

COMPARABLE WORTH  
Theories and Evidence

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Arvey (Industrial Relations, University of Minnesota) shared their academic and practical knowledge of job evaluation with me.

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# I

## Segregation and the Pay Gap

### I. Introduction

The terms *comparable worth* and *pay equity* refer to a form of sex discrimination that went virtually unrecognized until about 15 years ago. The issue is still little understood. Indeed, its status as a type of discrimination is controversial. Yet evidence abounds that jobs filled mostly by women have pay levels that are lower than they would be if the jobs were filled mostly by men. This is seen as sex discrimination by advocates of the principle of comparable worth.

At first glance, the issue sounds very much like the more familiar issue of “equal pay for equal work,” which refers to men and women in the *same* job, with the same seniority, performing the same work equally well, but being paid differently. Comparable worth is a different issue. It is distinct because it refers to comparisons between the pay in *different* jobs, jobs that differ in that they entail at least some distinct tasks. The comparisons are between one job that is largely male and one that is largely female. (Throughout this book, for brevity, I will use the terms *male job* and *female job* to describe jobs that are *disproportionately* or *predominantly*, but generally not entirely, performed by persons of one sex.) The allegation of discrimination is the claim that the difference between the pay of the two jobs results from gender bias in wage setting rather than from other job characteristics. Needless to say, a thorny issue is how one decides when two distinct jobs are nonetheless comparable in the sense that we would expect them to pay the same in the absence of sex discrimination.

The wage discrimination at issue in comparable worth is also distinct from discrimination in hiring, initial job placement, and promotion (all of which, for brevity, I will refer to as *hiring discrimination*). Hiring discrimination against women seeking to enter traditionally male jobs is one (although not the only) reason for occupational sex segregation. Without segregation of jobs, female jobs could not be given a discrimi-

natory pay level. This is obvious, since, without segregation, there would be no predominantly male and predominantly female jobs! Yet, in my view, engaging in discrimination on the basis of sex in setting the pay levels assigned to male and female jobs is analytically distinct from engaging in hiring discrimination on the basis of sex.

Some examples may help the reader to visualize the sorts of comparisons at issue in comparable worth. In the state of Washington, where female state employees sued over pay equity, the job of legal secretary, a female job, was found by an evaluation study to be comparable in worth to the job of heavy equipment operator, a job filled mostly by men. However, in 1972, heavy equipment operators made about \$400 more per month. Stockroom attendants, mostly men, made much more than dental hygienists, who were mostly women. (The above examples are from Remick 1980, pp. 416–417, as cited in Steinberg 1990.) In 1975, nurses in Denver sued the city claiming that their jobs paid less than male jobs such as tree trimmer and sign painter (Blum 1991, p. 49). It would be hard to argue that the latter two jobs require as much skill or are as demanding as nursing. Women workers for the city of San Jose discovered in the mid-1970s that secretaries were generally earning less than workers in male jobs that required no more than an eighth grade education, including, for example, men who washed cars for the city (Blum 1991, p. 60). Eventually, women in San Jose succeeded in getting the city to do a job evaluation study. It showed, to choose some examples, that nurses earned \$9120 per year less than fire truck mechanics and that legal secretaries made \$7288 less than equipment mechanics (Blum 1991, pp. 82–83). In 1985, the California School Employees Association complained that school librarians and teaching assistants (female jobs) were paid less than custodians and groundskeepers (male jobs) (Steinberg 1990). To take yet another example, in recent years the city of Philadelphia was paying practical nurses (mostly women) less than gardeners (mostly men) (Steinberg 1990). These are not atypical examples. In addition, one is hard-pressed to come up with a single example of a male job paying less than a female job that reasonable people would find comparable in skill, effort, or difficult working conditions. Nor are these differences in pay a result of men averaging more years of experience than women, since in the above comparisons of employers' policies regarding pay levels in the various jobs, a constant level of experience was assumed. (For example, this can be done by comparing starting salaries.)

Recently, the concept of comparable worth or pay equity has been applied to issues of discrimination on the basis of race or ethnicity as well as gender. If a job in a particular organization is filled largely with African Americans or Hispanics, does the pay level tend to be lower

than is commensurate with the job's skill level and other demands? We can examine whether the racial or ethnic composition of a job has an effect on its pay level just as we can examine whether its sex composition has this effect. In academic theorizing, as well as in legislation and litigation about *hiring* discrimination, issues of racial discrimination were raised first. They were later extended to sex discrimination. Where comparable worth is concerned, things have happened in the reverse order: The issue was first raised with respect to sex discrimination and has more recently been examined with respect to racial discrimination. In this book, I focus exclusively on comparable worth as an issue of gender discrimination. However, the reader should bear in mind that analogous questions can be raised with respect to race and ethnicity. (See Jacobs and Steinberg 1990a, note 12, on studies that have assessed effects of minority composition on wages. See also National Committee on Pay Equity 1987.)

This book is an interdisciplinary examination of the issue of comparable worth. This chapter sets the stage for the discussion by providing a sketch of the situation of men and women in paid employment in the United States. Twentieth-century trends and contemporary patterns in women's and men's employment, occupations, and pay are described, drawing from research by sociologists, economists, and psychologists. Chapter 2 compares various theories of labor markets from economics and sociology, with attention to how each view explains gender inequality in jobs and earnings, and how it treats the issue of comparable worth. Chapter 3 presents an empirical analysis of aggregate occupational data from the 1980 census that demonstrates the tendency of predominantly female occupations to pay less than predominantly male occupations, even after numerous measures of skill demands, working conditions, and market conditions are statistically controlled. It also demonstrates the penalty for doing nurturant work, a finding I interpret as evidence of indirect gender bias in wage setting. Chapter 4 examines methods of and findings from job evaluation, a technique used to evaluate jobs and assess comparable worth within a single organization. Chapter 5 explains the current legal status of comparable worth in the federal courts. Chapter 6 examines normative debates about gender inequality and comparable worth, drawing on social, political, and economic philosophies, including feminist theories. Finally, Chapter 7 takes the reader through the policy debates surrounding comparable worth, and presents my own view on these controversial issues.

Views of comparable worth hinge, in part, on empirical evidence. Yet such evidence is interpreted differently through the "lenses" of different theoretical models. Views of comparable worth are also affected by normative positions, by values. Although I am a sociologist by training, in

this book I also draw upon the disciplines of economics, psychology, law, and philosophy, as well as on interdisciplinary feminist perspectives. Thus, I hope to present a view of the complex and controversial issue of comparable worth that is informed by debates over evidence, theories, and values.

The remainder of this chapter sets the stage for examining comparable worth by summarizing research findings on the situation of women and men in paid employment. For the most part, I will draw upon research from the United States. The situation is similar in other industrial countries, albeit with some variations (Rosenfeld and Kalleberg 1990; Brinton 1988; Blau and Ferber 1986; Roos 1985). This chapter discusses the increases in women's employment in recent decades, the tendency of women to be clustered into a limited number of occupations, changes in the degree of occupational sex segregation, and changes in the sex gap in pay.

## II. Increasing Employment Among Women

Some women have always worked outside the home for pay in addition to working within the home. One often sees the term *working women* used to differentiate women who work for pay from full-time homemakers. This is misleading, of course, since homemakers work as well. To avoid this misleading juxtaposition, I will use the term *employment* or *labor force participation* to refer to paid work typically done outside the home.

### A. Which Women Are Employed?

Women are more likely to be employed if they are single, have fewer children, are black, have considerable education and other job skills, have high potential earnings, or have a husband with low earnings (Killingsworth and Heckman 1986; Desai and Waite 1991; O'Neill 1981). These are each "net" effects, that is, differences that are observed when other things are "held constant" via statistical controls. Yet, since some of these factors are negatively correlated with each other, real women often experience conflicting pulls. For example, consider a woman with a college education, three children, and a husband who is a well-paid manager. The fact that she is married, has children, and has a husband with relatively high earnings all mitigate against her employment. However, her college education increases the earnings she could make in a job, as well as her nondomestic interests, and thus makes it more likely

that she will be employed. Marital homogamy, the tendency to marry persons from a similar class and educational background, means that women whose high education and potential earnings mitigate in favor of employment typically have husbands with relatively high earnings, a factor mitigating against employment.

Today, many women remain employed during pregnancy and return to their jobs immediately or within a few weeks or months of birth. Relatively continuous employment around a birth is more common among women who are well educated, are in more skilled jobs, and have higher wages, perhaps because the financial loss from leaving their jobs would be greater for such women (Desai and Waite 1991). However, continuous participation around a birth is also more common among women with more economic need—single mothers or women whose husbands have low earnings (Desai and Waite 1991). Continuous participation is also aided by the availability of a more flexible work schedule or by working in an occupation containing more women with young children (Desai and Waite 1991).

### B. Trends in Women's Employment

It was traditionally believed that many women entered and left the labor force numerous times during their lives. Recent research that traces the employment histories of birth cohorts has challenged this view. (A birth cohort is a group of people born in the same year.) This research shows that, while many women left employment at the time of marriage or a first birth, after marriage, every birth cohort in this century has had continuous increases across time in the proportion of women employed (Goldin 1990, p. 22). This implies that while many women spent some years out of the labor force, if they stayed employed or reentered employment after marriage, they generally stayed employed fairly continuously. The reentries were typically after a period of child-rearing. What has been changing most is how many women enter the labor force at all and how early those who leave for childrearing reenter to stay (Goldin 1990).

The proportion of U.S. women who are employed has increased steadily since the early 1800s (Goldin 1990). More and more women have moved from working exclusively in the home to working both in their homes and for pay. As Table 1.1 shows, 19% of women were in the labor force (i.e., either employed or looking for a job) in 1890. By 1950 this figure was up to 30%. It was 35% in 1960, 42% in 1970, 51% by 1980, and 56% by 1987. The only time in this century that a decline in the proportion of women employed has ever occurred was right after World War II.

Table 1.1. shows increases in the proportion employed for both white and black women since 1950. However, the black and white trends differ in that black women did not increase their employment rate between 1890 and 1950; it was already very high (40%) in 1890. As Table 1.1 shows, black women have had higher employment rates than white women during every period, although white women had nearly caught up by 1987.

Married women with small children are still the group with the lowest employment rates. Yet this group has shown the fastest rate of increase, and now has participation rates only slightly lower than women's overall average. Consider, for example, married women who have at least one child under the age of 3. Table 1.1 shows that in 1960, only 15% of such women were in the labor force, compared to 35% of women overall. In 1975, 33% of such women were in the labor force, compared to

Table 1.1. Labor Force Participation<sup>1</sup> of Women by Marital Status, Presence of Youngest Child, and Race, 1890-1987

|      | All Women            |                       |         |       |                      |                    |                      |                                |
|------|----------------------|-----------------------|---------|-------|----------------------|--------------------|----------------------|--------------------------------|
|      | Married <sup>4</sup> |                       |         | White |                      | Black <sup>2</sup> |                      | Hispanic <sup>3</sup><br>Total |
|      | Total                | With child<br>under 3 |         | Total | Married <sup>4</sup> | Total              | Married <sup>4</sup> |                                |
|      |                      | Total                 | under 3 |       |                      |                    |                      |                                |
| 1890 | 18.9                 | 4.6                   | NA      | 16.3  | 2.5                  | 39.7               | 22.5                 |                                |
| 1950 | 29.5                 | 23.8                  | NA      | 28.5  | 20.7                 | 37.8               | 31.8                 | NA                             |
| 1960 | 35.1                 | 30.5                  | 15.3    | 34.2  | 29.8                 | 42.7               | 40.5                 | NA                             |
| 1970 | 41.6                 | 40.8                  | 25.8    | 40.9  | 38.5                 | 47.3               | 50.0                 | NA                             |
| 1975 | 46.3                 | 44.4                  | 32.7    | 45.9  | 43.5                 | 48.8               | 54.0                 | 43.0                           |
| 1980 | 51.1                 | 50.2                  | 41.1    | 50.9  | 49.3                 | 53.1               | 59.3                 | 47.4                           |
| 1985 | 54.5                 | 54.2                  | 50.5    | 54.1  | 53.0                 | 56.5               | 62.4                 | 49.3                           |
| 1987 | 56.0                 | 55.8                  | 54.2    | 55.7  | 55.1                 | 58.0               | 65.1                 | 52.0                           |

Sources: Goldin 1990 (Table 2.1); U.S. Department of Labor 1987b (Tables 1 and 3), 1988, 1989 (Table 6); Lueck, Orr, and O'Connell 1982 (Table A-2); Taeuber 1991 (Table B1-5).  
Notes:

<sup>1</sup> Numbers given are percentage of women in the labor force. The labor force consists of those who are employed and those looking for a job. Those out of the labor force include homemakers, students, the retired, and discouraged workers (those who want a job but have given up looking). NA, data not available.

