ages 25-54, 1962-2002



Source: March CPS

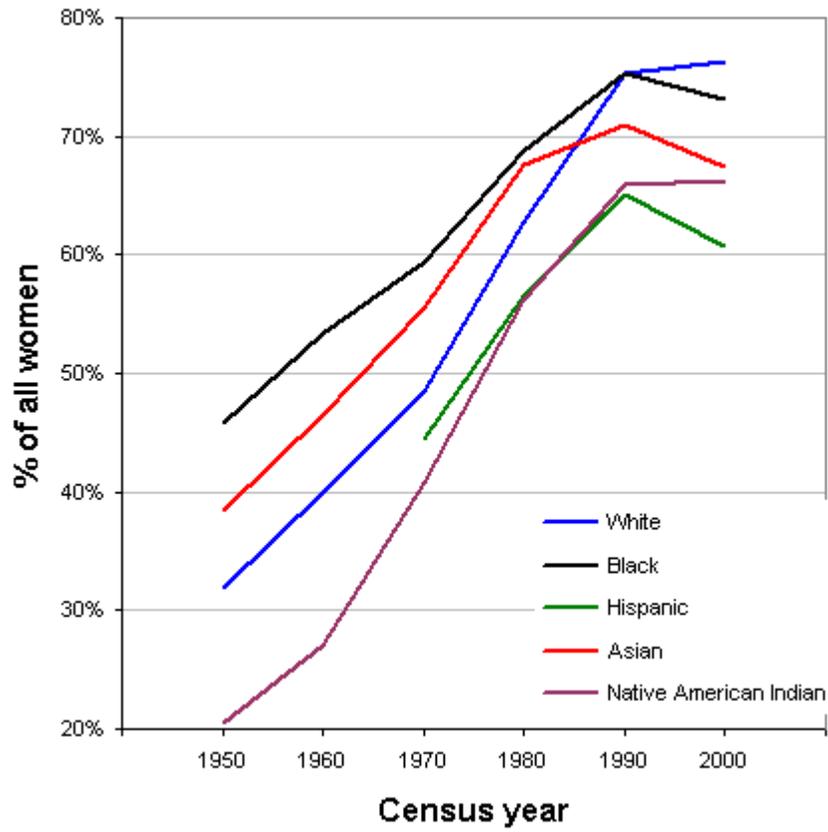
Figure 3  
Women labor force participation by age, 1950-2000



Source: IPUMS, 1% and 5% ([www.ipums.umn.edu/usa/](http://www.ipums.umn.edu/usa/)).

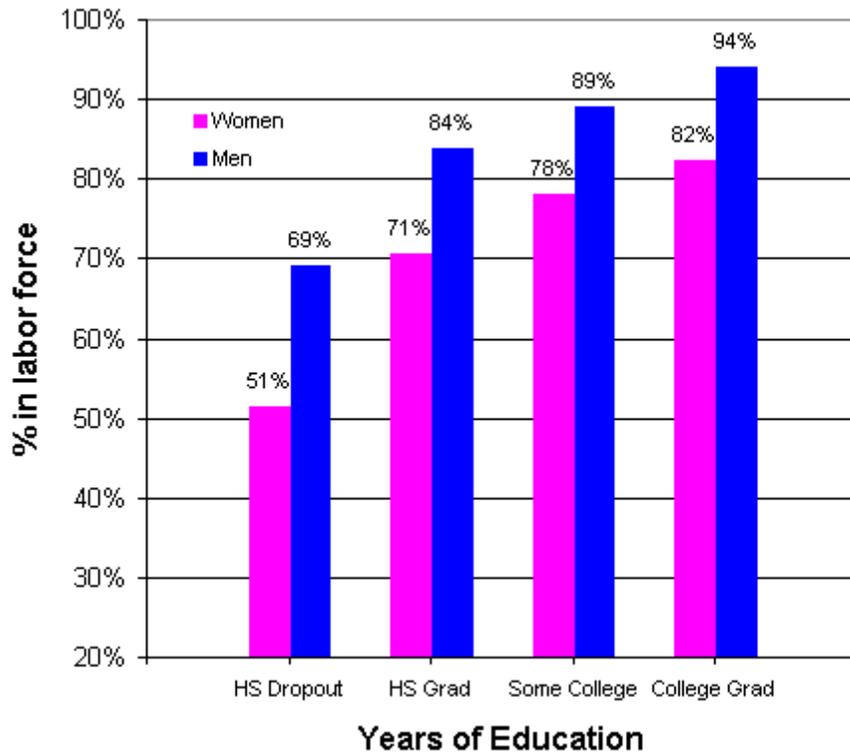
Figure 4

Women's labor force participation by race / ethnicity, 1950-2000



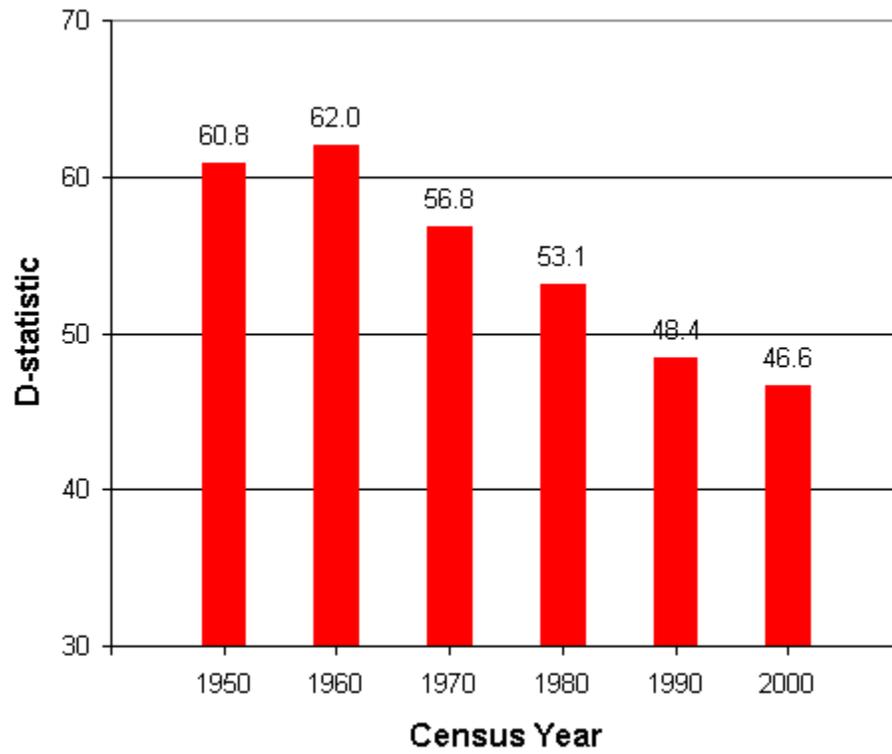
Source: IPUMS, 1% and 5%, women 25-54.

