

THE ECONOMICS OF WOMEN, MEN, AND WORK

SECOND EDITION

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SUGGESTED READINGS

- BECKER, GARY S. "A Theory of the Allocation of Time." *The Economic Journal* 75 (Oct. 1965): 493-517.
- BOWEN, WILLIAM and T. ALDRICH FINEGAN. *The Economics of Labor Force Participation*. Princeton, NJ: Princeton University Press, 1969.
- BROWN, CLAIR. "Consumption Norms, Work Roles, and Economic Growth." In *Gender in the Workplace*, ed. by Clair Brown and Joseph Pechman, eds. Washington DC: Brookings Institution, 1987, pp. 13-58.
- CAIN, GLEN G. *Married Women in the Labor Force*. Chicago: University of Chicago Press, 1966.
- GOLDIN, CLAUDIA. *Understanding the Gender Gap*. New York: Oxford University Press, 1990.
- KILLINGSWORTH, MARK R. *Labor Supply*. Cambridge: Cambridge University Press, 1983.
- MINCER, JACOB. "Labor Force Participation of Married Women." In *Aspects of Labor Economics*, ed. by Greg Lewis, ed. University of National Bureau of Economic Research Conference Studies, no. 14. Princeton, NJ: Princeton University Press, 1962, pp. 63-97.
- OPPENHEIMER, VALERIE. *The Female Labor Force in the United States: Demographic and Economic Factors Constraining its Growth and Changing Composition*. Westport, CT: Greenwood Press, 1976, orig. publ. 1970.
- SMITH, JAMES J., ed. *Female Labor Supply: Theory and Estimation*. Princeton, NJ: University Press, 1990.

Chapter 5

DIFFERENCES IN OCCUPATIONS AND EARNINGS: OVERVIEW

The main focus so far has been on the roles of men and women in the family, but Chapter 4 reviewed the dramatic increase in women's labor force participation that has occurred in the post-World War II period. This increase, in conjunction with a decline in male labor force participation rates, has resulted in a steady narrowing of gender differentials in the extent of involvement in market work. Furthermore, the labor force attachment of women has increased as women have become more committed to work outside the home. Although there have been important recent gains, these substantial increases in women's participation in paid work have not been accompanied by comparable improvements in their economic status as compared with men.

In Chapters 6 and 7, we consider alternative theoretical explanations for the observed differences in economic outcomes between men and women. In Chapter 6, we focus on supply-side explanations, particularly the human capital model, which emphasize the role of women's preferences and the choices they make to invest less in job-related education and training, as well as to spend a smaller proportion of their adult years in the labor force. These explanations can also encompass premarket discrimination, or societal discrimination, in which various types of social pressures influence women's choices adversely.

In Chapter 7, we consider demand-side explanations of the gender earnings gap. Emphasis will be on the possible results of gender discrimination in the labor market, which occurs when men and women with equal qualifications find work in different occupations and/or at different wage rates. We also consider that labor market discrimination can indirectly lower women's economic status by reducing their incentives to acquire education and training. In this chapter, we review the extent of gender differences in the two main indicators of economic status—occupational attainment and earnings.

OCCUPATIONAL DIFFERENCES

One way of determining the extent to which men and women do different types of work is to compare the distribution of male and female workers across occupational categories. These distributions are shown in Table 5.1 for 1972 and 1989. In both years, women tended to be concentrated in administrative support (including clerical) and service occupations. In 1989, 46 percent of all women workers were in these two occupations, compared to only 15.3 percent of men. Men were considerably more likely than women to be in operator and laborer jobs and in the precision production, craft, and repair occupations, which are the strongholds of skilled blue-collar workers. Forty percent of male workers were employed in these categories in 1989, as compared to 11 percent of women. Men were also somewhat more highly represented than women in executive, managerial, and administrative positions, whereas women were somewhat more highly represented than men in professional jobs.

Although the situation was fairly similar in both 1972 and 1989, some notable changes occurred between those years. Women were less concentrated in administrative support and service occupations in 1989 than they had been in 1972, when 53 percent held such jobs. Women were also considerably more likely to hold executive and managerial jobs, increasing their share of these positions from 20 percent to 40 percent.¹ Nonetheless, the figures in Table 5.1 amply demonstrate that considerable gender differences in occupational distributions remain.