<sup>2</sup> Data for 1890 through 1970 are for all nonwhites rather than for blacks.

<sup>3</sup> Includes all Hispanics, regardless of race. "Hispanic" is a diverse category, including persons whose ancestry is Mexican, Central American, Cuban, and Puerto Rican, and including citizens and noncitizens. Hispanics are also included in "white" and "black" categories according to their race. Figures for Hispanics by marital status not available in government documents.

<sup>4</sup> "Married" includes only married women with husband present.

46% of women overall. However, by 1987, the figure for women with children under 3 was up to 54%, only slightly less than the 56% of all women who were in the labor force.

One might wonder whether the dramatic increase in employment among mothers of young children is mainly an influx into part-time jobs. For the most part, this is not the case. To be sure, mothers are more likely than other women to be employed part-time. For example, in 1988 about one third of women with children had part-time jobs, while only about one fifth of all employed women worked part-time (Barrett 1991). Yet much of the increase in the employment of mothers has been in full-time jobs. This can be inferred from the fact that the proportion of employed women whose jobs are part-time has been relatively constant at around 20% since the early 1960s (Barrett 1991), even while the proportion of employed women who have small children has gone up dramatically.

Perhaps it is surprising, but very few women use part-time employment as a transition between full-time homemaking and full-time employment. It is much more common to move from homemaking to a full-time job (Blank 1989). For some, part-time work is an occasional alternative to full-time employment; for a few it occasionally punctuates nonemployment (Blank 1989). Few women use part-time employment as a transition because part-time jobs are largely dead-end; employers seldom structure jobs to facilitate smooth transitions from part-time jobs to attractive full-time jobs.

### C. Explanations of Increases in Women's Employment

What explains the dramatic increase in women's employment since World War II? To examine this, let us separate various specific explanations into two broad claims: (1) those asserting women's increased economic need to be employed, and (2) those asserting their increased opportunities for jobs and higher wages.

*Increased Economic Need.* Do more women than ever have an economic need to be employed? Yes. This is true in that a growing proportion of women are single or divorced, and more of these women than ever have children. Especially since 1970, the divorce rate has increased, the average age at marriage has gone up, and the proportion of out-of-wedlock births has increased for both white women and women of color (England and Farkas 1986). If we look at families that include children, the proportion of families with no adult male stayed fairly near 10% from 1940 through 1970, but thereafter it began to increase, reaching 16% by 1982 (Norwood 1982). These facts explain some of the increase in

women's employment in terms of economic need. However, they cannot explain the increase among *married* women with husbands present, except to the extent that more married women than previously are aware of the risk of divorce and invest in job experience as a form of insurance (Burkhauser and Duncan 1989).

Can the increase in employment among *married* women be explained by increased economic need for two incomes? The answer depends, in part, upon what we mean by "need." The question of what income a family needs is, at least in part, subjective. However, assuming *any* constant definition of need, only if the real (i.e., inflation-adjusted) incomes of men have gone down over time can the economic need for a second paycheck be said to have gone up. Table 1.2 presents data on men's income. "Income" includes interest, dividends, and government transfer payments, rather than just earnings from employment. The figures also include all men, not only those employed full-time year-round. Since these figures include men who had spells of unemployment, they will show men's incomes going down if annual earnings go down because more men are unemployed part of the year or because the average duration of unemployment goes up, as well as if wage rates go down. Table 1.2 shows that, on average, men's incomes were going up throughout the 1950s, 1960s, and early 1970s. Since 1973, however, men's incomes have gone down. They have rebounded since the early 1980s, but by 1988 had only returned to their late 1960s levels. These trends apply to both white and black men, though in any given year black men's earnings have been lower than those of white men. (For discussion of trends in men's earnings, see Levy 1987, 1988; Burtless 1990.) If decreasing male income causes increasing need for wives' employment, one cannot argue that such need was increasing in the 1950s, 1960s, early 1970s, or since 1983, but only between 1973 and 1983.

The reader might question whether increases in the percentage of earnings paid in taxes would alter this conclusion. Based on data presented elsewhere (Steurlle and Wilson 1987; Steurlle forthcoming) regarding families at the median income, I have calculated that the percentage of income paid in federal income tax plus Social Security tax (excluding the portion paid by the employer) was 7.6% in 1955, 10.8% in 1960, 14.2% in 1970, 17.5% in 1980, and 17.1% in 1990. The increases in federal taxes in the 1950s and 1960s were not more than increases in male earnings, and federal taxes have not increased in the 1980s. Thus, the conclusion that men's incomes have been going up continuously except between about 1973 and 1983 holds even when federal taxes are considered.

Since 1950, women's employment has gone up continuously, while men's income went down only between about 1973 to 1983. In sum,

Table 1.2. Median Income of Men by Race: 1950-1988<sup>1</sup>

| Year | Total  | White  | Black <sup>2</sup> | Hispanic <sup>3</sup> |
|------|--------|--------|--------------------|-----------------------|
| 1950 | 12,615 | 13,298 | 7,221              | NA                    |
| 1955 | 14,823 | 15,644 | 8,232              | NA                    |
| 1960 | 16,306 | 17,169 | 9,032              | NA                    |
| 1964 | 17,734 | 18,836 | 10,678             | NA                    |
| 1965 | 18,864 | 19,867 | 10,692             | NA                    |
| 1970 | 20,337 | 21,376 | 12,675             | NA                    |
| 1971 | 20,164 | 21,139 | 12,607             | NA                    |
| 1972 | 21,085 | 22,115 | 13,395             | NA                    |
| 1973 | 21,465 | 22,522 | 13,623             | NA                    |
| 1974 | 20,281 | 21,246 | 13,164             | 15,461                |
| 1975 | 19,467 | 20,450 | 12,226             | 14,902                |
| 1976 | 19,597 | 20,660 | 12,439             | 14,658                |
| 1977 | 19,762 | 20,699 | 12,283             | 15,221                |
| 1978 | 19,841 | 20,781 | 12,449             | 15,205                |
| 1979 | 19,194 | 20,051 | 12,412             | 14,455                |
| 1980 | 17,989 | 19,135 | 11,498             | 13,867                |
| 1981 | 17,534 | 18,605 | 11,063             | 13,278                |
| 1982 | 17,101 | 18,080 | 10,835             | 12,836                |
| 1983 | 17,414 | 18,320 | 10,714             | 12,893                |
| 1984 | 17,762 | 18,749 | 10,757             | 12,640                |
| 1985 | 18,473 | 19,494 | 11,681             | 12,571                |
| 1986 | 18,473 | 19,494 | 11,681             | 12,447                |
| 1987 | 18,522 | 19,687 | 11,679             | 12,736                |
| 1988 | 18,908 | 19,959 | 12,044             | 13,030                |

Source: Hensen 1990.

Notes:

<sup>1</sup> All income is in constant 1988 dollars. Thus, these figures are adjusted for changes in the cost of living (as measured by the Consumer Price Index) such that they reflect real trends in pretax purchasing power. NA, data not available.

<sup>2</sup> This category includes black males for 1970-1988. Before 1970, the category includes all nonwhite males.

<sup>3</sup> Includes all Hispanics, regardless of race. Hispanics are also included in "white" and "black" categories according to their race.

while the decade after 1973 saw increases in economic need for a second paycheck, such increases in need have *not* been a *consistent* trend for married women. Thus they cannot be the main explanation of the *consistent* increases in women's employment.

Yet most people I talk to have a clear perception that, in some meaningful way that is missed in the above figures, since the mid-1970s couples have needed two paychecks more than they did in times past.

There is a way to reconcile the kernel of truth in this perception with the figures presented above. My reconciliation hinges on an assumption about how people perceive well-being that comes from research in behavioral economics and social psychology to be discussed in Chapter 2. There is an asymmetry between how gains and losses are perceived. As a result, a decrease in one's income of \$5000 reduces one's sense of well-being more than an increase in income over the same income range increases the sense of well-being.

To illustrate, consider the situation of a couple with a nonemployed wife whose husband earns \$30,000 a year, but suffers a loss in income of \$10,000 due to conditions in the economy at large. Perhaps he worked in an auto plant that closed and the best job he can now find is a non-unionized job paying \$20,000. In response to this loss, the wife finds a job that pays exactly the \$10,000 that was lost, after expenses such as day care. Later, suppose that the man gets an offer of a better job that will restore him to his original earnings of \$30,000 (in inflation-adjusted dollars). The couple had previously felt that this was an adequate income—perhaps not as much as they would like, but high enough to make them decide the wife would stay home and care for their young children. Based on this we would predict that the wife will quit her job when the husband begins his new job. But the data in Tables 1.1 and 1.2 have shown us that when men's incomes rebound after a loss, women's employment does not decrease as the "economic need" thesis would predict. So our task is to understand why our hypothetical wife does not quit even when her husband's earnings had returned to their former level. This could be because she has grown to like her job, but that is not the point I want to emphasize here. If she quits the job, their family income will be exactly where it was before she joined the labor force. However, the asymmetry in how losses and gains affect perceived well-being implies that the original loss of \$10,000 lowered well-being more than the rebound of \$10,000 increased well-being. Thus, the sense of well-being still dictates the wife's employment. If losses are perceived as larger than gains of the same amount, then permanent increases in women's employment will be spawned in periods when men have even temporary decreases in earnings.

Similarly, the asymmetry in the perception of losses and gains suggests that permanent increases in women's employment will result when earnings inequality among men goes up, even in the absence of declines in men's average earnings. Increased inequality in men's earnings can result from earnings of men in the lower portion of the distribution going down while the earnings of men toward the top of the distribution go up. The asymmetry principle above predicts increased employment among women from this trend. That is, the *losses* in male

earnings in the families at the lower end of the distribution will do more to increase their wives' employment than the *gains* in male earnings in the families at the higher end of the distribution will do to lower their wives' employment. Since men's earnings have become substantially more unequal in the last two decades (Levy 1987; Burtless 1990), this may explain some of the increase in women's employment.

Finally, this principle regarding an asymmetry in how gains and losses are perceived helps explain how in recent decades the increases in wives' employment before childbearing make it likely that more wives will continue employment after childbearing than would have been the case in the absence of the prechild employment. Today, unlike in the 1950s and 1960s, most women are employed for several years, if not more, between marriage and the birth of the couple's first child. Consider the example of a woman whose potential wage is \$20,000 per year. If she has been employed before having children, she experiences non-employment after childbirth as a loss of \$20,000 per year. Had she not been employed before the birth, employment after the birth would be perceived as a gain of \$20,000 per year. Since the loss is felt more saliently than the gain of the same amount, women who are employed before childbearing are more likely to be employed afterward than are women who were not employed before the birth, even when the two groups have the same potential postbirth earnings and the same husbands' earnings. Thus, the trend to later childbearing creates an increase in women's employment after childbearing over and above its effect via the higher potential wage of women with more experience.

*Increased Opportunities.* What about the second explanation of increases in women's employment? Is there evidence that women's employment has increased because of increased opportunities for jobs and higher wages? Since World War II, jobs that had long been sex-typed as "women's work" showed greater increases in labor demand than did jobs overall (Oppenheimer 1970). This growth resulted from a restructuring of the economy that produced declining employment shares in agriculture and manufacturing and increases in service industries (such as retail sales, health, banking, and restaurants) and in service occupations (such as secretary) (Glass, Tienda, and Smith 1988). This has provided women with increased opportunities for employment.