Figure 5  
Labor force participation by education, 2000



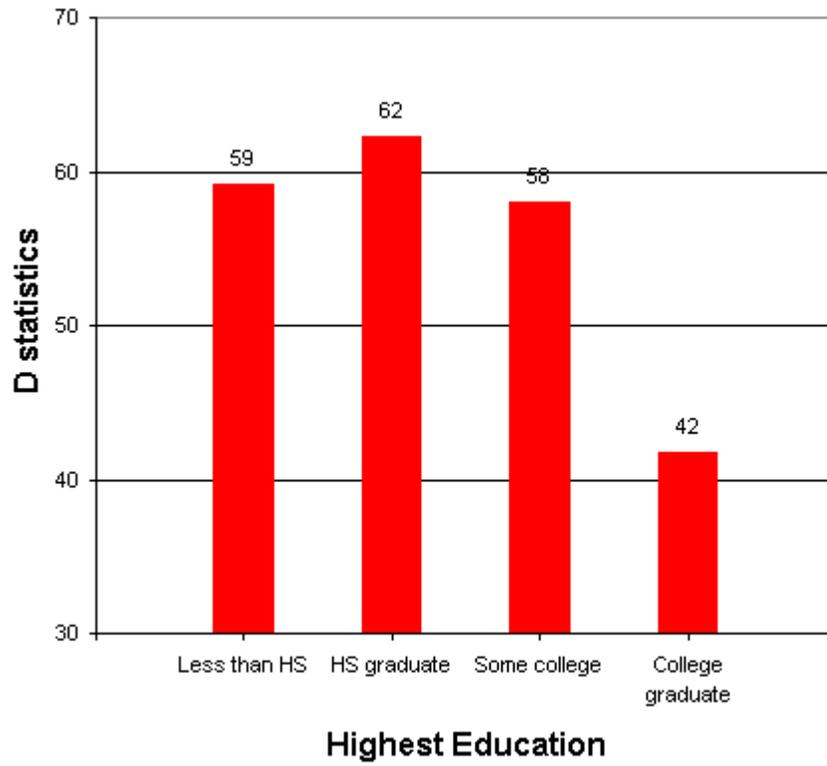
Source: 2000 PUMS 5%, ages 25-54

Figure 6  
Occupational Segregation, 1950-2000



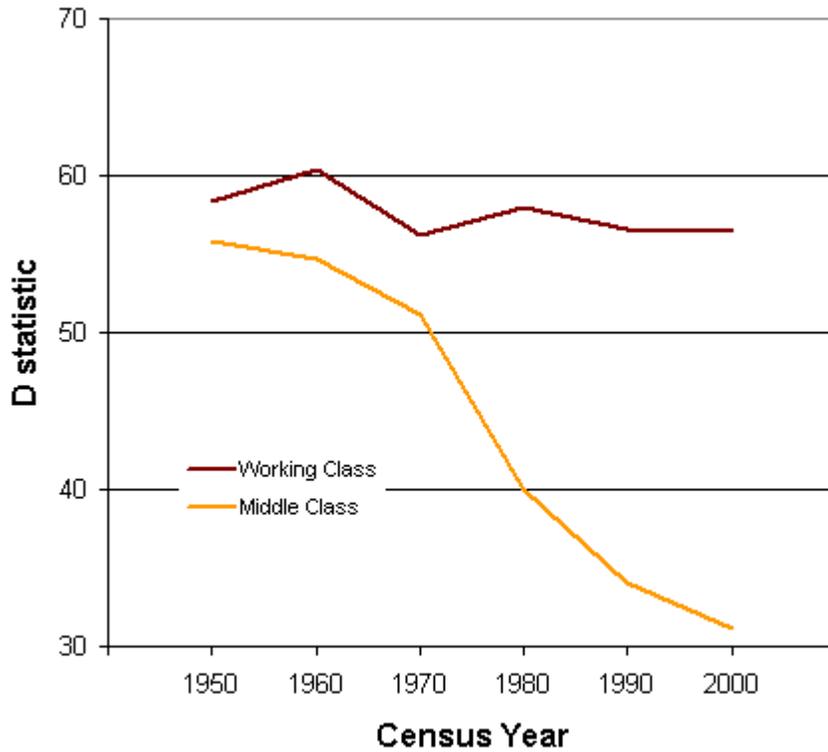
Source: IPUMS, 1% and 5%, ages 25-54

Figure 7  
Occupational Segregation by Education, 2000



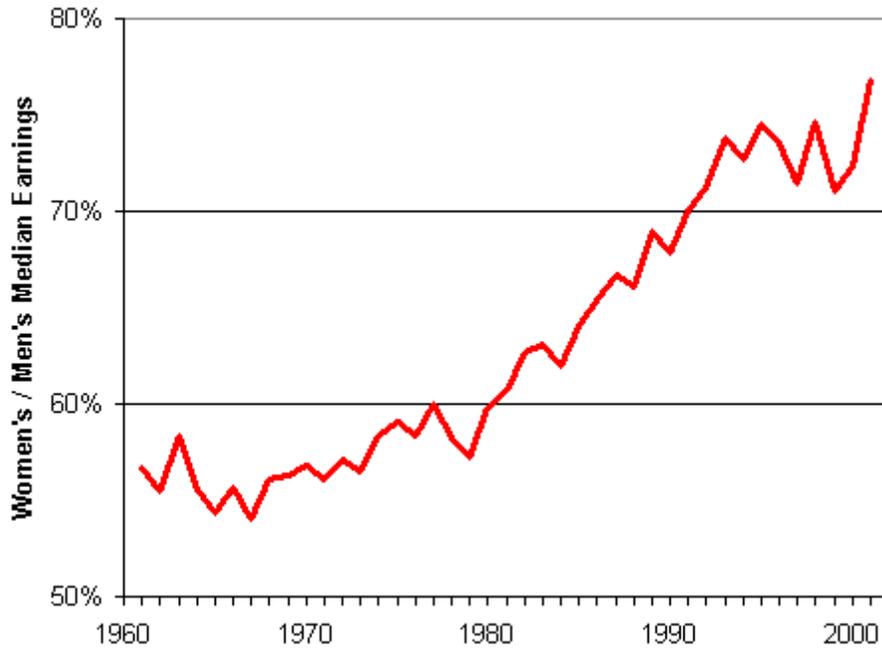
Source: 2000 PUMS, 5%, ages 25-54

Figure 8  
Occupational Segregation by class, 1950-2000



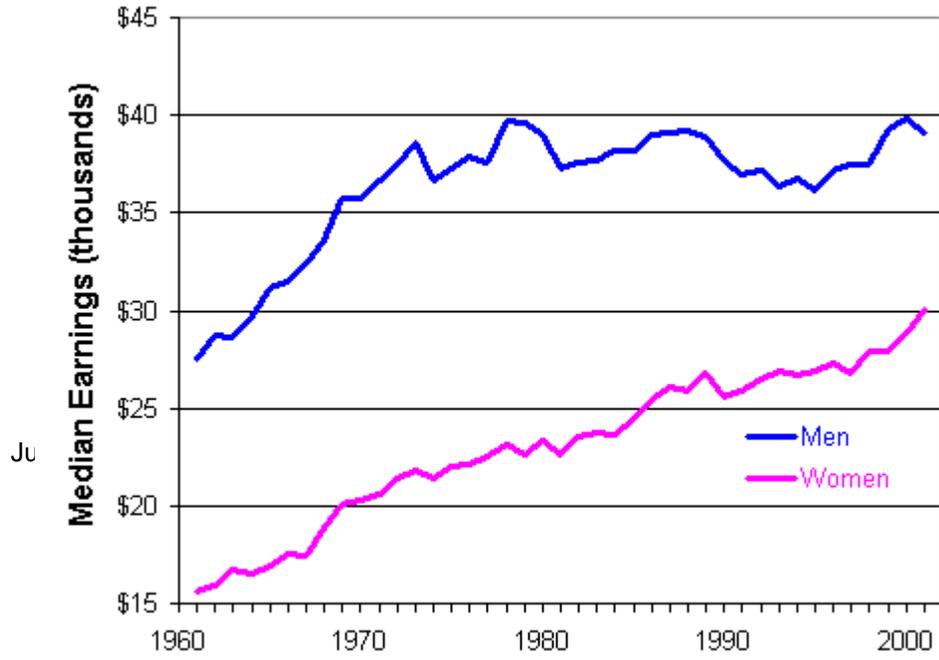
Note: Middle class occupations include professional and managerial (including non-retail sales) occupations. All other occupations are coded as working class occupations.  
Source: IPUMS, 1% and 5%, ages 25-54

Figure 9  
Gender Earnings Ratio, 1961-2001.