These differences in the occupational distributions of men and women are associated with gender differences in industrial distributions as well. In 1989, men were more heavily concentrated in construction and manufacturing—33.5 percent of men worked in those industries, as compared to 14.7 percent of women. In contrast, women were considerably more likely to be employed in services and in finance, insurance, and real estate—53.4 percent of women were in these industries, compared to 27.7 percent of men. To some extent, these differences in industrial distributions simply reflect gender differences in occupations. For example, we have

¹ It may be that, in the face of government pressure to increase the representation of women in higher-level positions, some women were moved into managerial jobs without being given corresponding responsibility and pay. There can, however, be little doubt that there has also been genuine change.

TABLE 5.1 Distribution of Men and Women by Major Occupational Categories, 1972 and 1989^a

Occupational Category	1972		1989	
	Men (%)	Women (%)	Men (%)	Women (%)
Executive, administrative, and managerial	11.5	4.6	13.9	11.1
Professional specialty	9.7	12.4	12.0	14.8
Technicians and related support	2.3	2.4	2.9	3.3
Sales occupations	10.0	11.1	11.1	13.1
Administrative support, including clerical	6.4	31.5	5.7	27.8
Service occupations	8.3	21.2	9.6	17.7
Precision production, craft, and repair	19.4	1.6	19.6	2.2
Operators, fabricators, and laborers	25.9	13.4	20.7	8.9
Farming, forestry, and fishing	6.4	1.9	4.4	1.1
Total employed	100.0	100.0	100.0	100.0

^a Data refer to civilian workers 16 years of age and over.

Source: Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, January 1984 and 1990.

seen that men are more likely to work as blue-collar workers than women, and a high proportion of such workers are employed in construction and manufacturing. However, there can also be substantial differences in the employment of men and women by firm or industry within occupational categories,² further contributing to the observed industry differences by gender.

In order to examine occupational differences by race and ethnicity as well as by gender, Table 5.2 provides data separately for black, white, and Hispanic workers. Black and Hispanic men and women were much less likely than whites of the same sex to be employed in the higher-paying managerial and professional positions. At the other end of the scale, they were overrepresented in service occupations, as well as among operators and laborers.

Within each race or ethnic group, however, the patterns of occupational differences by gender showed considerable similarities. Women were heavily overrepresented in administrative support and service occupations and, especially among minority workers, were more likely than men to be in professional and sales jobs. At the same time, women were underrepresented among precision production and craft workers, and among operators and laborers. Minority women were, however, no less likely than minority men to be managerial workers. Overall, gender differences in occupational distributions were larger than racial or ethnic differences.

² See for example, Francine D. Blau, *Equal Pay in the Office* (Lexington, MA: Lexington Books, 1977), and Erica L. Goshen, "The Structure of the Female/Male Wage Differential: Is It Who You Are, What You Do, or Where You Work?" *Journal of Human Resources* 26, no. 3 (Summer 1991): 457-72. For historical evidence on this, see Claudia Goldin, *Understanding the Gender Gap: An Economic History of American Women* (New York: Oxford University Press, 1990).

TABLE 5.2 Distribution of Workers by Occupation, Race, Hispanic Origin, and Gender, 1989^a

Occupational Category	WHITE		BLACK		HISPANIC	
	Men (%)	Women (%)	Men (%)	Women (%)	Men (%)	Women (%)
Executive, administrative, and managerial	14.7	11.6	6.7	7.4	6.9	7.3
Professional specialty	12.4	15.3	6.3	10.8	6.0	8.4
Technicians and related support	2.9	3.2	2.2	3.6	1.9	1.6
Sales occupations	11.7	13.6	5.8	9.4	7.1	12.5
Administrative support, including clerical	5.3	28.2	9.0	25.9	6.4	27.0
Service occupations	8.5	16.4	18.3	27.3	14.8	21.8
Precision production, craft, and repair	20.2	2.2	15.9	2.4	20.5	3.5
Operators, fabricators, and laborers	19.6	8.2	32.7	12.9	28.1	16.6
Farming, forestry, and fishing	4.6	1.2	3.1	0.4	8.2	1.5
Total employed	100.0	100.0	100.0	100.0	100.0	100.0

^aData refer to civilian workers 16 years of age and older. Data on Hispanics are for March 1988.