At the same time, real (i.e., inflation-adjusted) wage increases have made the rewards of employment greater. To put it another way, using economist's terminology, the opportunity cost of (i.e., what is forgone by) being a homemaker has increased. Table 1.3 shows that among full-time workers, women's real (i.e., inflation-adjusted) earnings were increasing in the 1950s, 1960s, and early 1970s. This was true for both white and black women, although in any given year black women

**Table 1.3. Median Annual Earnings of Women and Men Employed Full-Time, Year-Round, by Race and Hispanic Origin, 1955-1987<sup>1</sup>**

|      | White  |        |                    | Black  |        |       | Hispanic <sup>2</sup> |        |       |
|------|--------|--------|--------------------|--------|--------|-------|-----------------------|--------|-------|
|      | Women  | Men    | Ratio <sup>3</sup> | Women  | Men    | Ratio | Women                 | Men    | Ratio |
| 1955 | 12,110 | 21,431 | 0.565              | 6,220  | 11,292 | 0.551 | NA <sup>4</sup>       | NA     | NA    |
| 1960 | 12,988 | 21,431 | 0.606              | 8,804  | 14,165 | 0.622 | NA                    | NA     | NA    |
| 1965 | 14,155 | 24,468 | 0.579              | 9,612  | 15,367 | 0.625 | NA                    | NA     | NA    |
| 1970 | 16,187 | 27,623 | 0.586              | 13,637 | 19,409 | 0.703 | NA                    | NA     | NA    |
| 1975 | 16,323 | 27,918 | 0.585              | 16,030 | 21,416 | 0.748 | NA                    | NA     | NA    |
| 1976 | 16,719 | 28,487 | 0.587              | 15,737 | 20,914 | 0.752 | NA                    | NA     | NA    |
| 1977 | 16,642 | 28,852 | 0.577              | 15,848 | 20,707 | 0.765 | NA                    | NA     | NA    |
| 1978 | 16,955 | 28,502 | 0.595              | 15,855 | 22,549 | 0.703 | NA                    | NA     | NA    |
| 1979 | 16,624 | 28,144 | 0.591              | 15,454 | 21,218 | 0.728 | NA                    | NA     | NA    |
| 1980 | 16,142 | 27,200 | 0.593              | 15,055 | 19,138 | 0.787 | 13,637                | 19,021 | 0.717 |
| 1981 | 15,381 | 26,473 | 0.581              | 14,298 | 18,730 | 0.763 | 13,646                | 18,726 | 0.729 |
| 1982 | 16,310 | 26,186 | 0.623              | 14,577 | 18,598 | 0.784 | 13,384                | 18,362 | 0.729 |
| 1983 | 16,741 | 26,348 | 0.635              | 14,860 | 18,786 | 0.791 | 13,578                | 18,246 | 0.744 |
| 1984 | 17,040 | 27,162 | 0.627              | 15,357 | 18,537 | 0.828 | 14,253                | 18,790 | 0.759 |
| 1985 | 17,404 | 27,131 | 0.641              | 15,407 | 18,977 | 0.812 | 14,279                | 18,315 | 0.780 |
| 1986 | 17,721 | 27,582 | 0.642              | 15,507 | 19,447 | 0.797 | 14,706                | 17,625 | 0.834 |
| 1987 | 17,775 | 27,468 | 0.647              | 16,211 | 19,385 | 0.836 | 14,893                | 17,872 | 0.833 |

Source: Figart, Hartmann, Hoytt, and Outtz 1989 (Tables 3 and 4).

Notes:

<sup>1</sup> Earnings are in constant 1987 dollars. Thus, these figures are adjusted for changes in the cost of living (as measured by the Consumer Price Index) such that they reflect real trends in before-tax purchasing power. NA, data not available.

<sup>2</sup> Includes all Hispanics, regardless of race. Hispanics are also included in "white" or "black" categories according to their race.

<sup>3</sup> Ratio of women's annual earnings to men's annual earnings.

earned less than white women. These wage increases for women were fueled by general growth in the economy that provided increases to men as well. During these periods, the rewards of employment went up for women, and this brought into or kept in the labor force an increasing proportion of white and black women (Butz and Ward 1979).

### III. The Sex Segregation of Jobs

In the United States, as in most societies, men and women generally hold different jobs. If we use the approximately 500 detailed occupational categories used by the U.S. Census Bureau as a benchmark, approximately 60% of men or women would have to change occupations in

order to achieve integration (Blau 1988). "Integration" here refers to a situation in which each occupation has the same sex mix as the labor force as a whole. If we were to use a more detailed classification of job titles and look within firms, we would see segregation to be even more pervasive than these figures indicate (Bielby and Baron 1984). This is partly because some occupations are filled exclusively by men in some firms but exclusively by women in others. For example, many restaurants have either all males or all females waiting tables. Thus, for this occupation, the level of integration implied by national data is misleading as an indicator of how often men and women really work together in the same job within a restaurant. More segregation is seen within firms than in national occupational data for a second reason as well. Organizations often employ more detailed categories than the census categories. Take, for example, a census occupation like physician. The 1980 census shows this to be 14% female. But if we were to use most any clinic's or hospital's more detailed classification by department, we would see that certain specialties, such as pediatrics and psychiatry, contain more than 14% females, while others, such as surgeons, contain fewer (American Medical Association 1986).

Another type of segregation is by industry or firm. The industry one works in is defined by the good or service sold by the firm one works for. For example, one can work in the auto industry or the restaurant industry. Workers in all occupations are included within the industry. Thus, managers, secretaries, production workers, and janitors who work for General Motors are all classified as in the auto industry. Women are more likely than men to work in small firms and in industries with labor-intensive production and relatively low levels of unionization and profit. Yet sex segregation by firms and industries is nowhere near as pervasive as segregation by occupation. After all, most firms and certainly most industries have both male and female workers. In contrast, some occupations (e.g., nursing, secretarial work, plumbing) are filled almost exclusively by one sex or the other.

Segregation means that few jobs are substantially integrated by sex. If sex had no relation to the job one were in, we would expect the sex ratio of each job to approximate the sex ratio of the labor force as a whole, which was slightly over 40% female in 1980. Thus, one way to look at integrated jobs would be to look at what occupations are between, say, 30 and 50% female. According to the 1980 census, out of 503 occupations, this included only 87 occupations. Examples of these integrated occupations are personnel managers, accountants, buyers, physicians' assistants, authors, artists, shoe salespersons, door-to-door salespersons, bartenders, book binders, short-order cooks, ushers, and tailors.



### A. What Kinds of Jobs Do Men and Women Hold?

Occupations filled mainly with women include maids, assembly line workers in the electronics industry, clerks in retail stores, secretaries and other clerical workers, teachers (at the grade school through high school level), nurses, real estate agents, social workers, and librarians. Men predominate in the highest status professions (such as doctor and lawyer), in higher levels of management, in blue-collar crafts (such as plumber, carpenter, and electrician), in assembly line jobs in durable manufacturing (such as autos, steel, and tires), and in jobs involving outdoor labor. One can see from these lists that women's jobs are not usually *less* skilled than men's, but women's and men's jobs generally require *different kinds* of skills. There are both male and female jobs at both low and high levels of education. For example, hairdressers (mostly women) and bus drivers (mostly men) each average 13 years of schooling. Examples of male and female jobs at higher levels of education include electrical engineers and librarians, each averaging 17 years of education. (These examples are taken from the 1980 census data used in Chapter 3.)

Although women's and men's jobs require approximately equal average amounts of formal education received prior to entering the job, women's jobs typically provide less on-the-job training (Corcoran and Duncan 1979; Barron, Black, and Loewenstein 1990). Thus, as the seniority of workers increases, women's jobs may *become* less skilled relative to men's.

Female jobs are also attached to shorter mobility ladders than male jobs, thus reducing women's possibilities for promotion (C. Smith 1979; Rosenbaum 1980; Bielby and Baron 1984; DiPrete and Soule 1988). Related to this is the fact that very few female jobs involve supervision of other workers (Jaffee 1989; Wolf and Fligstein 1979; Hill 1980; Ward and Mueller 1985), especially male workers (Bergmann 1986).

How compatible are women's jobs with family responsibilities? One might think that women would choose jobs most compatible with such responsibilities. To a limited extent this is true. For example, more men than women are concentrated in jobs requiring out-of-town travel, working evenings, or unusually long hours. However, even here there are exceptions. For example, nurses are often required to work evenings, nights, and weekends. Overall, on other dimensions, it does not appear that women's jobs are any more compatible with family responsibilities than men's. Indeed, one national survey (Glass 1990) found more men than women reporting flexibility of schedules, more unsupervised break time, and more paid sick leave and vacation, all of which would be helpful for a parent.

Black women, like white women, generally work in predominantly female occupations. Race discrimination and poverty have limited black women's options even more than those of white women. Thus, more black than white women fill jobs such as maid and nurse's aide. However, much of the convergence between black and white women's earnings during the 1960s and 1970s (seen in Table 1.3) came from black women moving into secretarial work as well as the professions of teaching, nursing, and social work. These jobs had previously been dominated by white women. However, black women in these jobs are more likely than white women to work for the government (local, state, or federal), making their jobs particularly vulnerable to budgetary cuts in this era of fiscal austerity (Higginbotham 1987).

### B. Trends in Segregation

If we use the census detailed occupational categories for calculation, the extent of occupational sex segregation among nonfarm occupations declined very slowly and unevenly throughout the century until about 1970 (England 1981; Jacobs 1989a). Starting about 1970, a much faster decline has occurred (Beller 1984; Jacobs 1989a; Blau 1988). Most of the decline since 1970 came from women entering male jobs, rather than men entering female jobs.

The 1970s saw an increasing number of women becoming accountants, bank officers, financial managers, and janitors. These changes contributed heavily to the decline in segregation. Other male occupations that increased their representation of women by at least 10 percentage points during the 1970s include computer programmers, personnel and labor relations professionals, pharmacists, draftspersons, radio operators, public relations professionals, office managers, buyers and purchasing agents, insurance agents, real estate agents, postal clerks, stock clerks, ticket agents, typesetters, bus drivers, animal caretakers, and bartenders (Beller 1984). The decline in segregation was much greater among younger than among older cohorts. The decline was greater in professional occupations than in blue-collar occupations. The overall decline in occupational sex segregation in the 1970s was as great for African Americans as for whites (Beller 1984).

The decline in occupational segregation by sex continued in the 1980s, though at a pace somewhat slower than in the 1970s (Blau 1988). In general, the same jobs that saw large influxes of women in the 1970s did so in the 1980s as well. Examples are computer operators, insurance adjusters, animal caretakers, typesetters, personnel workers, vocational counselors, and public relations workers. There was little integration of

**women into the skilled blue-collar crafts such as plumbing or carpentry, or into durable goods manufacturing jobs (e.g., auto or steel workers), just as there had been little entry of women into these fields in the 1970s. These facts provide a hint about the reasons for the slowing of desegregation. First, occupations that, for whatever reasons, were the easiest targets for women's entry desegregated first, leaving the "hard cases" to move more slowly later. Second, since the influx of women continues to be largest in those occupations where it began, some initially male jobs have now "tipped" and become disproportionately female. Thus, further increases in the proportion of women in these jobs increase rather than decrease segregation. Examples of such occupations are public relations professionals, personnel and labor relations professionals, and real estate agents.**

Thus far the discussion of trends in segregation has been based on research using the detailed occupational categories employed by the Census Bureau. We can think of jobs as specific occupations within a specific establishment (and hence, a specific industry). Such jobs would be the most meaningful categories across which to compute a measure of occupational sex segregation. Unfortunately, such data are not available for the economy as a whole for even one year, much less a number of years. However, as discussed above, we know that national occupational data understate the full extent of job segregation, since men and women in mixed-sex occupations often work in different industries and firms or in different subspecialties within the occupation. But what about *trends* in the sex segregation of these more detailed categories of jobs? Unfortunately, we have little information on this.

One cautionary note to the conclusion that *job* segregation declined in the 1970s comes from case studies of formerly male occupations into which there has been a large influx of women since 1970. In some cases there has been occupational desegregation but not job desegregation. That is, women and men in a newly integrated occupation may often work for different establishments, sometimes in different industries (Reskin and Roos 1990). For example, bus driving has also become integrated, but most of the women work for school districts while men still retain most of the better-paid jobs as city bus drivers. To take another example, the occupation bakers has become integrated as grocery stores have started hiring women for newly created in-store jobs using automated processes to make cakes and cookies. Yet men still dominate the less automated and more highly paid tasks of making bread in nonstore settings. Women are also becoming systems analysts. Yet in this occupation women often work in hospitals, banking, and insurance, while men are more likely to work in manufacturing industries. In each of these cases, women have gone into a formerly male occupation, but into a less

desirable subpart of it, at least in terms of pay. Thus, even though an occupation has been integrated, when we use more detailed and industry-specific categories, we see that a new female "ghetto" has been created.

In summary, what can we conclude regarding trends in segregation? Occupational classifications measure the function or task people perform. Occupational segregation increased and decreased sporadically throughout the century, with a very modest net decline between 1900 and 1970. There was a faster pace of decline during the 1970s, and there has been a continued though slowed decline in segregation since 1980. We do not have data on whether segregation in jobs (defined by cross-classifying more detailed job titles and firms) has also decreased since 1970. Doubts about this are fueled by evidence that some of the occupational integration has led to new patterns of segregation within occupations. My conjecture is that some desegregation in jobs is occurring, particularly at the managerial and professional level, and will continue, but that the pace of desegregation of jobs is slower than that of occupations.