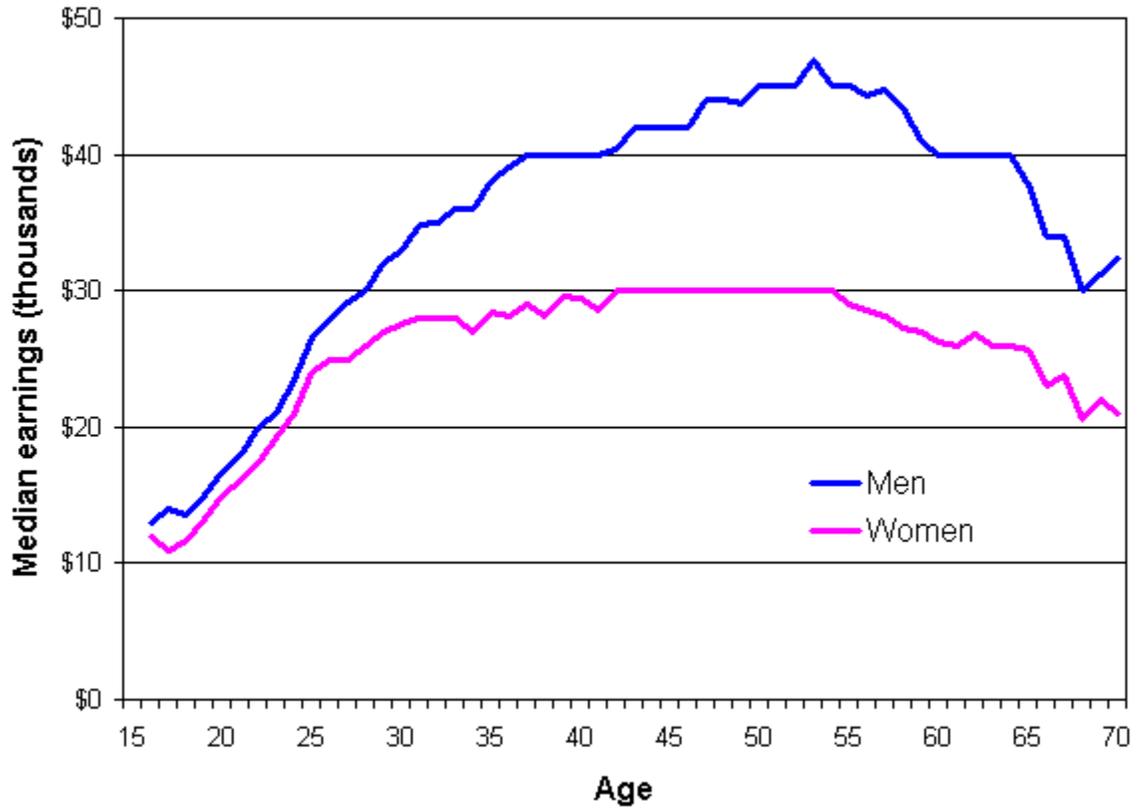
Source: Current Population Surveys, March, ages 25-54, employed full-time year-round.

Figure 10  
Annual Earnings by Gender, 1961-2001.



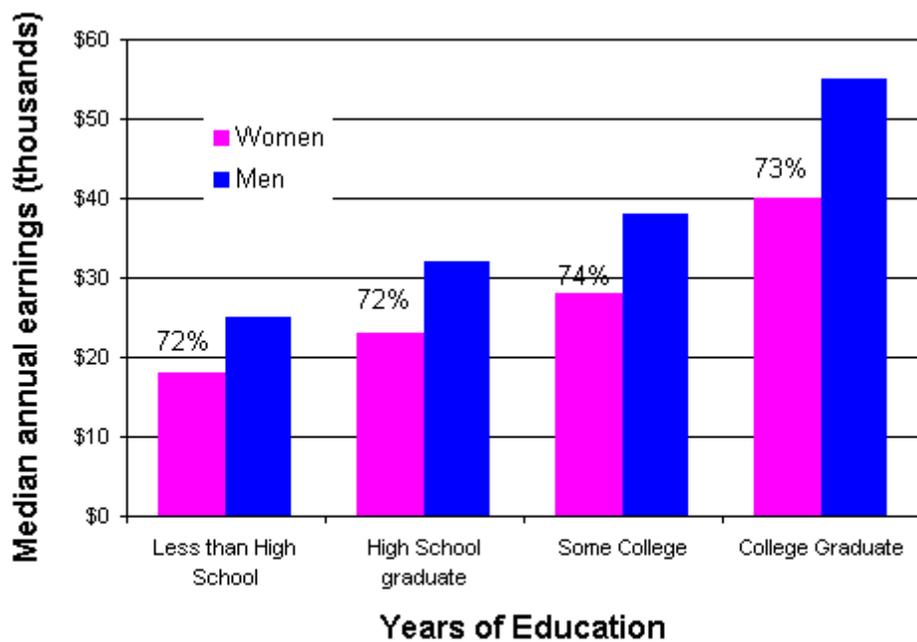
Source: Current Population Surveys, March, ages 25-54, employed full-time year-round.

Figure 11  
Median Annual Earnings by Gender and Age.



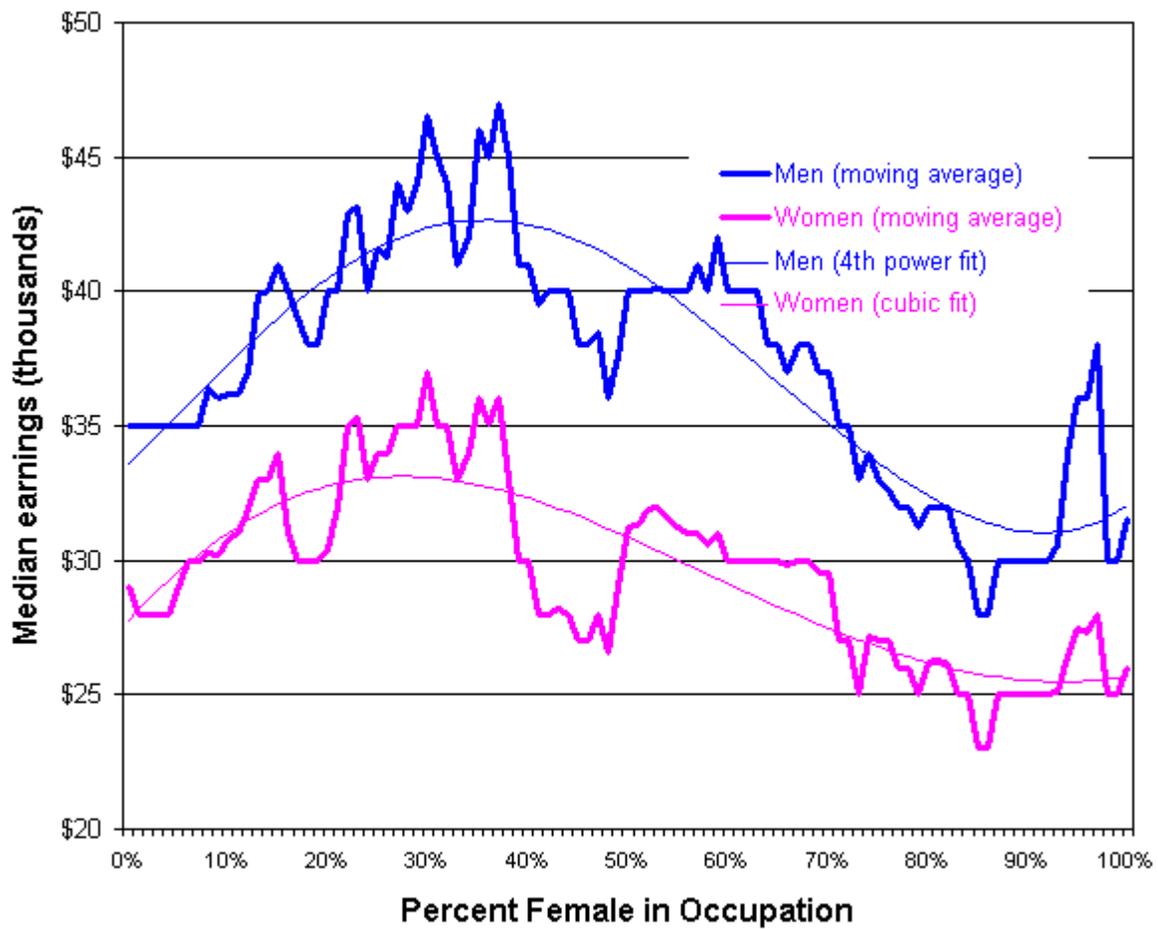
Source: 2000 PUMS, 1%, employed full-time year-round.