Source: Bureau of the Census, Current Population Reports, Population Characteristics Series P-20, No. 433, *The Hispanic Population in the United States: March 1988* (July 1989); U.S. Department of Labor, *Employment and Earnings*, January 1990.

Occupational Segregation

So far we have discussed gender differences in occupational distributions in a rather general way. Occupational segregation refers to a situation where two groups, in this case men and women, tend to work in a different set of occupations. The index of segregation is a widely accepted measure of the degree of such segregation.³ It gives the percentage of female (or male) workers who would have to change jobs in order for the occupational distribution of the two groups to be the same. The index would equal zero if the distribution of men and women across occupational categories were identical; it would equal 100 if all occupations were either completely male or female. In terms of the data in Table 5.1, the index of occupational segregation by gender was 35.4 in 1989.

The same approach may be used to calculate an index of segregation by race and ethnicity. Using the figures presented in Table 5.2, the index of segregation is 26.6 between black and white men and 19.8 between Hispanic and white men; for women it is 16.1 between blacks and whites, and 15.3 between Hispanics

³See Otis Dudley Duncan and Beverly Duncan, "A Methodological Analysis of Segregation Indices," *American Sociological Review* 20, no. 2 (1955): 210-17. The index of occupational segregation by sex is defined as follows:

$$S = \frac{1}{2} \sum_i |M_i - F_i|$$

where M_i = the percentage of males in the labor force employed in occupation i , and F_i = the percentage of females in the labor force employed in occupation i .

and whites. The indexes of gender segregation within each group are considerably higher: 35.9 for whites, 36.1 for blacks, and 35.7 for Hispanics. This confirms our earlier observation that there are greater differences in occupational distribution between men and women than between whites, blacks, and Hispanics of the same sex.

However, data on major occupational categories do not reveal the full extent of occupational segregation by gender. For example, among sales workers, women tend to be employed as retail sales clerks, whereas men are more likely to be manufacturing sales representatives. Information is available on a far larger set of detailed occupations. The precise number has varied over time but is well in excess of 300. The proportion of women in these more narrowly defined occupations within the broader groupings examined earlier does indeed tend to vary considerably. This is illustrated in more detail in Table 5.3, which shows a selection of professional specialty occupations, chosen because we tend to be familiar with the nature and function of the various professions and because both men and women are substantially represented in the category as a whole.

In 1989, 44 percent of all women professionals were in the five predominantly (80 percent or more) female professions shown in the table—dietician, librarian, nurse, kindergarten and kindergarten teacher, and elementary school teacher. At the same time, this represents a considerable decrease since 1970, when 59 percent were in these jobs. Men also comprised over 80 percent of the incumbents in a number of the professions listed, including the clergy, dentist, engineer, and physician. Together, these four jobs accounted for about one-third of male professional workers. Note, however, that women had made considerable inroads into these traditionally male professions since 1970, and that in 1989, women constituted more than 20 percent in such formerly predominantly male occupations as architect, chemist, computer systems analyst, lawyer, operations researcher, and pharmacist.

A number of studies have calculated the index of occupational segregation for various years using the detailed breakdown of all occupations. For much of the present century, these studies have shown levels of occupational segregation well in excess of 60 percent. Only in the 1980s did the index fall below that figure.⁴ (Trends in the extent of occupational segregation will be discussed in greater detail below.) But even these calculations underestimate the full extent of segregation. Job categories used by employers are far more detailed than the census occupations, and

⁴See Edward Gross, "Plus Ça Change . . . ? The Sexual Structure of Occupations Over Time," *Social Problems* 16, no. 1 (Fall 1968): 198-208; Francine D. Blau and Wallace E. Hendricks, "Occupational Segregation by Sex: Trends and Prospects," *Journal of Human Resources* 14, no. 2 (Spring 1979): 197-210; Andrea H. Beller, "Trends in Occupational Segregation by Sex and Race: 1960-1981," in *Sex Segregation in the Workplace: Trends, Explanations and Remedies*, Barbara F. Reskin, ed. (Washington, DC: National Academy Press, 1984), pp. 11-26; Suzanne M. Bianchi and Nancy Rytina, "The Decline in Occupational Sex Segregation During the 1970s: Census and CPS Comparisons," *Demography* 23, no. 1 (February 1986): 79-86; Francine D. Blau, "Occupational Segregation by Gender: A Look at the 1980s," paper presented at the American Economic Association Meetings, New York City, December 1988.