### C. Explanations of Levels and Trends in Segregation

Why are some jobs filled by women, some by men, and few integrated by sex? What explains why levels of segregation change over time? As a way to organize research on these questions, I will divide the factors affecting segregation into those involving *choices* on the part of those entering jobs, and those involving *constraints* faced by job entrants. In making this distinction, we must remember that today's choices may be affected by past constraints, and vice versa. For example, parents or teachers may encourage different job choices for young women and men. This sex-differentiated reinforcement is a constraint that may lead to different job *choices* at the point one declares a college major or applies for a job. The emphasis in this chapter is not on which theory each factor is compatible with. Often a single factor plays a part in several theories, and theories are not my concern in this chapter. (For discussion of how this research forms evidence for particular theories, see Chapter 2.)

*Choices.* Segregation results, in part, because men and women choose different jobs. But why are these choices different? Some researchers argue that the choices are rational responses to the division of labor by sex in the family. In this view, women choose jobs compatible with their family responsibilities. I see this as playing a relatively minor role in job choices, since, as discussed above, the jobs women hold are generally not more accommodating to parenting than are men's jobs.

A variant of this argument sees the division of labor by sex in the family to cause women's employment to be intermittent, which leads women to choose jobs that maximize lifetime earnings, conditional on this intermittent employment. If jobs that provide much on-the-job training have steeper wage trajectories (i.e., higher rates of return to seniority) but lower starting wages, women may avoid such jobs because the gains from steeper wage gains do not outweigh the losses from the lower starting wages. Research on this question is discussed in Chapter 2 as it bears on the ability of human capital theory to explain segregation. In my view, this view is largely incorrect. Consistent with the view, women are concentrated in jobs that provide relatively low amounts of on-the-job training (Corcoran and Duncan 1979; Barron et al. 1990), and female jobs do have lower returns to seniority than male jobs (Rosenbaum 1980; Filer 1983). However, no research has ever demonstrated the higher starting wages that are the purported advantage of jobs offering less training. Given this, it is hard to see how women's efforts to maximize lifetime earnings would lead them to choose female jobs.<sup>1</sup>

Thus, if the job choices of men and women differ, I believe these differences are sustained by lifelong socialization that leads men and women to find different jobs interesting, respectable, of value, or consistent with their gendered identities. This is consistent with the view I develop in this book—that it is much more accurate to see men and women in jobs with *different skills*, than with *different amounts* of skill. Preferences for certain kinds of work entail preferences for exercising certain kinds of skills. The socialization that forms these proclivities begins in childhood and continues throughout adulthood. It operates through reinforcement patterns, role models, cognitive learning, sex-segregated networks of peers, and other processes.

These differences in interests can be seen early in life. Even preschool and elementary school children express sex-typed occupational goals (Marini and Brinton 1984). However, the occupational aspirations of boys are more highly sex typed than those of girls (Marini and Greenberger 1978).

Are these differences in job interests a reflection of broader differences in values? Some evidence supports this. Studies decades ago found that males claimed to place more value on money in choosing a job. Studies attempting to assess changes in the job dimensions valued by young adults have found surprisingly little convergence between the sexes (Lueptow 1980; Herzog 1982; Peng et al. 1981; Tittle 1981). Lueptow (1980) compared the occupational values of graduating seniors in 1961 and 1975 and found that in both years men claimed to place more value than did women on status, money, freedom from supervision, and po-

tential for leadership. In both years, the study found that women placed more value on working with people, helping others, using their abilities, and being creative. Other surveys have shown that men place a greater value on autonomy, authority, and promotion possibilities than do women (Brenner and Tomkiewicz 1979; Murray and Atkinson 1981; Peng, Fetters, and Kolstad 1981; Herzog 1982), and these job dimensions have been found to affect men's job satisfactions to a greater extent than women's (Glenn and Weaver 1982; Crane and Hodson 1984; Murray and Atkinson 1981). There is also some evidence that men value taking risks more than women (Walker, Tausky, and Oliver 1982; Subich, Barrett, Donerspike, and Alexander 1989).

Yet we must be cautious in inferring from these studies that sex differences in occupational values explain segregation. Some of the studies surveyed adults already holding jobs. Thus, it is possible that jobs affected values as much as values affected the job chosen. The studies also show some conflicting findings. For example, while a number of surveys find that men claim to value pay more than women, one study found no such difference (Walker et al. 1982), and some studies have found pay to have a greater influence on women's job satisfaction than on men's (Crane and Hodson 1984).

It is also important not to assume that these sex differences show men to be more career or achievement oriented than women. Women may be equally career oriented but focused on different skills or values. One example of such bias in interpretation appears in an article by Brenner and Tomkiewicz (1979), who asked college students to rate job characteristics in terms of their importance to them. Men were found to place more value on income, opportunity to take risks, and supervisory authority. Women placed more value on good relations with coworkers, opportunity to develop knowledge and skills on the job, and intellectual stimulation. The authors conclude from these findings that women give less importance to careers than men. This is certainly not an obvious conclusion from the findings; one might regard an orientation toward continued learning of knowledge and skills, on which women placed more emphasis, as the best indicator in the survey of the sort of careerism we would expect employers to care about.

A preference for a sex-typical job does not always reflect values, tastes, or dispositions toward the kind of work in these jobs. It may rather reflect a preference for working with members of one's own sex or for doing work labeled male or female regardless of the content of the work. There is evidence of this sort of preference, especially among males. One experiment (Heilman 1979) divided high school students into two groups that received different information on the projected sex composition of the occupations of lawyer and architect. Students ran-

domly assigned to the first group were told that these jobs were projected to have a high percentage of males in them in coming years, while those randomly assigned to the second group were told the jobs were projected to contain a much higher percentage of females. The boys told that the jobs were projected to have more women in them reported less interest in going into those jobs. The opposite effect occurred for girls, although the effect was stronger for the boys.

In my view, gender role socialization and sex-typed choices of jobs clearly have some role in segregation. But what is their role in the desegregation observed since about 1970? There is evidence that occupational preferences have shifted substantially among high school students (Marini and Brinton 1984). A decline in sex differences in college majors occurred during this period as well (Beller 1984; Jacobs 1985, 1989b). Of course, some of these shifts could be *responses* to changed constraints. This is suggested by the evidence reviewed above that specific occupational choices shifted more than underlying occupational values. Yet preferences were undoubtedly shifting for other reasons as well. However, these changes in preferences are probably *not* explained by changing patterns of childhood socialization, since the women who started these changes in the 1970s were young children in the very traditional 1950s. Thus, to say that socialization is a factor in segregation does *not* imply that changing patterns of childhood socialization is the only way for desegregation to occur.

*Constraints Posed by Employers, Male Workers, and Institutional Practices.* One sort of constraint faced by those seeking jobs is discrimination by employers. Our concern here is not with theories of discrimination, which are reviewed in Chapter 2, but with evidence about whether hiring discrimination exists. Discrimination in hiring, placement, and promotion is suggested by experimental studies that present randomly assigned groups of managers or prospective managers with resumes that differ only in the male or female names on them. Such studies often find that men are preferred in typically male jobs (Rosen and Jerdee 1974, 1978; Levinson 1975; Rosen 1982). Sociologists Bielby and Baron (1986) also found substantial evidence of discrimination in the statements of California manufacturers about their hiring practices. Milkman's (1987) historical study showed that although many women went into previously male jobs during World War II, this shifted rather than eradicated boundaries between men and women's work; employers redivided jobs such that each job was done only by women or only by men. Women were laid off after the war. As new hires were made, employers refused to rehire women in the traditionally male jobs they had held during the war, even when this violated union seniority

rules, and even when the women had more training in the job than the men newly returned from the war.

Employers may discriminate because of beliefs about sex differences in skills, because of values about the roles men and women should play, to create antagonisms that minimize workers' solidarity, or to avoid the disruption that occurs when male workers are faced with a woman entering "their" jobs.

Some women anticipate discrimination and alter their "choices" accordingly. Discrepancies between young women's aspirations and their expectations about future jobs are evidence that women anticipate a constraint. Marini and Greenberger (1978) found that girls expected to end up in occupations that averaged 75% female, but aspired to occupations that averaged 66% female. In contrast they found no difference between the average percentage female of the occupations high school boys said they expected to work in and those to which they aspired. Another survey of high school students showed that 34% of girls but only 22% of boys believed that their sex would prevent them from getting the kind of work they would like to have (Bachman, Johnston, and O'Malley 1980). This is evidence that young women anticipate constraints and this affects their plans.

One constraint women face is the way they are treated by male workers if they enter a male job. In one survey of female blue-collar workers, almost one third of the women reported that male coworkers gave them a hard time and that male coworkers disapproved of women doing craft work (O'Farrell and Harlan 1982). Schroedel's (1985) in-depth interviews with women who entered male-dominated blue-collar craft jobs revealed that many women felt unwelcome as a result of men's derogatory comments, men's attempts to sexualize the relationships (such as touching women while working next to them), and men's unwillingness to teach women the skills they would ordinarily teach a new male coworker. Case studies of occupations that many women entered in the 1970s show that men often tried to keep women out, either for fear that it would lower their wages or because they saw it as a threat to their sense of masculinity (Reskin and Roos 1990). Unionized men have been more successful than others at keeping women out (Reskin and Roos 1990; Hartmann 1976). There are several ways that unions have helped men to keep women out of "their" jobs. Some unionized jobs can only be entered through apprenticeships and one has to be selected by a union member to be an apprentice. Also, prior to the passage of the 1964 Civil Rights Act, which rendered such laws illegal, unions lobbied for laws that prohibited hiring women in particular jobs or for particular shifts.

Institutional inertia plays a role in perpetuating discriminatory constraints. Milkman (1987) examined historical data on a number of man-

ufacturing firms across the century and found that if an industry hires one sex in a certain job at its origin, the sex label generally "sticks" for decades because it gains the weight of tradition.

Institutional inertia perpetuates segregation in yet another way. Many firms have structured mobility ladders, sometimes called internal labor markets. While some jobs are a "dead end" from which one cannot be promoted, others lead to a sequence of jobs through which promotions are common. The jobs at the bottom of these mobility ladders are filled from outside the firm; they may be thought of as ports of entry. Once segregation has occurred in jobs that are ports of entry—for any of the reasons discussed above—the existence of structured mobility ladders will perpetuate segregation up the ladders and through the life cycle of each cohort of workers without a need for further overt discrimination.

Another set of institutional practices that create constraints falls into a category similar to the legal notion of "disparate impact," discussed in more detail in Chapter 5. Job requirements that have a disparate and adverse impact on women are those that, given prior sex differences in experiences, make it more difficult for women to qualify for or remain in the job. These constraints are distinct from direct sex discrimination in hiring. That is, sex is not explicitly being used as a criterion for letting people into the job. Yet other criteria are being used that tend to screen out women. Examples of such criteria that have an adverse impact on women include upper age limits for entering apprenticeships (which disadvantage homemakers returning to the labor force), veterans' preferences (since more men than women have been veterans), limited public advertising of jobs (since more men than women are likely to talk to men who work in the jobs and thus have access to the information), the use of machinery designed for typical male height and strength, and departmental rather than plantwide seniority being credited toward promotions (Roos and Reskin 1984).

It is hard to know how much discriminatory barriers of either an overt or disparate impact variety have changed. My rough sense is that there has been a substantial decline in hiring discrimination, but that a substantial amount remains. Antidiscrimination legislation has had some effects on employers' hiring practices (Beller 1979, 1982a, 1982b; Leonard 1984; U.S. Department of Labor 1984; Burstein 1985; Gunderson 1989). In this sense, the lessening of constraints has been an important factor in desegregation. After legal requirements, Equal Employment Opportunity (EEO) was institutionalized as part of personnel departments in most large firms, thus giving it some inertial force even in the absence of governmental enforcement. The Republican administrations in office since 1980 have been much less aggressive than prior Republican or Democratic administrations about using the Equal Employment Oppor-

tunity Commission (EEOC) or the Office of Federal Contract Compliance Program (OFCCP) to sue or fine employers who discriminate against women or people of color.