Figure 12  
Earnings by Education



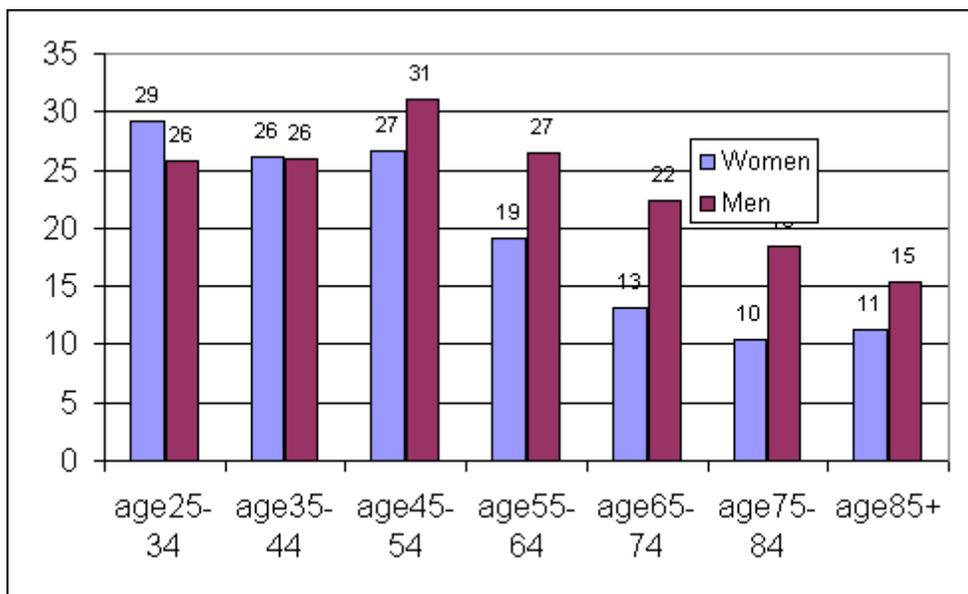
Source: 2000 PUMS (5%), ages 25-54, employed full-time year-round.

Figure 13  
Median Annual Earnings by Percent Female in Occupation.



Source: 2000 PUMS, 5%, ages 25-54, employed full-time year-round.

Figure 14. Percent of College Graduates by Sex and Age, 2000



Source: Census 5% Pums

Figure 23. Women's Share of Degrees, 1950-2000

Figure 15. Women's Share of Degrees, 1950-2000

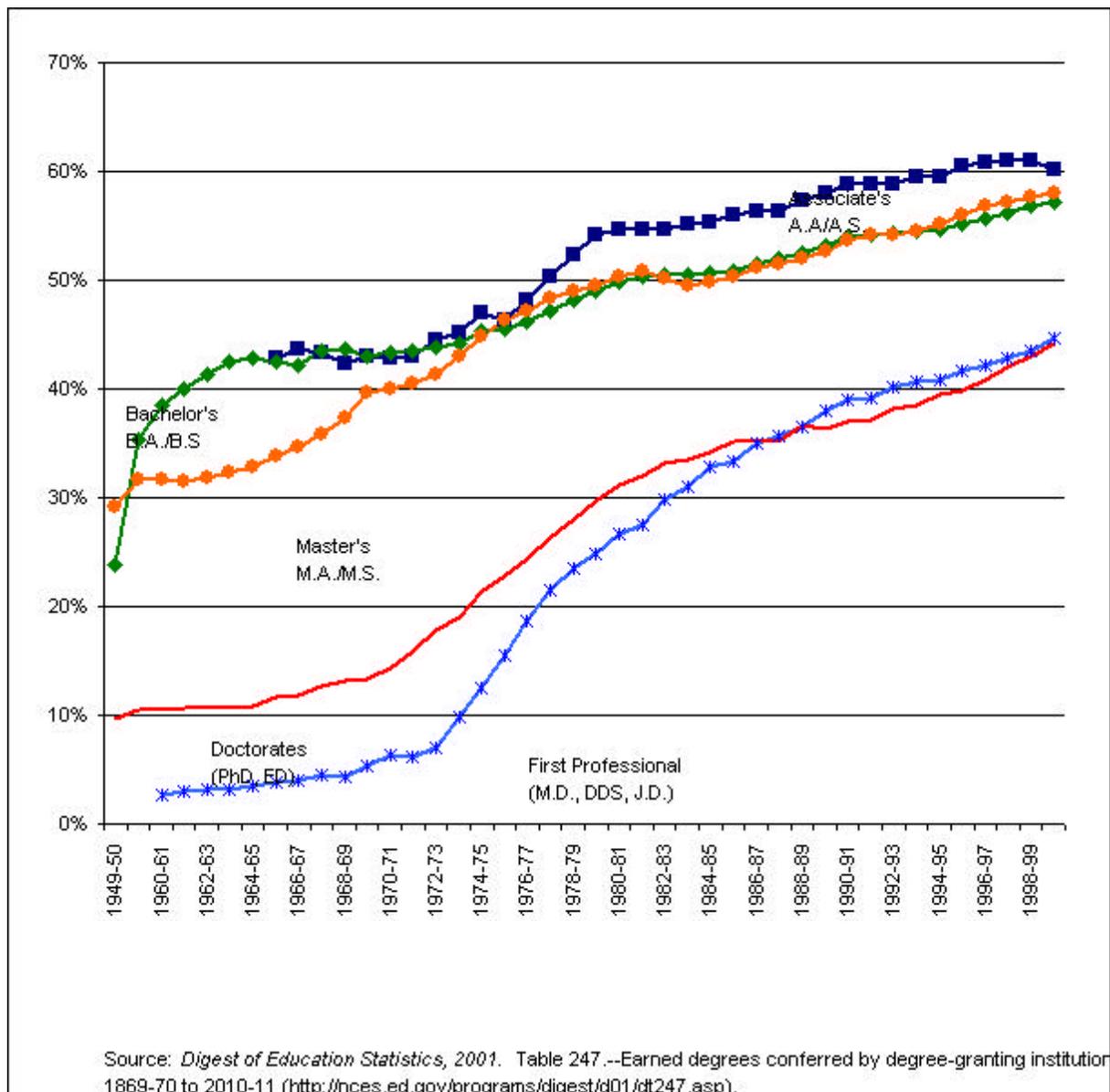
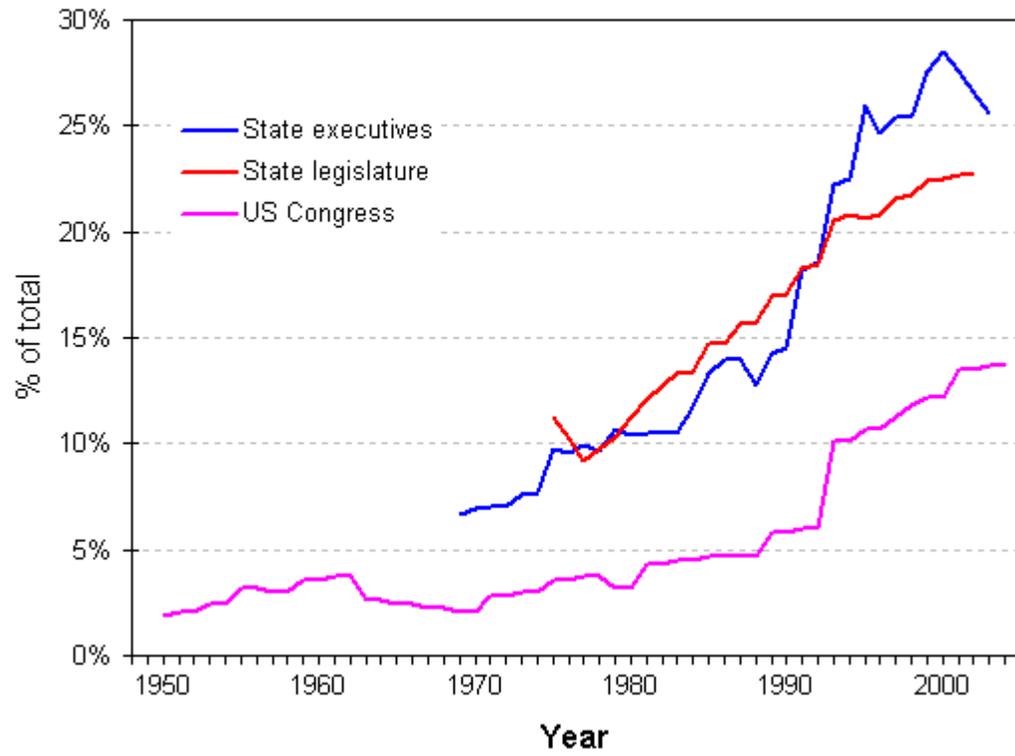
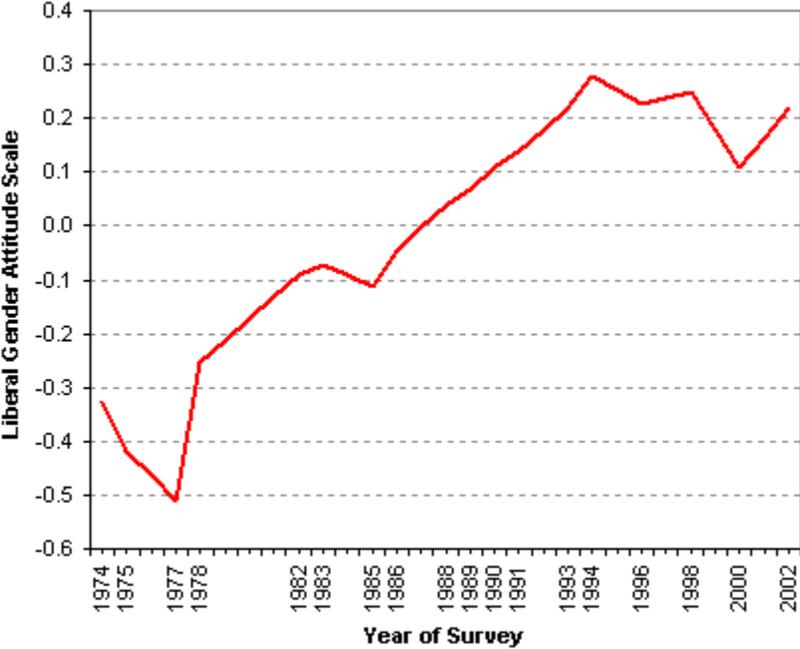