TABLE 5.3 Percent Female in Selected Professional Specialty Occupations, 1970, 1989^a

Occupations	1970	1989
Architects	4.0	20.6
Biological and life scientists	37.8	34.6
Chemists, except biochemists	11.7	27.8
Clergy	2.9	7.8
Computer systems analysts and scientists	13.6	32.4
Dentists	3.5	8.6
Dietitians	92.0	90.8
Economists	15.9	41.3
Editors and reporters	41.6	49.2
Engineers	1.7	7.6
Lawyers	4.9	22.2
Librarians	82.1	87.3
Operations and systems researchers and analysts	11.1	41.1
Pharmacists	12.1	32.3
Physicians	9.7	17.9
Psychologists	38.8	54.0
Public relations specialists	26.6	57.1
Registered nurses	97.3	94.2
Social workers	63.3	68.1
Teachers, except college and university		
Prekindergarten and kindergarten	97.9	97.8
Elementary school	83.9	84.7
Secondary school	49.6	52.6
Teachers, college and university	29.1	38.7

^a 1970 data are from the 1970 Census and are for the experienced civilian labor force aged 16 and over. 1989 data are annual averages from the Current Population Surveys and are for employed civilians aged 16 and over.

Source: Bureau of the Census, *Detailed Occupation of the Experienced Civilian Labor Force by Sex for the United States and Regions: 1980 and 1970*, Supplementary Report PC80-S1-15, March 1984; and U.S. Department of Labor, *Employment and Earnings* 37 (January 1990).

researchers have found that particular firms often employ only men or women, even in occupations where both sexes are substantially represented.⁵ Restaurants, for instance, commonly employ only waiters, or waitresses, but not both. The impact of these factors is revealed in a study of California firms. Using the employers' own job classifications, it was found that 51 percent of firms were completely sex-segregated by job category; no men and women shared the same job title. An additional 8 percent of the firms were single-sex establishments. The mean index of segregation in the remaining firms was 84.1.⁶

⁵See Blau, *Equal Pay in the Office*.

⁶James N. Baron and William T. Bielby, "A Woman's Place Is With Other Women: Sex Segregation in the Work Place," *Sex Segregation in the Workplace*, Reskin, ed. pp. 27-55.

Hierarchies Within Occupations

In addition to differences in their distribution among occupations, men and women also tend to be employed at different levels within occupations. This is often referred to as vertical segregation. No adequate data are available that would enable us to construct economy-wide quantitative measures, but there can be little doubt that such hierarchical differences are substantial.

A good example of this is the hierarchy on university faculties, because they generally use a clear and widely understood set of titles. Table 5.4 provides data on the distribution of men and women by rank in academic years 1974-75 and 1989-90. In both years, women were overrepresented at the lower end of the occupational hierarchy, as Assistant Professors, Instructors, and Lecturers, whereas men were more highly represented at the upper ranks, as Professors and Associate Professors—the categories that tend to have job security in the form of tenure. The data do suggest some improvement over the fifteen-year period, as would be expected if women were initially underrepresented at the higher ranks, at least in part because many of them had been recently hired. By 1989-90, women comprised 26.4 percent of Associate Professors, roughly comparable to their share of Assistant Professors 15 years earlier. Nonetheless, movement into the highest level has proved to be quite slow. The proportion of Professors who were women increased only from 10.1 in 1974-75 to 12.8 percent in 1989-90 and remained considerably below the female share of Associate Professors in 1974-75 (17.3 percent).