Women have been helped by changes in some job requirements, whether these changes occurred because of successful lawsuits involving disparate impact (Burstein and Pitchford 1990) or for other reasons. To take an example of the latter, the development of real estate courses at community colleges around 1970 provided a way for women to circumvent apprenticeship systems that had required current brokers (mostly men) to sponsor new real estate agents (Reskin and Roos 1990).

The fact that resistance by male workers to women's entrance into jobs is a factor in discrimination suggests some conditions under which desegregation might proceed. Reskin and Roos (1990) show that women are more likely to enter male-dominated occupations when they are undergoing deskilling, losing autonomy, or their earnings relative to all jobs is going down. Women are more able to enter jobs at such times because men are less concerned with keeping women out when their jobs are losing desirability; in such times men themselves want to leave the jobs. Unfortunately for women, this means it will be easiest to enter those male jobs with declining advantages in terms of earnings, mobility prospects, or autonomy.

Desegregation has also been more likely to occur when there is an expansion in demand in a male occupation and women are found to be cheaper than men (Oppenheimer 1970; Richardson and Hatcher 1983; Cohn 1985).

#### IV. The Sex Gap in Pay

##### A. Trends in the Sex Gap in Pay

In the United States, as in most nations, women earn substantially less than men. For manufacturing workers, the female/male earnings ratio moved from 0.35 in 1820, to 0.50 in 1850, to 0.58 in 1930 (Goldin 1990). For all workers, the ratio rose from 0.45 to 0.60 between 1890 and 1930 (Goldin 1990). Table 1.3 shows little change between 1955 and 1980 for whites. During most of this period the ratio was about 0.59. Among blacks, Table 1.3 shows that the sex gap in pay narrowed considerably between 1955 and 1980, with women's relative earnings moving from 0.55 to 0.79. Thus, when it comes to women's pay relative to that of men, there have been eras of progress and eras of stagnation, and the timing of such change has differed by race.

Since 1980, white, black, and Hispanic women have made progress relative to men of their own racial or ethnic group, and relative to white men. As Table 1.3 shows, the sex ratio for whites moved from 0.59 to 0.65 between 1980 and 1987. For blacks the sex ratio moved from 0.79 to 0.84, and for Hispanics from 0.72 to 0.83. For the most part, women made these relative gains because their earnings showed slight (inflation-adjusted) absolute gains during the 1980s, while white and black men's wages were relatively stagnant and Hispanic men's wages declined.

The figures referred to so far (in Table 1.3) are based on annual earnings of full-time workers. Another way to look at trends in the pay gap is

Table 1.4. Female-Male Ratios of Median Usual Weekly Earnings among Full-Time Wage and Salary Workers, by Race, 1967-1989

| Year <sup>3</sup> | Unadjusted for Hours Worked <sup>1</sup> |       | Adjusted for Hours Worked <sup>2</sup> |       |
|-------------------|--|-------|--|-------|
|                   | White                                    | Black | White                                  | Black |
| 1967              | 0.608                                    | 0.700 | 0.676                                  | 0.732 |
| 1971              | 0.607                                    | 0.707 | 0.669                                  | 0.747 |
| 1973              | 0.606                                    | 0.718 | 0.669                                  | 0.756 |
| 1974              | 0.598                                    | 0.731 | 0.659                                  | 0.768 |
| 1975              | 0.613                                    | 0.751 | 0.672                                  | 0.789 |
| 1976              | 0.615                                    | 0.738 | 0.676                                  | 0.781 |
| 1977              | 0.606                                    | 0.731 | 0.669                                  | 0.775 |
| 1978              | 0.599                                    | 0.732 | 0.660                                  | 0.773 |
| 1979              | 0.611                                    | 0.747 | 0.673                                  | 0.790 |
| 1981              | 0.635                                    | 0.775 | 0.694                                  | 0.817 |
| 1982              | 0.639                                    | 0.794 | 0.698                                  | 0.838 |
| 1983              | 0.646                                    | 0.790 | 0.703                                  | 0.832 |
| 1984              | 0.670                                    | 0.798 | 0.731                                  | 0.842 |
| 1985              | 0.674                                    | 0.829 | 0.736                                  | 0.874 |
| 1986              | 0.679                                    | 0.827 | 0.742                                  | 0.866 |
| 1987              | 0.682                                    | 0.844 | 0.745                                  | 0.890 |
| 1988              | 0.684                                    | 0.830 | 0.746                                  | 0.877 |
| 1989              | 0.693                                    | 0.865 | 0.758                                  | 0.914 |

Source: U.S. Department of Labor 1967-1989.

Notes:

<sup>1</sup> Includes only full-time workers, i.e., those working at least 35 hours per week.

<sup>2</sup> Includes only full-time workers, i.e., those working at least 35 hours per week, and adjusts for sex differences in average hours worked among these workers.

<sup>3</sup> Data for 1967-1978 are for the month of May only.

to examine usual weekly earnings of full-time, year-round workers. Figures in the left two columns of Table 1.4 show these trends for black and white men and women. For some reason the female/male ratios are slightly higher in such data, but they show the same basic trends in the sex gap in pay—steady decreases among blacks and decreases among whites since 1980.

One limitation of the statistics in Table 1.3 and in the left two columns of Table 1.4 is that all workers who work at least 35 hours a week are considered full-time. Yet among these full-time workers, men average slightly more hours per week than women. Thus, when figures on the sex gap in pay are adjusted for differences in hours worked within full-time workers, the ratios are several percentage points higher, although the trends in sex gaps are similar, as the right two columns of Table 1.4 show.

One set of statistics that can mislead as an indicator of women's progress is comparisons between the sex gap in pay for different age groups. Table 1.5 gives female/male earnings ratios separately by age group, for

Table 1.5. Adjusted<sup>1</sup> Female-Male Ratios of Median Usual Weekly Earnings among Full-Time Wage and Salary Workers, by Age, 1973-1988

| Age                       | 1973 | 1978 | 1983 | 1988 |
|---------------------------|------|------|------|------|
| Total, 16 years and older | 0.68 | 0.67 | 0.72 | 0.77 |
| 16-19                     | 0.86 | 0.91 | 0.96 | 0.93 |
| 20-24                     | 0.83 | 0.80 | 0.89 | 0.96 |
| 25-34                     | 0.72 | 0.73 | 0.80 | 0.85 |
| 35-44                     | 0.61 | 0.59 | 0.66 | 0.75 |
| 45-54                     | 0.62 | 0.59 | 0.63 | 0.67 |

Sources: Figures for 1973 to 1983 from Table 3, O'Neill, June. "The Trends in the Male-Female Wage Gap in the United States." *Journal of Labor Economics* Vol. 3, No. 1, pp. S91-S116. Copyright © 1985. Reprinted with permission. Figures for 1988 from U.S. Department of Labor 1989a (Table 33) and 1989b (Table 41).

Notes:

<sup>1</sup> Adjusted for sex differences in hours worked among workers classified as full-time (i.e., 35 hours/week or more). For 1988 figures only, data on hours used for the adjustments come from a slightly different age group than was used for the figures on earnings because of unavailability of data on narrow age groups in published sources. For 1988, hours for those 25-44 were used to adjust earnings ratios of those 25-34 and 35-44, and hours of those 45-64 were used to adjust earnings ratios of those 45-54.

1973, 1978, 1983, and 1988. The table shows that, in each year, the gap is much smaller among younger workers. For example, in 1988, the female/male earnings ratio among those 20–24 was 0.96, whereas it was 0.85 among those 25–34, and 0.75 among those 35–44. Some interpret this to mean that the sex gap in pay is disappearing. This optimistic interpretation hinges on assuming that the differences in a given year across age groups result entirely from a cohort effect and not at all from a life cycle effect. Another way to put this assumption is to say that each cohort (i.e. people born in a given year) will retain the same sex ratio of pay it currently has as it ages. If this is true, as the older cohorts with the larger sex gap retire, the overall sex gap in pay will decrease. If, on the other hand, we interpret the age differences as entirely a life cycle effect, experienced by every cohort, the figures have no implications as to the future of the sex gap in pay. They simply reveal that the sex gap in pay increases with age. This results in part because the sex gap in experience increases as women go through the childbearing years, and in part because even those women who are employed continuously usually work in jobs low on prospects for mobility and raises. For both these reasons, women's earnings fall further and further behind men's across the life cycle. Further complicating matters is the possibility of period effects. Period effects refer to changes over time, for example, decreases in discrimination, that affect all employed cohorts and age groups approximately equally.

In reality, all three effects (cohort, life cycle, and period) are probably operative, as suggested by Table 1.5 (and by Bianchi and Spain 1986). In each of the years shown, younger workers have a higher female/male ratio of earnings. We can also follow one cohort across the years. To take one example, consider those who were aged 25–34 in 1973, with women earning 0.72 of men's earnings. Ten years later, in 1983, when this same cohort was aged 35–44, the women were earning only 0.66 what men earned. For this cohort, women's relative losses across the life cycle were great enough to override any period gains between 1973 and 1983. But, if we look at the cohort 25–34 in 1978, women earned 0.73 of men's earnings in 1978, but had decreased the sex gap slightly to a ratio of 0.75 by 1988 when the cohort was 35–44. Here the period progress accruing to the cohort appears to have been large enough to override any relative losses of women across the life cycle. This suggests that favorable change in women's relative pay is occurring via both period and cohort effects. However, net of these changes, women's relative position deteriorates across the life cycle. Thus, the progress is not as fast as would be indicated by interpreting all of the age differences in sex ratio for any given year as cohort effects.

### B. Explanations of the Sex Gap in Pay

What factors explain the sex gap in pay? Here I will consider evidence for the role of a number of factors, leaving questions of what theories this evidence supports for Chapter 2. Some of these factors have their effects on the sex gap in pay via their effects on segregation.

*Sex Differences in Productivity or Effort?* Are women less productive than men? We seldom have measures of productivity, so there is little direct evidence on this. Yet there is much speculation and some indirect evidence. Becker (1985) speculates that, because of their domestic responsibilities, women exert less intense effort on the job, saving energy for domestic pursuits. The fact that women who are employed do more household work than their husbands is well documented (Berk and Berk 1979; Ross 1987; Hochschild 1989). But despite this, tests of differences in effort have, if anything, suggested that women expend *more* effort than men in their paid jobs. Bielby and Bielby (1988) analyzed data from a national survey that asked respondents how "hard" their jobs require them to work, how much "effort, either physical or mental" their jobs require, and how much "effort" they put into their jobs "beyond what is required." Women reported slightly *more* effort than men. One might wonder whether this finding simply results from women "bragging" more than men about their effort level. This is doubtful, since social psychologists' experiments show that men generally overestimate and women underestimate their own performance (Colwill 1982). Evidence on time allocation also suggests that women's effort is higher than men's; national survey data show that women report less time than men in coffee breaks, lunch breaks, and other regularly scheduled work breaks (Stafford and Duncan 1980; Quinn and Staines 1979). Thus, research indicates that sex differences in effort explain none of the sex gap in pay.

*Industries and Firms.* While the most obvious form of segregation is at the occupational level, there is some segregation by industry and firm as well, and this contributes to the sex gap in pay. Unlike occupations, many of which are nearly all male or female, almost all firms (and thus industries, since they are a collection of firms all selling the same product) employ both men and women. Yet, although sex segregation by firm and industry is not nearly as extreme as by occupation, there are, nonetheless, systematic tendencies for women to be employed in those firms and industries with low average wages (Blau 1977; Beck, Horan, and Tolbert 1980; Hodson and England 1986; Aldrich and Buchele 1989; Coverdill 1988; Ferber and Spaeth 1984). For example, Blau (1977) exam-

ined cases where men and women in the same very detailed occupation (like accounting clerk, payroll clerk, or computer programmer) had different wages, and found that this was usually a matter of women working in a lower-wage firm. Often the entire industry the lower-paying firms were in had lower average wage scales.

However, even when women move to higher-wage firms and industries, their wages do not go up as much as men's do. The wage premium associated with being in a high-wage firm or industry goes disproportionately to male jobs (Aldrich and Buchele 1989).

*Amount of Human Capital Investment and Expected Human Capital Investment.* Are women in jobs requiring less skill, and, if so, does this affect the sex gap in pay? Here, let us confine our attention to *amount* of skills or training rather than *types* of skill. Amount of schooling, one type of human capital, explains virtually none of the sex gap in pay, since men and women in the labor force have virtually the same median years of formal education, as Table 1.6 shows. Among whites, women had 1.3 years more education than men in the labor force in 1952, and men did not close this gap until 1969. By 1979, white men's median was a trivial 0.1 year more education than white women's. For blacks the trends are somewhat different, but black women have had slightly more education than black men in all years since 1952, as Table 1.6 shows, although by 1983 this female advantage in median education had declined to a relatively trivial 0.2 year.