Figure 16. Women Public Officials



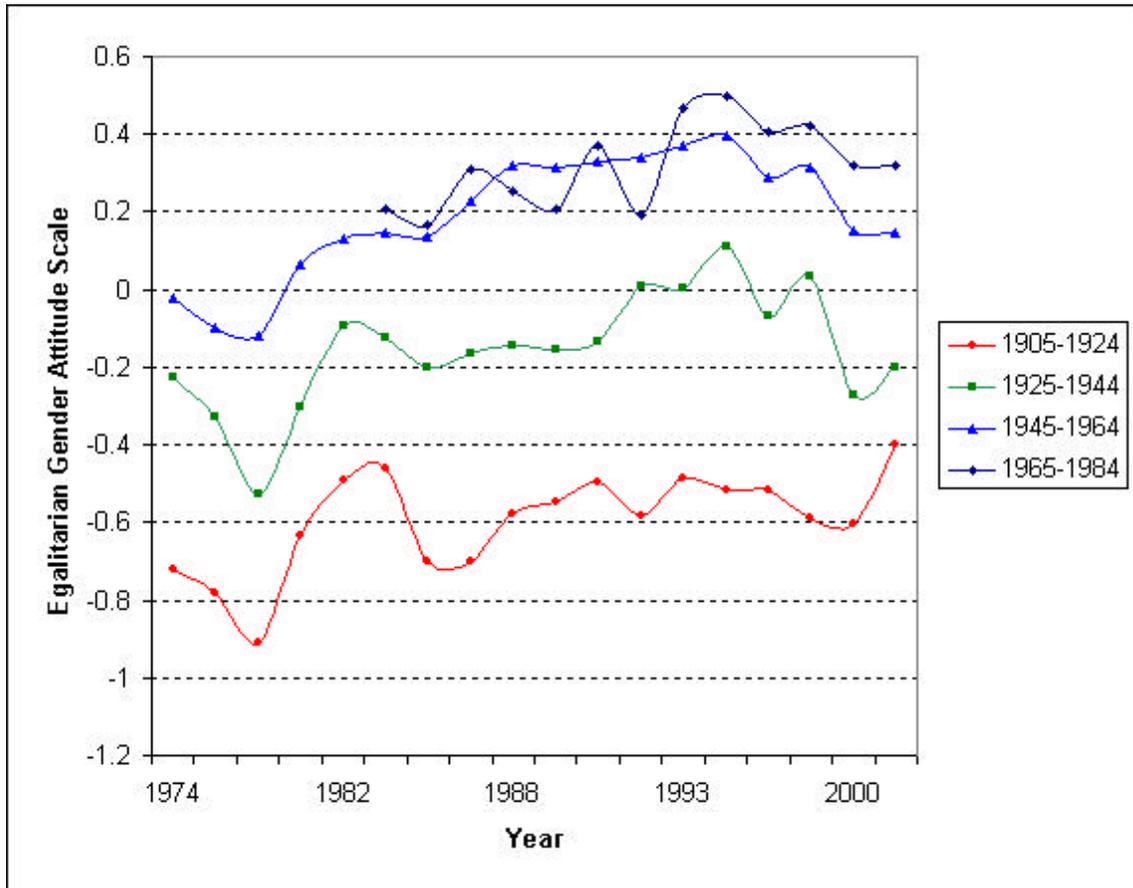
Source: Center for American Women and Politics  
[www.cawp.rutgers.edu](http://www.cawp.rutgers.edu)

Figure 17. Gender Role Attitudes, 1974-2002



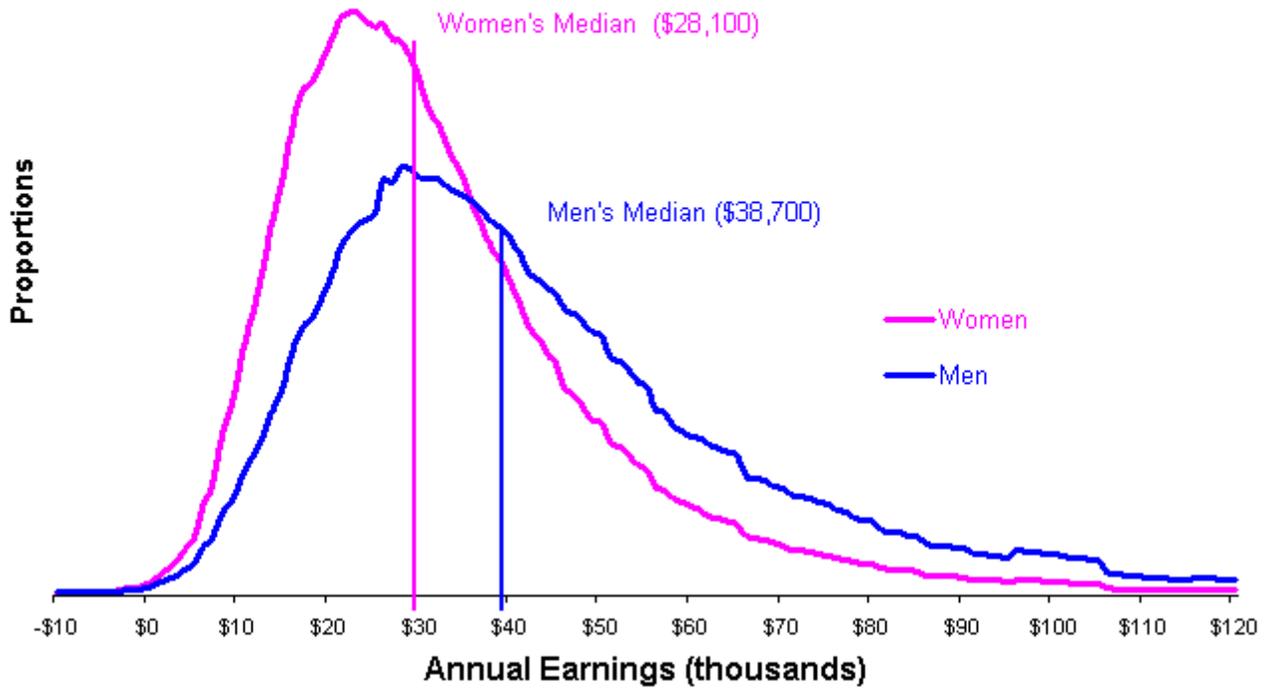
Source: General Social Survey.