This case is not unique. Although women have increased their share of managerial jobs from 19.7 percent in 1972 to 39.8 percent in 1989, their representation in top positions is still extremely sparse. In 1990, of the 4012 directors and highest executives at 799 major companies covered by a *Fortune* study, only 19 were women.⁷ Similarly, a recent Korn/Ferry study found that women comprised only 3 percent of top executives at the level of senior vice

TABLE 5.4 Percent Female of Faculty in Institutions of Higher Education by Academic Rank, 1974-75 and 1989-90

Academic Rank	1974-75	1989-90
Professors	10.1	12.8
Associate professors	17.3	26.4
Assistant professors	27.9	39.5
Instructors	48.0	56.5
Lecturers	41.4	52.4
Total	22.5	27.4

Source: AAUP Bulletin 61 (August 1975), Table 19 and *Academic* 76 (March-April 1990), Table 16.

⁷Peter Kilborn, "Labor Dept. Wants to Take on Job Bias in the Executive Suite," *New York Times* (July 30, 1990), pp. A1, A12.

president or above. This did, however, represent an increase since 1979, when the figure was 0.5 percent.⁸

Evaluating the Extent of Occupational Segregation

However segregation is measured, and whatever the numerical value of the index arrived at, how can it be determined whether any figure in excess of zero and short of 100 is modest or excessive? The answer depends in part on one's perception of how great the differences are in men's and women's talents, tastes, and motivation and how relevant these are to their occupational distribution and achievements.

Those who argue that occupational segregation is natural and appropriate are at one extreme. In this view, efforts to change the existing situation will merely lead to economic inefficiency and personal frustration. Its proponents emphasize the similarities among individuals within each sex and the differences between the two groups. Those who emphasize the variations among individuals within each sex and similarities between the two groups are at the other extreme. In this view, if men and women were not constrained by gender stereotyping and various barriers to individual choice but were free to follow their own inclinations, they would be far less concentrated in separate occupations. The fact that there are occupations that are predominantly male in some countries but female in others lends some support to the view that socially imposed restrictions play a role in the sex typing of jobs.⁹ In this case, removing existing barriers would presumably increase efficiency and decrease frustration, since individuals could seek work suited to their particular aptitudes.

It should be emphasized that even if the present level of occupational segregation is deemed excessive, it would be unreasonable to conclude that the optimal situation would necessarily be a precisely proportional distribution of men and women. Apart from whatever innate differences there may be, past socialization and the prevalent allocation of household responsibilities would make such an outcome unlikely for some time to come.

In addition, the rate of change is limited by the extent to which new people can be hired. Large numbers of people cannot be expected to change jobs on short notice, as the computation of the segregation index perhaps implies. The most that could reasonably be expected is that the underrepresented group would be more highly represented among new hires, to the extent that they are qualified for the available positions, than among those presently employed in the occupation. This may be, at best, a very slow process, especially during periods of recession and retrenchment.

⁸Lori Silver, "Few Women, Minorities at the Top: Survey Finds No Gain in Executive Positions in Past Decade," *The Washington Post*, (August 14, 1990), p. A1.

⁹This subject will be discussed at greater length in Chapter 10.

TRENDS IN OCCUPATIONAL SEGREGATION

The same issues confronted in measuring current occupational segregation also arise in determining the precise extent to which it has changed over time. However, in addition to the concern over how detailed the categories are, or whether hierarchical segregation is taken into account, there is also the question of whether the same occupational definitions are used for the various periods to be compared. The main difficulty is that the definition and number of occupational categories undergo frequent changes. Given constant flux in the economy, this is inevitable. For example, had the Census Bureau rigidly adhered to the occupational categories of an earlier era, jobs such as computer systems analyst and programmer, as well as computer operator and data entry keyer, would not be included. In spite of the best efforts of the people who compile the data and the researchers who use them, data are not entirely comparable over the years and are less so as the years get farther apart.