There is a sex difference in another sort of human capital: years of job experience. Because many women spend some years rearing children and keeping house full-time, the average woman in the labor force has fewer years of experience than the average man. Early studies had

Table 1.6. Median Years of School Completed by Men and Women in the Labor Force, by Race, 1952–1983

|      | White |       |            | Black |       |            |
|------|-------|-------|------------|-------|-------|------------|
|      | Men   | Women | Difference | Men   | Women | Difference |
| 1952 | 10.8  | 12.1  | -1.3       | 7.2   | 8.1   | -0.9       |
| 1959 | 11.8  | 12.2  | -0.4       | 8.1   | 9.4   | -1.3       |
| 1969 | 12.4  | 12.4  | 0.0        | 10.8  | 11.9  | -1.1       |
| 1979 | 12.7  | 12.6  | 0.1        | 12.2  | 12.4  | -0.2       |
| 1983 | 12.8  | 12.7  | 0.1        | 12.4  | 12.6  | -0.2       |

Source: From: O'Neill, J. "The Trends in The Male-Female Wage Gap in the United States." *Journal of Labor Economics* Vol. 3, No. 1, pp. S91-S116. Copyright © 1985. Reprinted with permission.

shown that this difference explains between one quarter and one half of the sex gap in pay (Polachek 1975; Mincer and Polachek 1974, 1978; Sandell and Shapiro 1978).

A 1979 study by Corcoran and Duncan will be discussed in some detail since it is the best available for assessing the effects of various types of human capital on the sex gap in pay. They used a standard method of regression decomposition in which the amount that any variable contributes to the sex gap in pay is a function of (1) the rate of return of the variable (how much an additional increment contributes to earnings for both men and women) and (2) the size of the difference between men and women's average on this variable. They found that the regression coefficients or slopes—the rates of return—to different types of human capital were not terribly different for men and women. Their results do show that the *overall* rate of return to experience is higher for white males than other groups. (Hoffman 1981 also found this.) But when experience is divided into subcomponents according to whether the experience was with one's current employer (called "tenure") and whether it involved on-the-job training, rates of return for the subcomponents did not differ much by race or sex. This implies that the overall group differences in rates of return to experience came from groups spending different proportions of their employed years in different types of experience, which in turn offer varying rates of return. For example, white men are likely to have a higher portion of their experience in a job that provides on-the-job training, and years of tenure during which training was provided have a higher rate of return than other years of tenure in one's current firm or than years of experience in prior firms.

Since coefficients did not vary significantly between groups for most variables, Corcoran and Duncan used white male slopes for the decomposition, and my discussion that follows uses these results. Calculations from Corcoran and Duncan's study (1979) are presented in Tables 1.7 and 1.8. (They include decompositions using other groups' slopes.)

A striking implication of Table 1.7 is the amount of the sex gap in pay among whites that comes from men having more tenure (seniority with one's firm), including periods during which the employer was providing training. The training portion of tenure explains 11% of the gap between white men and white women. Although Table 1.7 shows that this same factor explains 8% of the gap between white men and black women, and 15% of the gap between black men and white men, Table 1.8 shows that on-the-job training is a relatively minor factor in the sex gap in pay between black men and women, explaining only 2%. It is also a trivial part of the pay gap between black women and white women (1%). Whether or not differences between groups in time spent in jobs with



Table 1.7. Percentage of 1975 Wage Gap between White Men and Other Groups Accounted for by Indicators of Human Capital

|   | Black Men | White Women | Black Women |
|---|-----------|-------------|-------------|
| Years out of labor force since completing school      | 0 (0)     | 6 (5)       | 3 (-3)      |
| Years of work experience before present employer      | 2 (6)     | 3 (1)       | 1 (-1)      |
| Years with current employer prior to current position | 5 (4)     | 12 (11)     | 7 (5)       |
| Years of training completed on current job            | 15 (22)   | 11 (17)     | 8 (14)      |
| Years of posttraining tenure on current job           | -4 (-5)   | -1 (-1)     | -1 (1)      |
| Proportion of total working years that were full-time | 0 (-1)    | 8 (7)       | 4 (2)       |
| Hours of work missed due to illness of others in 1975 | -1 (1)    | -1 (0)      | -2 (-1)     |
| Hours of work missed due to own illness in 1975       | -1 (-1)   | 0 (0)       | -1 (0)      |
| Placed limits on job hours or location                | 0 (1)     | 2 (1)       | 1 (-1)      |
| Plans to stop work for nontraining reasons            | -1 (-1)   | 2 (1)       | 1 (2)       |
| Formal education (in years)                           | 38 (43)   | 2 (2)       | 11 (15)     |
| Percentage of total gap explained by human capital    | 53 (71)   | 44 (45)     | 32 (32)     |
| Percentage of total gap unexplained by human capital  | 47 (29)   | 56 (55)     | 68 (68)     |

Note: The decomposition calculates what percentage of the total gap in the natural log of hourly earnings between white men and each other group arises because of group differences in means on the independent variables, assuming the white male slopes. The calculation is the difference between the two groups' means times the slope. This is then divided by the total log-dollar gap and the quotient multiplied by 100 to convert to a percentage. (The percentages in parentheses are alternative estimates arrived at by using the lower-earning group's slopes.) The total gap is adjusted for whether individuals live in the South and the size of the largest city they live near. Adapted and computed from Corcoran and Duncan (1979, Table 1).

training are themselves explained by discrimination in job assignments or by job choices is a separate question that Corcoran and Duncan's analysis cannot answer.

White women also earn less if they have been out of the labor force. (See also Mincer and Ofek 1982.) This is shown by the net effects on wages of (1) years of work experience before present employer and (2) years with current employer prior to current position. The first of

Table 1.8. Percentage of 1975 Wage Gap between Black Men and Women and between Black and White Women Explained by Indicators of Human Capital

|   | Black Women and Black Men | Black Women and White Women |
|---|---------------------------|-----------------------------|
| Years out of labor force since completing school      | 10 (-7)                   | -8 (14)                     |
| Years of work experience before present employer      | 0 (-3)                    | -3 (3)                      |
| Years with current employer prior to current position | 7 (6)                     | -12 (-12)                   |
| Years of training completed on current job            | 2 (2)                     | 1 (2)                       |
| Years of posttraining tenure on current job           | 2 (-2)                    | -4 (3)                      |
| Proportion of total working years that were full-time | 16 (4)                    | -10 (-6)                    |
| Hours of work missed due to illness of others in 1975 | 2 (-1)                    | 3 (-5)                      |
| Hours of work missed due to own illness in 1975       | 0 (0)                     | 3 (-2)                      |
| Placed limits on job hours or location                | -3 (1)                    | -3 (-6)                     |
| Plans to stop work for nontraining reasons            | 3 (5)                     | -1 (7)                      |
| Formal education (in years)                           | -16 (-20)                 | 76 (97)                     |
| Percentage of total gap explained by human capital    | 25 (-15)                  | 43 (95)                     |
| Percentage of total gap unexplained by human capital  | 75 (115)                  | 57 (5)                      |

Note: The decomposition calculates what percentage of the total gap in the natural log of hourly earnings between the two groups arises because of group differences in means on the independent variables, assuming the slopes of the higher-earning groups, black men in column 1 and white women in column 2. (The percentages in parentheses are alternative estimates arrived at by using the lower-earning group's slopes.) The total gap is adjusted for whether individuals live in the South and the size of the largest city they live near. Computed from Corcoran and Duncan (1979, Table 1).

these two factors explains 3% of the gap between white men and white women (Table 1.7) but has no effect on the sex gap among blacks (Table 1.8). The second factor explains 12% of the sex gap among whites (Table 1.7), and 7% (Table 1.8) of the sex gap among blacks. The proximate cause of these portions of the sex gap in pay is women's lesser employment experience. However, discriminatory job and wage differentials may be behind some proportion of these sex differences in years of employment experience, since women have less motivation to stay employed if they are paid less. It is interesting that none of the measures of experience contribute to the pay gap between white and black women; black women have more experience but lower earnings.

Overall, Table 1.7 shows that Corcoran and Duncan (1979) found human capital (broadly construed to include all measures of education, employment continuity, and labor force attachment) to explain 44% of the pay gap between white men and women and 32% of the gap between white men and black women.

Tables 1.7 and 1.8, taken together, also reveal some facts about the interaction of race and gender. Overall, a much smaller proportion of the sex gap in pay between black women and black men is explained by human capital than is explained for either the gap between black and white women or between black women and white men. In particular, black women's higher average education than black men's makes a large *negative* contribution to the sex gap for blacks. That is, black women have higher education than black men, but lower earnings. In contrast, education makes significant contributions to the pay gap between black and white women (76%), between black women and white men (11%), and between black and white men (38%).

Let us now turn our attention to the question of whether women's *intentions or expectations* for less employment continuity at the time they first enter employment might explain some of the subsequent sex gap in pay. To the extent that job experience provides skill accumulation, this can be seen as relevant to the amount of human capital one accumulates. There are two versions of how expectations about continuity of experience might affect earnings. One posits that, if there is a trade-off between starting wages and steep wage trajectories (i.e., high returns to experience and/or tenure), women who plan intermittent employment will be more apt to choose jobs with relatively high starting wages than will either men or women planning continuous employment. This could possibly create an average sex gap in pay, despite the fact that it would produce higher lifetime earnings for women than if they chose jobs similar to men. However, as mentioned above, no study to date has found higher average starting wages for women or in women's jobs, even when other factors are controlled (England 1984; England, Farkas, Kilbourne, and Dou 1988). A milder version of this thesis might say that women will be more motivated to choose jobs with steep upward wage trajectories the longer they plan to be employed. I find this a more plausible claim, although we lack research on how much this has affected women's choices.

A second way that women's plans for intermittent employment may affect the sex gap in pay is via employers' statistical discrimination. (Definitions and theoretical discussion of statistical discrimination appear in Chapter 2.) If women have higher turnover rates, and employers know this, then based on this sex difference in turnover they may engage in what economists call statistical discrimination. That is, em-

ployers will be reluctant to hire women in jobs where turnover is especially expensive, particularly jobs that provide much on-the-job training. What evidence is there for this as a factor in the sex gap in pay? First, let us look at the evidence about sex differences in turnover. It is equivocal (Price 1977, p. 40). Several studies based on recent national probability samples of young workers (mostly in their twenties) found no sex differences in turnover, even when wage was not controlled (Waite and Berryman 1985; Donohue 1987; Lynch 1991). At first glance this seems extremely counterintuitive since we know that women leave the labor force for childrearing more often than men. The seeming anomaly is explained by the fact that men change firms more often than women (Barnes and Jones 1974). Other studies find gross differences, with women having higher turnover rates, but after statistically adjusting for wages or wage-related job characteristics, these differences disappear or reverse (Viscusi 1980; Blau and Kahn 1981; Haber, Lamas, and Green 1983; Shorey 1983). In general, workers of any sex or race are more likely to quit a job when it is low paying or has low opportunity for advancement (C. Smith 1979; Osterman 1982; Haber et al. 1983; Shorey 1983; Grounau 1988; Kahn and Griesinger 1989; Light and Ureta 1989). Thus, if women are placed in less desirable jobs through discrimination, this could explain part of their higher turnover in studies that do find gross sex differences in turnover. If this is true, then women's disadvantageous job placements may explain their higher turnover rather than vice versa. However, if the job placements result from statistical discrimination based on real exogenous turnover differences, then statistical controls for job characteristics are inappropriate in studies designed to assess exogenous sex differences in turnover propensity. Thus, the "chicken and egg" question of which is exogenous, the higher turnover or the discrimination, is virtually impossible to assess statistically. My best guess is that, except in the most recent cohorts (to which Waite and Berryman's 1985, Donohue's 1987, and Lynch's 1991 analyses were confined), exogenous sex differences in turnover existed but were very small and not present in all workplaces or occupations. However, it is important to note that among young cohorts in the recent period, turnover differences disappeared. Thus, if employers continue favoring men for jobs providing much training, it cannot be explained rationally via statistical discrimination but must reflect erroneous perceptions or other discriminatory motivations.