Figure 18. Gender Role Attitudes by Cohort and Period, 1974-2002



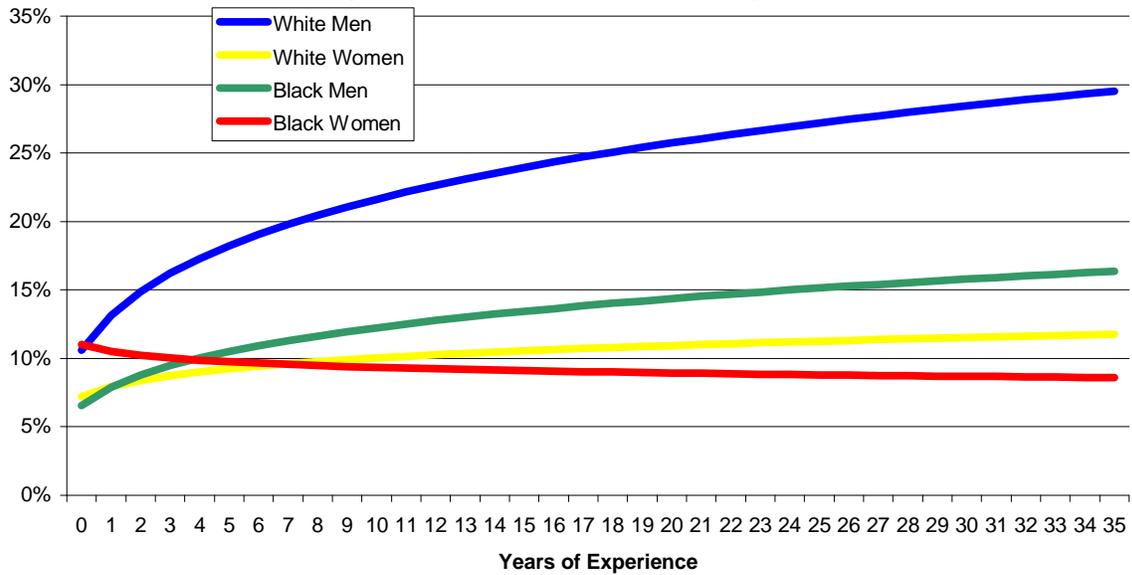
Source: General Social Survey, 1974-2002.

Figure Textbox 4  
Annual Earnings Distributions by Gender.



Source: 2000 PUMS, 5%, Ages 25-54, employed full-time year-round.

**Figure Textbox 6.**  
**Percentage of Workers Exceeding 75th Percentile of White Men's Earnings**  
**by Gender, Race and Years of Experience**



Source: 1976-1993 Waves of the Panel Study of Income Dynamics.  
Sample: Men and women ages 25-59 in the civilian labor force who worked at least 250 hours during the year.

Table 1

**Labor Force Participation Rates by Family Status**

	Women			Men		
	Children under age 6 at home	Only children ages 6 to 17 at home	No unmarried children under 18 at home	Children under age 6 at home	Only children ages 6 to 17 at home	No unmarried children under 18 at home
<b>Labor force participation (%)</b>						
Currently married	60	74	76	92	92	84
Formerly married	77	82	77	88	88	80
Never married	72	75	80	85	84	80
<b>Full-time year-round employment (%)</b>						
Currently married	31	41	51	77	78	69
Formerly married	45	56	54	69	72	59
Never married	39	47	54	62	61	55

Source: 2000 Census 5% PUMS, age 25-54, in household with one family.

Table 2

**Women's Labor Force Participation by Birth Cohort, Age, and Census Year.**

Panel A: Birth Cohort by Age.								Panel B: Birth Cohort by Census Year.						
	16-24	25-34	35-44	45-54	55-64	65-74	75-84		1950	1960	1970	1980	1990	2000
<b>1885-1894</b>					24%	13%	5%	<b>1885-1894</b>	24%	13%	5%			
<b>1895-1904</b>				33%	35%	14%	4%	<b>1895-1904</b>	33%	35%	14%	4%		
<b>1905-1914</b>			35%	47%	42%	12%	4%	<b>1905-1914</b>	35%	47%	42%	12%	4%	
<b>1915-1924</b>		32%	43%	53%	42%	13%	5%	<b>1915-1924</b>	32%	43%	53%	42%	13%	5%
<b>1925-1934</b>	38%	35%	51%	59%	45%	15%		<b>1925-1934</b>	38%	35%	51%	59%	45%	15%
<b>1935-1944</b>	39%	45%	65%	71%	51%			<b>1935-1944</b>		39%	45%	65%	71%	51%
<b>1945-1954</b>	46%	65%	77%	74%				<b>1945-1954</b>			46%	65%	77%	74%
<b>1955-1964</b>	58%	74%	74%					<b>1955-1964</b>				58%	74%	74%
<b>1965-1974</b>	62%	73%						<b>1965-1974</b>					62%	73%
<b>1975-1984</b>	62%							<b>1975-1984</b>						62%

Note: Shaded cells are data from the 2000 Census. Outlined cells are for prime working ages, 25-54.

Source: 1950 – 2000 IPUMS, ages 16-84.

*Table 3***Labor Force Participation Rates by Race and Ethnicity**

<b>Race / Ethnicity</b>	<b>Women</b>	<b>Men</b>	<b>Ratio</b>
White (only)	75.2%	88.7%	0.85
African American	73.1%	72.0%	1.02
Hispanic (any)	60.6%	76.7%	0.79
Mexican	58.4%	77.7%	0.75
Puerto Rican	62.7%	73.4%	0.85
Central American	63.8%	80.0%	0.80
South American	66.0%	81.6%	0.81
Cuban	68.6%	77.2%	0.89
Dominican	61.0%	71.2%	0.86
Asian (any)	67.4%	83.9%	0.80
Chinese	70.1%	86.0%	0.82
South Asian	59.2%	87.5%	0.68
Filipina	76.6%	83.5%	0.92
Southeast Asian	64.8%	77.5%	0.84
Korean	61.4%	80.1%	0.77
Japanese	67.9%	89.2%	0.76
Native American Indian	68.7%	78.1%	0.88
Pacific Islander	70.7%	80.2%	0.88

Source: 2000 5% PUMS, ages 25-54.

Table 4.

**Labor Force Participation Rates by Education and Gender, 1950-2000**

	1950	1960	1970	1980	1990	2000
<b>HS Dropout</b>						
Women	35%	39%	45%	50%	53%	49%
Men	89%	93%	90%	85%	79%	68%
W/M Ratio	0.39	0.42	0.50	0.59	0.67	0.72
<b>HS Graduate</b>						
Women	41%	41%	50%	63%	72%	69%
Men	94%	97%	96%	94%	91%	83%
W/M Ratio	0.43	0.42	0.52	0.67	0.79	0.84
<b>Some College</b>						
Women	48%	44%	51%	69%	79%	78%
Men	88%	96%	95%	94%	93%	89%
W/M Ratio	0.54	0.46	0.54	0.73	0.85	0.88
<b>College Graduate</b>						
Women	60%	55%	61%	76%	84%	82%
Men	92%	97%	97%	96%	96%	94%
W/M Ratio	0.65	0.56	0.63	0.79	0.88	0.88

Source: IPUMS, 1% and 5%, adults age 25-54.

Table 5.