Thus far I have discussed how much of the sex gap in pay can be explained by human capital or anticipated human capital at any one point in time. But what of the trends in the sex gap in pay? Can these be explained by trends in human capital? Let us look at this question first in terms of the post-World War II period up until about 1980, a period

during which the sex gap in pay was relatively unchanging. Were there trends in human capital that we would expect to have reduced the sex gap in pay? Several studies suggest not. For example, women's education relative to men's has not increased in the last 50 years (Goldin 1990; Smith and Ward 1984). Thus, based on education trends, we would not expect the sex gap in pay to change. Of course, during all this time, both men's and women's levels of education were increasing, and women had as much or more education than men (Jacobs 1989b). Thus, the point is not that at any one time education can explain the sex gap in pay, but rather that trends in the sex gap in education were not changing favorably to women, so we would not expect a change in the sex gap in pay on the basis of trends in education alone.

Similarly, prior to 1980, women's experience did not increase relative to men's (Smith and Ward 1984; Goldin 1990). At first this seems counterintuitive. One might think that as the percentage of women who are employed increases, this would lessen the sex gap in experience. But, in fact, the upward surge in women's employment affects the average experience of employed women in two conflicting ways: (1) On the one hand, the fact that fewer currently employed women have left the labor force (at all or for as long a time) increases the average experience of employed women. (2) On the other hand, the entrance of new female workers with little experience depresses the average years of experience of employed women. Thus, whether the average experience of employed women goes up, down, or stays the same as women's employment increases depends upon the relative strength of these two conflicting forces. Recent research (Smith and Ward 1984; Goldin 1990) suggests that they canceled each other out, so that women's average experience did not rise, and the sex gap in experience did not begin to close, until about 1980. Since 1980, however, women's relative experience has increased, and this is one factor in the declining sex gap in pay (Smith and Ward 1984; Goldin 1990; O'Neill 1985). However, this does not mean that experience completely "explains" the sex gap in pay. As we have seen, experience explains less than one half the sex gap in pay at any particular point in time.

*Values and Preferences.* Do women's values and preferences help explain the sex gap in pay? In one sense, I have already considered this question above. I argued that gender-specific socialization orients both men and women toward kinds of jobs and skills typical for their gender. Insofar as women's jobs then pay less, values have played a part in the sex gap in pay. In a formal analysis of this type, Filer (1983) uses a large number of measures of tastes and personality characteristics to predict earnings and finds that they explain some of the sex difference in pay.

Much of this, I would argue, is an indirect effect. Values are affecting occupational choice and occupations are affecting earnings, but Filer's (1983) study does not make clear the mechanism through which occupational characteristics affect earnings. One such mechanism is the sort of wage discrimination against female jobs at issue in comparable worth, to be discussed below.

A thesis claiming a more direct causal line from values to earnings posits that men simply place a higher value on earnings when they decide which occupation to select, while women trade these off for other job characteristics. A number of studies have asked people what they value in jobs, and find that men rank earnings more highly than women (Brenner and Tomkiewicz 1979; Lueptow 1980; Peng et al. 1981; Herzog 1982; Major and Konar 1984). However, one study by Walker et al. (1982) found no such difference. Moreover, research on job satisfaction has found that women's satisfaction is *more* affected than is men's by the pay in their job (Glenn and Weaver 1982; Crane and Hodson 1984). In addition, studies of turnover find that the extent to which wage increases affect whether women will quit a job is as large or larger for women than for men (Shorey 1983; Kahn and Griesinger 1989; Light and Ureta 1989). Thus, if we look at responses to job characteristics, it appears that women may place more importance than men on earnings. In short, existing evidence provides no clear answer to the question of whether or not there is a sex difference in the value placed on money contributing to the sex gap in pay.

*Sex Composition Effects.* The call for comparable worth is based on the finding that a job's sex composition affects its wage level. This is a very consistent finding coming from a wide range of studies. Here I review this research, dividing studies into three types: those taking occupations as units of analysis and using national data, those taking individuals as units of analysis and (generally) using national data, and those taking jobs as units of analysis using data from a single organization or employer.

One type of study has taken U.S. Census detailed occupational categories as units of analysis and used national data. Such studies have controlled for occupational characteristics such as average requirements for education, and an array of occupational demands, with measures typically taken from the Dictionary of Occupational Titles (DOT). In general, such studies have found that, net of these measures, both men and women earn less if they work in a predominantly female occupation. This has been found for 1940, 1950, and 1960 with controls for education (Freiman and Terrell 1975b), for 1970 with controls for education, DOT skill measures, and other variables (England and McLaughlin

Table 1.9. Summary of Studies Examining the Effect of Occupational Sex Composition on Earnings and the Sex Gap in Pay

| Study                        | Data Source <sup>1</sup> | Measure of of Earnings                 | Pay Ratio (Female/Male) | Estimated Coefficients of Sex Composition <sup>2</sup> |                | Percentage of Sex Gap Explained by Sex Composition <sup>3</sup> : Coefficients |      |         | Unit of Analysis <sup>4</sup>                              | Control Variables <sup>5</sup> Included in Regressions             |
|------------------------------|--------------------------|--|-------------------------|--|----------------|--|------|---------|--|--|
|                              |                          |  |                         | Female Equation  | Male Equation  | Female   | Male | Average |  |  |
| Ferber and Lowry (1976)      | 1970 census              | Median annual                          |                         | -1438  | -5008          |  |      |         | Weighted occup. (n = 260)                                  | 1, 2   |
| Snyder and Hudis (1976)      | 1970 census              | Median annual                          |                         | -2070  | -3900          |  |      |         | Unweighted occup. (n = 212)                                | 1, 2, 7, 11, 27  |
| Treiman and Hartmann (1981)  | 1970 census              | Median annualized <sup>6</sup>         |                         | -1630  | -2960          |  |      |         | Unweighted occup. (n = 499)                                | 1  |
| England, et al. (1982)       | 1970 census              | Median annual for full-time year-round | 0.54                    | -1682  | -3005          | 21   | 38   | 30      | Weighted occup. (n = 387)                                  | 1, 26, 27, 29, 30, 31, 32  |
| Aldrich and Buchele (1986)   | 1980 NLS                 | Hourly                                 | 0.64                    | -0.586   | -0.686         | 9  | 11   | 10      | Weighted occup. (n = 192)                                  | 1, 2, 4, 5, 6, 7, 12, 13, 14, 26, 27, 33                           |
| O'Neill (1983)               | 1980 CPS                 | Log hourly                             | 0.68                    | -0.158 (0.049)   | -0.148 (0.049) | 12   | 11   | 11      | Weighted occup. (n = 306)                                  | 1, 2, 6, 7, 11, 18, 27, 28, 36, 37, 38, 39                         |
| Johnson and Solon (1984)     | 1978 CPS                 | Log hourly                             | 0.66                    | -0.090 (0.014)   | -0.168 (0.015) | 11   | 21   | 16      | Individual n <sub>f</sub> = 19,412 n <sub>m</sub> = 24,056 | 1, 2, 3, 6, 7, 8, 9, 10, 12, 13, 15, 26, 27, 28, 36                |
| U.S. Bureau of Census (1987) | 1984 SIPP                | Log hourly for full-time workers       | 0.70 nhs <sup>7</sup>   | -0.340 (0.067)   | -0.241 (0.060) | 43   | 30   | 37      | Individual n <sub>f</sub> = 5,555 n <sub>m</sub> = 8,167   | 1, 4, 5, 7, 8, 9, 10, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24,  |
|                              |                          |  | col                     | -0.417 (0.061)   | -0.189 (0.056) | 38   | 17   | 28      |  | 25, 34   |
| Sorensen (1989b)             | 1984 PSID                | Log hourly                             | 0.65                    | -0.230 (0.033)   | -0.239 (0.040) | 23   | 24   | 23      | Individual n <sub>f</sub> = 2,411 n <sub>m</sub> = 2,616   | 1, 2, 4, 5, 6, 7, 8, 9, 10, 12, 13, 15, 19, 23, 24, 26, 27, 28, 35 |

Source: Adapted from Sorensen 1989b (Table 4.1).

Notes:

<sup>1</sup> Abbreviations: NLS = National Longitudinal Survey, Center for Human Resource Research, Ohio State University. CPS = Current Population Survey, U.S. Government. SIPP = Survey of Income and Program Participation, U.S. Government; PSID = Panel Study of Income Dynamics, Institute for Survey Research, University of Michigan.

<sup>2</sup> All measured as the proportion of workers in an occupation who are female except Aldrich and Buchele, which is percentage female. Standard errors are in parentheses when available.

<sup>3</sup> Blanks exist because data were unavailable to calculate these figures or unweighted occupations were used as the unit of analysis and thus individual inferences could not be made. The percentage of the pay gap accounted for by the sex composition of an occupation using the male coefficient was calculated as follows:  $b_m(X_m - X_f)/(w_m - w_f)$ .  $X_m$  and  $X_f$  are the sample means of the proportion of women in an occupation for men and women, respectively.  $w_m$  and  $w_f$  are the sample means of earnings for men and women.  $b_m$  is the male regression coefficient for the proportion of women in an occupation. To derive the figure using the female coefficient  $b_f$  is replaced by  $b_f$ .

<sup>4</sup> Weighted occup.: each observation is an occupation weighted by the proportion of the female or male work force in the occupation; unweighted occup.: each occupation counts equally; individual: each observation is an individual worker; n = number of observations; n<sub>f</sub> = the number of women; n<sub>m</sub> = the number of men.

<sup>5</sup> Independent variables included were (1) sex composition of an occupation, (2) education, (3) potential work experience, (4) actual work experience, (5) tenure (job and/or employer tenure), (6) region, (7) urban, (8) race, (9) marital status, (10) children (number and/or presence), (11) hours of work, (12) union status (membership and/or coverage), (13) government employment, (14) industry dummies for core/periphery distinction, (15) two-digit SIC code industrial categories, (16) firm size, (17) involuntarily left last job, (18) turnover, (19) health/disability, (20) blue-collar occupation, (21) high school curriculum, (22) attended private high school, (23) obtained advanced degree, (24) obtained college degree, (25) various fields of study in college, (26) general education development (DOT), (27) specific vocational preparation (DOT), (28) DOT measures of working conditions, (29) DOT measures of cognitive skills, (30) DOT measures of perceptual skills, (31) DOT measures of manual skills, (32) DOT measures of social skills, (33) race or certification required, and (39) self-employed. DOT refers to measures from the Dictionary of Occupational Titles.

<sup>6</sup> Median annualized earnings = (median annual earnings · 2080)/mean annual hours.

<sup>7</sup> nhs: not a high school graduate; hs: high school graduate; col: college graduate. Separate analyses done by educational level.

36

37

1979; England, Chassie, and McCormick 1982), and for 1980 with similar controls (Parcel 1989). The one study that does not find this net negative effect of occupational percentage female (Filer 1989) used a very extensive list of controls. I will argue in Chapter 3, in conjunction with my analysis of this genre using 1980 census data, that Filer may have included inappropriate variables and “overpartialed” the effect. To foreshadow, my analysis in Chapter 3 finds a negative effect on wages of the percentage female in an occupation, under more rigorous controls than most previous studies have used for skill demands as well as characteristics of the firms and industry people in given occupations typically work in.

A second type of study takes individuals as units of analysis, and examines the effects of occupational sex composition by mapping this contextual variable onto each individual’s record according to the occupation s/he holds. Controls for various other occupational characteristics are mapped on in the same way as contextual variables. Such studies find a net negative effect on both men’s and women’s wages of being in an occupation that is predominantly female (Johnson and Solon 1986). One advantage of such studies is that they employ controls for individuals’ human capital. One study (England et al. 1988) found this negative effect of occupational percentage female using longitudinal data and a “fixed-effects” model to control for any unmeasured differences between unchanging pay-relevant attributes of those individuals in predominantly female and male occupations.

Sorensen (1989b) has assembled most of the published studies investigating the net effect of occupations’ percentage female. (She includes studies using either census occupations or individuals as units of analysis.) These findings are summarized in Table 1.9. In general, these studies find that moving from an all-male to a comparable all-female occupation is associated with a wage penalty equivalent to between 10 and 30% of the sex gap in pay.

A third type of study employs data from one organization or employer. These studies show similar findings. One advantage of these studies is that they often employ more detailed job categories than do national studies. A second advantage is that they allow us to see the potential effects of comparable worth at the level at which they would occur in the version of the reform generally advocated—within a single employer or organization. A disadvantage of such studies is that they are limited to the public sector, where data on pay are more readily available. A number of states have done job evaluation studies for comparable worth purposes in the last ten years. Invariably, these studies have found that, net of measures of job skill or worth, female jobs pay less (Remick 1984; Rothchild 1984; Steinberg, Haignere, Possin, Chertos,

and Treiman 1986; Acker 1989; Orazem and Matilla 1989). The job evaluation techniques used in such studies are discussed in more detail in Chapter 4.