**Gender Composition and Earnings of Selected Occupations, 1950-2000.**

	Percent of workers who are women						Earnings in 1999		
	1950	1960	1970	1980	1990	2000	Women	Men	Gender Ratio
<b>Male Occupations in 2000</b>									
Auto mechanics	1%	0%	1%	1%	2%	2%	\$26,000	\$31,000	84%
Electricians	1%	1%	2%	2%	3%	3%	\$33,000	\$39,100	84%
Fire fighters	0%	0%	1%	1%	2%	4%	\$40,000	\$47,000	85%
Airplane pilots	0%	1%	1%	1%	4%	4%	\$44,000	\$59,000	75%
Truck drivers	1%	1%	2%	3%	6%	6%	\$23,000	\$32,400	71%
Electrical Engineers	1%	1%	2%	5%	10%	9%	\$54,000	\$64,000	84%
Taxicab drivers	1%	3%	7%	12%	11%	13%	\$18,000	\$23,000	78%
Clergy	4%	2%	2%	5%	11%	15%	\$29,000	\$32,000	91%
Police	2%	3%	4%	5%	13%	16%	\$40,000	\$45,600	88%
Architects	2%	4%	4%	9%	16%	21%	\$40,100	\$52,000	77%
Guards and watchmen	3%	3%	6%	15%	19%	24%	\$24,000	\$27,000	89%
<b>Mixed Occupations in 2000</b>									
Physicians	6%	7%	9%	15%	23%	30%	\$86,000	\$134,000	64%
Lawyers	4%	3%	4%	15%	26%	33%	\$65,000	\$88,000	74%
Mail carriers	1%	1%	7%	14%	28%	34%	\$36,700	\$40,000	92%
Managers	13%	13%	14%	25%	34%	36%	\$36,000	\$51,000	71%
Sales workers	36%	40%	39%	39%	39%	43%	\$28,000	\$40,000	70%
Real estate agents	16%	27%	35%	50%	53%	52%	\$35,000	\$50,000	70%
Bartenders	8%	12%	25%	47%	55%	57%	\$16,000	\$22,000	73%
Bus drivers	4%	12%	36%	53%	55%	57%	\$21,000	\$32,000	66%
Public administration officials	16%	22%	20%	35%	59%	59%	\$34,000	\$49,000	69%
Accountants	13%	15%	24%	37%	53%	60%	\$36,000	\$51,000	71%
<b>Female Occupations in 2000</b>									
Bill collectors	17%	17%	38%	62%	68%	72%	\$25,700	\$30,000	86%
Medical and dental technicians	41%	52%	58%	67%	73%	73%	\$30,000	\$35,000	86%
Teachers	73%	68%	64%	67%	74%	75%	\$33,000	\$40,300	82%
Waiters and Waitresses	83%	90%	92%	88%	82%	76%	\$15,200	\$21,000	72%
Librarians	91%	88%	84%	84%	85%	80%	\$35,000	\$38,000	92%
Cashiers	81%	87%	91%	87%	82%	80%	\$16,000	\$24,000	67%
Telephone Operators	92%	96%	94%	79%	86%	81%	\$26,000	\$30,000	87%
Barbers and beauticiains	56%	62%	66%	76%	84%	85%	\$19,000	\$25,000	76%
Hospital attendants	57%	74%	87%	88%	87%	87%	\$19,200	\$24,000	80%
Nurses (professional)	97%	98%	92%	91%	91%	92%	\$42,000	\$45,000	93%
Bank tellers	43%	74%	89%	94%	94%	94%	\$19,000	\$22,000	86%
Secretaries and typists	94%	97%	97%	99%	98%	97%	\$26,000	\$32,000	81%

Source: 2000 PUMS, 5%; ages 25-54, employed full-time year-round

*Table 6*

**Changes in Occupational Gender Segregation, 1950-2000**

	<b>1950</b>	<b>1960</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>
Occupational Segregation	60.8	62.0	56.8	53.1	48.4	46.6
Actual Change from Previous Decade		+1.2	-5.2	-3.7	-4.7	-1.8
Change from Integration of Occupations		+1.8	-3.3	-4.6	-3.4	+0.7
Change from Shifts in the Occupational Structure		-1.0	-1.7	+1.6	-1.2	-2.1

Source: IPUMS, 1% and 5% files, ages 25-54.

Table 7

Occupational Segregation by Birth Cohort and Census Year

	1950	1960	1970	1980	1990	2000
1875-1884	59.4					
1885-1894	60.5	61.6				
1895-1904	61.6	61.8	56.5			
1905-1914	61.2	62.3	58.0	56.0		
1915-1924	60.4	62.8	58.3	55.8	52.8	
1925-1934	59.3	61.8	58.2	55.4	51.9	50.6
1935-1944		61.0	56.1	54.5	50.2	49.7
1945-1954			56.0	51.6	48.6	48.4
1955-1964				54.6	47.9	47.7
1965-1974					49.4	46.0
1975-1984						42.9

Note: Outlined cells are for prime working ages, 25-54.

Source: Census 1950 – 2000, 1% and 5% IPUMS, ages 16-84.

*Table 8*  
**Occupational Segregation by Race and Ethnicity**

<b>Race / Ethnicity</b>	<b>Gender Segregation</b>		<b>Racial Segregation</b> (from Whites of Same Gender)	
	<b>Within Race / Ethnicity</b>	<b>versus White Men</b>	<b>Women</b>	<b>Men</b>
White (only)	52.7	52.7		
African American	47.7	57.4	21.7	26.5
Hispanic (any)	51.4	55.9	23.5	28.3
Mexican	52.1	57.5	28.3	34.7
Puerto Rican	47.0	53.9	17.1	23.2
Central American	47.7	58.1	37.9	37.3
South American	42.6	50.8	21.1	20.4
Cuban	44.7	48.5	10.5	13.6
Dominican	46.4	56.8	31.3	31.8
Asian (any)	39.6	51.7	23.4	30.2
Chinese	34.4	49.8	30.7	38.1
South Asian	36.6	52.0	28.7	41.8
Filipina	40.9	56.6	24.5	28.5
Southeast Asian	37.3	55.3	40.8	35.8
Korean	38.3	48.3	28.6	30.5
Japanese	39.5	48.9	15.5	22.9
Native American Indian	48.3	50.7	13.7	16.3
Pacific Islander	45.4	50.1	15.3	17.1

Source: Census 2000 5% PUMS, ages 25-54.

*Table 9*

**Annual earnings, full-time year-round workers, 25-54, 1999**

	Women	Men	Ratio
Median	\$28,100	\$38,700	72.6%
Mean	\$34,361	\$50,535	68.0%
Geometric mean	\$28,293	\$39,062	72.4%
20 <sup>th</sup> percentile	\$18,000	\$24,000	75.0%
80 <sup>th</sup> percentile	\$45,000	\$63,000	71.4%

Source: Census 2000 5% PUMS, ages 25-54.

Table 10

**Gender Earnings Ratios by Birth Cohort, Age, and Census Year.**

Panel A: Birth Cohort by Age							Panel B: Birth Cohort by Census Year						
	16-24	25-34	35-44	45-54	55-64	65-74		1950	1960	1970	1980	1990	2000
<b>1885-1894</b>					61%	58%	<b>1885-1894</b>	61%	58%				
<b>1895-1904</b>				65%	60%	67%	<b>1895-1904</b>	65%	60%	67%			
<b>1905-1914</b>			65%	58%	60%	63%	<b>1905-1914</b>	65%	58%	60%	63%		
<b>1915-1924</b>		70%	56%	56%	55%	67%	<b>1915-1924</b>	70%	56%	56%	55%	67%	
<b>1925-1934</b>	90%	64%	53%	50%	59%	71%	<b>1925-1934</b>	90%	64%	53%	50%	59%	71%
<b>1935-1944</b>	86%	60%	50%	58%	65%		<b>1935-1944</b>		86%	60%	50%	58%	65%
<b>1945-1954</b>	78%	65%	63%	67%			<b>1945-1954</b>			78%	65%	63%	67%
<b>1955-1964</b>	80%	76%	73%				<b>1955-1964</b>				80%	76%	73%
<b>1965-1974</b>	90%	81%					<b>1965-1974</b>					90%	81%
<b>1975-1984</b>	88%						<b>1975-1984</b>						88%

Note: Shaded cells are data from the 2000 Census. Outlined cells are for prime working ages, 25-54.

Source: 1950 – 2000 IPUMS, ages 16-84.

*Table 11*  
**Median Earnings in 1999 by Race and Ethnicity**

<b>Race / Ethnicity</b>	<b>Women</b>	<b>Men</b>	<b>Within Race / Ethnicity Ratio</b>	<b>Ratio Relative to White Men</b>
White (only)	\$28,000	\$40,000	70%	70%
African American	\$25,000	\$30,000	83%	63%
Hispanic (any)	\$21,000	\$25,000	84%	53%
Mexican	\$20,000	\$23,900	84%	50%
Puerto Rican	\$25,000	\$30,000	83%	63%
Central American	\$18,000	\$22,500	80%	45%
South American	\$24,000	\$30,000	80%	60%
Cuban	\$26,000	\$31,000	84%	65%
Dominican	\$20,000	\$24,700	81%	50%
Asian (any)	\$30,000	\$40,000	75%	75%
Chinese	\$34,000	\$43,000	79%	85%
South Asian	\$30,300	\$35,000	87%	76%
Filipina	\$32,300	\$50,000	65%	81%
Southeast Asian	\$23,100	\$30,000	77%	58%
Korean	\$35,000	\$48,500	72%	88%
Japanese	\$27,700	\$38,000	73%	69%
Native American Indian	\$24,000	\$30,000	80%	60%
Pacific Islander	\$25,000	\$30,000	83%	63%

Source: 2000 5% PUMS, ages 25-54, employed full-time year-round in 1999.

*Table Textbox 1***Measures of Employment**

	Women	Men
Out of Labor Force, 2000	26.5%	14.4%
Of whom:		
Did not work in 1999	69.3%	51.9%
Worked in 1999	30.7%	48.1%
In Labor Force, 2000	73.5%	85.6%
Of whom:		
Unemployed, 2000	4.5%	4.2%
Employed, 2000	95.5%	95.8%
Of whom:		
Did not work in 1999	2.4%	1.5%
Worked in 1999	97.6%	98.5%
Usual hours worked in 1999		
1-16	4.6%	1.3%
17-34	15.5%	4.0%
35-40	58.2%	49.4%
41-59	17.5%	32.6%
60+	4.3%	12.6%
Worked in 1999		
Number of weeks worked		
1-24	5.7%	3.1%
25-49	21.3%	14.8%
50-52	73.0%	82.1%
Worked full-time (35+ hours) year-round (50+ weeks) in 1999:	<b>45.6%</b>	<b>67.9%</b>

Source: Census 2000 5% PUMS, ages 25-54.

Table Textbox 2

**Women's Labor Force Participation Rates by Country**

	Labor Force Participation Rates (%)		Labor Force Participation Rates (%)
Australia	53.2	Jordan	11.6
Austria	47.7	Korea, Republic of	47.4
Bangladesh	55.9	Malaysia	44.7
Brazil	52.8	Mexico	38.5
Canada	59.5	Morocco	30.3
Chile	36.5	Netherlands	64.4
Egypt	19.6	Pakistan	15.2
Ethiopia	71.9	Peru	58.1
France	61.7	Philippines	50.0
Guatemala	45.6	Poland	49.6
Greece	38.9	Portugal	52.7
Hong Kong, China	48.5	Russian Federation	51.8
Hungary	45.4	Singapore	51.3
Indonesia	51.5	South Africa	43.9
Iran, Islamic Republic of	10.6	Sudan	29.1
Ireland	46.0	Sweden	66.6
Israel	47.3	Thailand	64.2
Italy	35.3	United Kingdom	54.5
Japan	49.3	United States	60.2

Source: International Labor Office, 2003.

Data are for 2000 or the latest year available.

Table Textbox 6

**Gender Inequality across 50 Largest Metropolitan Areas, 2000**

Metropolitan Area	Occupational Segregation	Men's Earnings	Women's Earnings	Gender Earnings Ratio	Men's Labor Force Participation	Women's Labor Force Participation	Gender LFP Ratio
New York-Northern New Jersey-Long Island	0.47	\$64,511	\$44,958	70%	85%	70%	82%
Los Angeles-Riverside-Orange Co. CA	0.45	\$51,053	\$38,191	75%	82%	66%	81%
Chicago-Gary-Kenosha, IL-IN-WI CMS	0.47	\$58,566	\$39,368	67%	87%	73%	84%
San Francisco-Oakland-San Jose, CA	0.42	\$66,375	\$47,442	71%	86%	74%	86%
Washington-Baltimore, DC-MD-VA-WV	0.42	\$59,033	\$43,802	74%	88%	78%	88%
Philadelphia-Wilmington-Atlantic City, PA-NJ	0.48	\$53,163	\$37,032	70%	86%	75%	88%
Dallas-Fort Worth, TX	0.47	\$53,125	\$36,440	69%	87%	72%	83%
Boston-Worcester-Lawrence, MA-NH-ME-CT	0.44	\$60,551	\$43,076	71%	87%	77%	88%
Houston-Galveston-Brazoria, TX	0.51	\$52,462	\$34,851	66%	84%	68%	80%
Atlanta, GA	0.46	\$53,493	\$37,244	70%	89%	75%	85%
Detroit-Ann Arbor-Flint, MI	0.49	\$58,969	\$37,837	64%	87%	72%	83%
Seattle-Tacoma-Bremerton, WA	0.43	\$54,582	\$38,312	70%	89%	76%	84%
Minneapolis-St. Paul, MN-WI	0.44	\$54,019	\$38,409	71%	92%	83%	90%
Cleveland-Akron, OH	0.49	\$49,141	\$32,619	66%	89%	76%	85%
Phoenix-Mesa, AZ	0.47	\$48,449	\$34,202	71%	86%	71%	82%
St. Louis, MO-IL	0.50	\$48,148	\$32,492	67%	89%	77%	87%
San Diego, CA	0.45	\$50,298	\$36,078	72%	86%	71%	82%
Tampa-St. Petersburg-Clearwater, FL	0.47	\$44,800	\$32,090	72%	86%	75%	87%
Portland-Salem, OR-WA	0.46	\$47,526	\$34,391	72%	90%	76%	85%
Orlando, FL	0.46	\$45,640	\$31,085	68%	89%	79%	89%
Kansas City, MO-KS	0.46	\$48,012	\$33,590	70%	91%	79%	87%
Milwaukee-Racine, WI	0.48	\$50,873	\$34,490	68%	88%	79%	89%
Indianapolis, IN	0.46	\$48,802	\$33,681	69%	88%	78%	88%
Sacramento-Yolo, CA	0.45	\$48,339	\$37,047	77%	85%	73%	86%
Miami-Fort Lauderdale, FL	0.47	\$47,887	\$33,996	71%	80%	74%	92%
Norfolk-Virginia Beach-Newport News, VA-NC	0.49	\$43,416	\$28,997	67%	85%	75%	88%
Columbus, OH	0.43	\$47,738	\$35,775	75%	90%	77%	86%
Greensboro--Winston-Salem--High Point, NC	0.48	\$42,628	\$29,994	70%	89%	78%	88%

Table Textbox 6

**Gender Inequality across 50 Largest Metropolitan Areas, 2000**

Metropolitan Area	Occupational Segregation	Men's Earnings	Women's Earnings	Gender Earnings Ratio	Men's Labor Force Participation	Women's Labor Force Participation	Gender LFP Ratio
Las Vegas, NV-AZ	0.45	\$ 44,728.21	\$32,433.39	73%	83%	71%	85%
San Antonio, TX	0.47	\$ 42,558.67	\$30,394.24	71%	82%	69%	84%
Salt Lake City-Ogden, UT	0.47	\$ 47,379.96	\$31,318.46	66%	89%	73%	82%
Austin-San Marcos, TX	0.41	\$ 51,455.32	\$35,299.26	69%	89%	75%	85%
Nashville, TN	0.45	\$ 46,928.99	\$33,742.19	72%	87%	76%	87%
Buffalo-Niagara Falls, NY	0.50	\$ 45,434.25	\$30,157.96	66%	85%	77%	90%
Cincinnati-Hamilton, OH-KY-IN	0.46	\$ 53,593.34	\$35,947.73	67%	89%	76%	85%
Jacksonville, FL	0.47	\$ 45,711.51	\$30,877.86	68%	87%	73%	84%
Charlotte-Gastonia-Rock Hill, NC-SC	0.45	\$ 54,012.13	\$37,158.31	69%	90%	77%	85%
Grand Rapids-Muskegon-Holland, MI	0.48	\$ 46,150.06	\$30,966.68	67%	88%	78%	88%
West Palm Beach-Boca Raton, FL	0.48	\$ 50,165.42	\$34,271.44	68%	86%	73%	85%
Louisville, KY-IN	0.46	\$ 49,774.80	\$33,401.14	67%	87%	76%	87%
Raleigh-Durham-Chapel Hill, NC	0.45	\$ 49,646.04	\$34,984.31	70%	92%	77%	84%
Richmond-Petersburg, VA	0.44	\$ 49,914.08	\$34,862.35	70%	87%	78%	90%
Tulsa, OK	0.50	\$ 43,357.94	\$28,940.79	67%	88%	73%	83%
Tucson, AZ	0.45	\$ 40,689.18	\$29,607.24	73%	84%	70%	84%
Harrisburg-Lebanon-Carlisle, PA	0.48	\$ 42,086.89	\$30,731.09	73%	89%	78%	88%
Syracuse, NY	0.47	\$ 43,388.00	\$30,280.19	70%	88%	77%	88%
Oklahoma City, OK	0.46	\$ 42,283.92	\$30,317.78	72%	84%	72%	86%
Toledo, OH	0.49	\$ 45,909.15	\$30,345.75	66%	89%	77%	87%
Little Rock-North Little Rock, AR	0.49	\$ 40,007.35	\$29,288.82	73%	85%	76%	89%
Fresno, CA	0.49	\$ 38,488.41	\$31,461.97	82%	80%	66%	83%

Source: PUMS 2000. All statistics based on 25-54 year old population. Earnings for persons employed full time, year round.