Another study of public sector employment examined pay in the California state civil service. Baron and Newman (1989; forthcoming) found “smoking gun” evidence of discrimination in pay setting. A 1934 memo (Becker 1934) said that pay in jobs is set, among other things, according to the “age, sex, and standard of living of employees normally recruited for the given job.” Baron and Newman’s (1989; forthcoming) analysis of the California civil service data found higher pay levels in predominantly male jobs, even when controlling for the broader occupational category into which each more detailed job falls, and for the education and experience required of persons entering the job. Their study did not have the sort of measures of skill demands common to job evaluations. However, the validity of their conclusions is further buttressed by the fact that changes in the sex composition of jobs between 1979 and 1985 were associated with changes in a job’s pay level such that a job’s becoming more female depressed wages and becoming more male increased wages (Baron and Newman 1989). If we assume that any changes in jobs’ skill demands were uncorrelated with changes in sex composition, then their findings about change effectively “hold constant” any unmeasured skill demands of the jobs.

Other studies that have also analyzed how change over time in jobs’ sex composition affects change in their pay find that when a job changes its sex composition, the wage for both men and women goes up if more males come into the job, and the wage for both men and women goes down if more women come into the job (Ferber and Lowry 1976, p. 384; Pfeffer and Davis-Blake 1987). We cannot be sure if the changing sex composition affected the wages, as these authors suggest, if the change in wage affects sex composition (as suggested by Reskin and Roos 1990), or if both effects are operative.

*Types of Skills and Working Conditions in Jobs: Indirect Gender Bias.* Another factor affecting the sex gap in pay is the kind, rather than amount, of skills and working conditions jobs require. Some view this as a part of the comparable worth issue. The studies above implicitly do not. That is, they take as given the returns to different job characteristics, and, controlling for these factors, estimate the adverse effect on wages of being in a predominantly female occupation.

However, the types of skills common in women’s jobs may have lower returns than the types of skills common in men’s jobs *because* of gender discrimination. That is, if a type of skill or working condition has traditionally been associated with women’s work in either the household or

paid employment, it may come to be devalued via stigma that gets institutionalized into wage systems, so that this skill or working condition comes eventually to carry a low rate of reward, or a penalty, whether it appears in a male or female occupation. However, since such skills and working conditions are more common to female occupations, this devaluation has a disparate and adverse impact on women's wages. Many view this as a part of the discrimination at issue in comparable worth, as will be discussed in Chapter 4 as an issue in job evaluation studies, in Chapter 5 as an issue in legal proofs of discrimination, and in Chapter 6 as an issue of feminist theory. There is substantial evidence that women's concentration in jobs with different kinds of skills affects the sex gap in pay. Daymont and Andrisani (1984) show that one's college major has an important effect on pay, and women are in the majors associated with lower pay. Women are more often than men in jobs involving nurturant social skills, and these not only have lower returns than other skills, but actually have net negative returns (Kilbourne, England, Farkas, and Beron 1990; Steinberg et al. 1986; Jacobs and Steinberg 1990a; Steinberg 1990). The fixed-effects model used by Kilbourne et al. (1990) allows an assessment of the effect of doing nurturant work on earnings while controlling for all unchanging, unmeasured differences between individuals in nurturant and other jobs. Even under these stringent individual controls, as well as controls for factors computed from DOT measures and occupational sex composition, the penalty for nurturance is found. My analysis in Chapter 3 will show this penalty for doing nurturant work as well. The adverse working conditions typical in some women's jobs (such as interpersonal stress, exposure to death and suffering, or exposure to blood, urine, and feces) are often given fewer points in job evaluations used to set pay than are the kinds of adverse working conditions (such as exposure to dirt and the out-of-doors) more typical in men's jobs (Steinberg 1990). Even those adverse working conditions typical to male jobs seldom have a large effect on earnings, however.

Overall, I conclude that the *kinds* of skills traditionally exercised by women are valued less in wage determination than are traditionally male skills. This more indirect form of gender bias is seen by many advocates as part of the discrimination to be redressed by comparable worth.

### C. *Consequences of the Sex Gap in Pay*

What are the consequences of the sex gap in pay? A person doubting the importance of the issue might argue that if marriage is nearly universal and husbands and wives pool their income, the sex gap in pay has

little consequence for the economic well-being of either women or children. This would be a mistaken conclusion, however. The sex gap in pay has important consequences within marriage as well as for those women who are not married.

Not all women marry, and some women divorce. Many never-married and divorced women have children. Indeed, rates of both divorce and out-of-wedlock births have increased dramatically. About half of the cohort born in the early 1950s (Cherlin 1981; Preston and McDonald 1979), and two thirds of those marrying today (Martin and Bumpass 1989) are projected to experience divorce. Many divorced women have children. Out-of-wedlock births rose from 5% of all births in 1960 to 18% in 1980 (Preston 1984). Unmarried women with children—whether divorced or never married—typically have custody of their children and must support them on some combination of their own earnings, any child support they receive from the children's fathers, and government subsidies. Child support awards are typically small. For example, awards to divorced women averaged \$2500 per year per family in 1981, and less than half the mothers received the full amount awarded (U.S. Bureau of Census 1983b). While it is true that many divorced women remarry, both age and the presence of children inhibit women's remarriage probabilities (Mott and Moore 1983), so a significant minority of women with children do not remarry (Preston 1984). Thus, the sex gap in pay, in combination with the fact that divorced and never-married women generally have financial responsibility for their children after divorce, is a crucial part of why such a high proportion of female-headed families is in poverty (McLanahan, Sorensen, and Watson 1989, p. 120).

There is a paradox here. To some extent the increase in divorce is probably itself a result of women's increased economic independence (England and Farkas 1986, pp. 64–65). The fact that more women than previously have jobs means that more can afford to leave marriages they consider unhappy and at least minimally support themselves and their children. Yet, because of the continued sex gap in pay and men's failure to support their children after divorce, the economic consequences of divorce for women and children are still grave (Preston 1984).

But what of marriages that remain intact? For married women, does the sex gap in pay have adverse consequences? Yes. A long line of research on marital power (reviewed in England and Kilbourne 1990c) has shown that women's employment and the relative earnings of husbands and wives affect the balance of power in marriages. When women's earnings are lower, even when they are making valuable contributions in the form of home management and child rearing, their bargaining power vis-à-vis their husbands is substantially lower than that of women with higher earnings. The fact that women's economic fate is more adversely affected by divorce than men's is part of why men

can retain disproportionate bargaining power within marriages. The ability to leave a relationship with relatively few losses implies the power to hold out for a better bargain without risk of a big loss. Thus, the sex gap in pay has profound consequences for the degree of informal democracy in marriages. It adversely affects women's ability to negotiate for what they want in marriage on a wide range of issues, including intimacy, purchasing decisions, the sharing of household work, and geographical moves. The sex gap in pay is a part of what prevents equality in husbands' and wives' bargaining power over all these issues.

### V. Conclusion

This chapter has presented an overview of women's and men's positions in paid employment. The chapter began by exploring explanations for the unabated increase in women's employment. One factor is the increasing proportion of women who are single, many with children. These women need jobs because, whether they are divorced or never married, they usually have the major responsibility for the support of themselves and any children they have. Among married women, increased potential wages have drawn more women into employment, as has a restructuring of the economy that brought disproportionate increases in labor demands in fields already labeled "female." I argued that couples today may perceive a greater need for two earners than previously despite the fact that, on average, male earnings have greater buying power today than in the 1950s or early 1960s. I speculated that this increase in perceived need can be reconciled with trends in men's earnings if a decrease in income is perceived as larger than a gain of the same amount over the same income range. The last 20 years have seen fluctuations in men's earnings because of recessions and recoveries, and increasing wage inequality among men. The asymmetry in the perceptions of losses and gains of the same size may explain why women who enter paid labor to buffer reductions in men's earnings often stay even after their husband's earnings have rebounded. Also, as the norm becomes for women to be employed before childbearing, couples get used to two incomes and want to avoid the loss that would occur if women did not return to their jobs shortly after childbearing.

The unabated increase in women's employment makes the issue of comparable worth more important: As employment becomes the norm for most women most of the time, the consequences of facing discriminatory wage penalties increase. The importance of comparable worth also results from occupational sex segregation. If there were no disproportionately female or male jobs, there would be no problem of com-

parable worth, at least as an issue of gender inequality. There might still be concerns about whether the pay levels of jobs were set in a consistent manner, or about whether the racial or ethnic composition of jobs had discriminatory effects. But without the sex segregation of jobs, comparable worth would not be the important women's issue it is today.

Occupational sex segregation has declined since about 1970, although it is still substantial. Yet even as national data show a decline in segregation, we also see sex segregation of subfields within occupations women have recently entered, and some occupations show desegregation and then resegregation, as they move from being mostly male to integrated, and then "tip" and become segregated female enclaves.

Occupational sex segregation is partly explained by social forces operating upon women's and men's choice of jobs. These social forces include influences of parents, educational institutions, peer groups, and other social networks. Discrimination by employers in hiring is also a factor, as is the resistance of male workers to women's entrance into their occupations. Finally, historical and institutional factors also contribute to segregation; if a job starts out as female or male, considerable inertia develops around that initial label. Also, if entry level jobs are of one sex or the other, this segregation will be perpetuated over time and up the mobility ladders that comprise internal labor markets.

Segregation more often takes the form of women and men exercising *different kinds* of skills than of women's concentration into less skilled jobs. This is precisely why the issue of comparable worth is so poignant; women are often being paid less for equally demanding, though different jobs. This fact also makes it more comprehensible that women's own choices could be one factor in job choices. When we focus upon the low wages and low mobility prospects of typically women's jobs, it appears that no rational woman would choose such jobs. But when we see that often equally high levels but different kinds of skills are exercised in female jobs, it is more plausible that reasonable people would find such work interesting and meaningful. This, however, does not imply that women want or agree with the low pay accorded their jobs.

This chapter also examined research on the sex gap in pay. Education and effort, the two "all-American" routes to economic success, do have payoffs for both men and women. Yet neither is particularly relevant to the sex gap in pay since women have as many years of education as men, and studies show women expend as much or more effort as men on their jobs. Women's fewer years of seniority and overall employment experience, and the intermittency of such experience, explains some proportion (between one quarter and one half) of the sex gap in pay.

Much of the sex gap in pay results from segregation itself. Some of this segregation is interfirm, with women concentrated in lower-paying firms and industries. This aspect of the sex gap in pay would not be

touched by comparable worth reforms unless we envisioned a national wage setting board whose authority spanned the entire economy, something no American advocates of comparable worth have suggested.

A large component of the sex gap in pay comes about because women are segregated into lower-paying occupations within every firm. Proponents of pay equity reforms allege that at least some portion of the pay differences between male and female jobs arise *because* the jobs are filled by women or entail skills that are traditionally female. Evidence abounds that, controlling for a number of measures of skill and other occupational requirements, jobs with more women in them offer lower wages to both men and women than do jobs containing more men. I refer to this as direct gender bias in wage setting. There is also evidence that, net of this direct effect of jobs' sex composition, kinds of skills traditionally done by women, such as nurturant social skills, have lower (sometimes even negative) returns than other kinds of skills (such as cognitive skills). I refer to this as indirect gender bias in wage setting. Comparable worth is about both of these types of gender bias in wage setting: direct gender bias based on the sex composition of the job, and indirect gender bias in which the returns to jobs' requirements for various types of skill and working conditions differ according to whether the job characteristic is traditionally associated with women's or men's spheres.

This chapter has focused on empirical regularities rather than how these are interpreted by theories or help us to evaluate theories. The next chapter will focus on scientific theorizing, examining how a number of bodies of theory view labor markets, gender inequality, and, most specifically, comparable worth.

#### Note

1. The evidence is mixed on whether women with more traditional family plans are more likely to choose female occupations. Waite and Berryman (1985) find that young women who aspire to have more children and less continuous employment are more apt to choose female occupations. In contrast, Lehrer and Stokes (1985) find that young women's plans to be employed at age 35 and expected family size affected the skill level of the occupation aspired to, but *not* its sex composition. Even if Waite and Berryman's finding is correct, this does not demonstrate that female occupations lead to higher lifetime earnings than male occupations for those who have intermittent employment. It may simply mean that the wage disadvantages of female occupations are taken into account more in occupational choices of women who plan more continuous employment.