In spite of these limitations, there is no reason to question the unanimous findings of the studies on this subject, all of which point to little change over a number of decades prior to 1960. The index of segregation was actually reported to have increased by 1.1 percentage points between 1950 and 1960, as predominantly female clerical and professional jobs grew in relative size. Between 1960 and 1970, an inflow of men into female professions and of women into male sales and clerical jobs produced a modest drop in the segregation index of 3.1 percentage points.¹⁰

During the 1970s, a larger decrease in the segregation index of 8.5 percentage points was found.¹¹ The decline in segregation continued into the 1980s, although at a somewhat lower pace.¹² The cumulative effect of these changes has been impressive, with the index declining from 67.3 percent in 1970 to 56.7 percent in 1987, a decrease of nearly 11 percentage points.¹³ This reduction in segregation was mainly related to the entry of women into formerly male white-collar jobs, particularly professional and managerial occupations. As noted earlier, the data in Table 5.3 indicate that, over the 1970s and the 1980s, women made notable progress in entering a number of professions that were formerly predominantly male, including architecture, engineering, law, pharmacy, and medicine. There were similar large increases in many executive, administrative, and managerial occupations during this period. Examples include a rise in the representation of women between 1970 and 1989 from 7.9 to 31.0 percent of marketing, advertising, and public relations managers, from 8.5 to 25.9 percent of purchasing managers, from 19.4 to 42.7 percent of financial managers, and from 21.1 to 52.6 percent

¹⁰Blau and Hendricks, "Occupational Segregation."

¹¹Bianchi and Rytina, "The Decline in Occupational Sex Segregation During the 1970s." See also Bellet, "Trends in Occupational Segregation by Sex."

¹²Blau, "Occupational Segregation by Gender."

¹³Blau, "Occupational Segregation by Gender." This comparison must be interpreted with some caution, because it is based on two different data sets that are not entirely comparable: the Census for 1970 and the Current Population Survey for 1987.

of personnel and labor relations managers. Examples from management-related occupations include increases in female representation from 10.3 to 32.8 percent of management analysts, from 24.6 to 48.6 percent of accountants and auditors, and from 27.8 to 48.8 percent of buyers.

Nonetheless, many highly segregated occupations remain. This can be seen in Table 5.5, which shows some of the most segregated occupations, those that

TABLE 5.5 Selected Occupations Less Than 10 Percent or More Than 90 Percent Female, 1989^a

Occupations	Less than 10 Percent Female	More than 10 Percent Female
Airplane pilots and navigators	3.8	91.0
Clergy	7.8	91.7
Construction laborers	3.0	96.3
Construction trades	2.1	99.2
Dentists	8.6	90.8
Engineers	7.6	91.3
Extracurricular occupations	2.6	96.1
Firefighting and fire prevention occupations	3.9	90.4
Garbage collectors	4.1	95.9
Helpers, construction and extractive occupations	4.4	97.2
Material moving equipment operators	3.8	94.2
Mechanics and repairers, except supervisors	3.1	98.3
Plant and systems operators	5.0	95.1
Precision metalworking	6.4	97.8
Rail transport occupations	2.8	
Supervisors, protective service occupations	8.3	
Timber cutting and logging occupations	1.6	
Truck drivers, heavy	1.9	
Welders and cutters	6.6	
Bank tellers		91.0
Bookkeepers, account and auditing clerks		91.7
Child care workers, except private household		96.3
Dental hygienists		99.2
Dietitians		90.8
Health record technologists and technicians		91.3
Licensed practical nurses		96.1
Nursing aides, orderlies and attendants		90.4
Private household occupations		95.9
Receptionists		97.2
Registered nurses		94.2
Secretaries, stenographers, and typists		98.3
Teachers' aides		95.1
Teachers, prekindergarten and kindergarten		97.8

^aData are for employed civilians aged 16 and over.

Source: U.S. Department of Labor, *Employment and Earnings* (January 1990).

are either less than 10 percent or more than 90 percent female. Many of the predominantly male jobs are blue-collar occupations. Overall, relatively little change occurred in the gender composition of such jobs during the 1970s and the 1980s. The predominantly female categories include, in addition to the traditionally female professions, jobs in the administrative support and service areas.

Thus, the figures indicate that some decline in the amount of segregation has occurred since 1960 and that the pace of change has accelerated since 1970. However, many jobs remain segregated by gender, and the magnitude of the segregation index continues to be substantial. As we have seen, 57 percent of women (or men) would have had to change jobs in 1987 in order for the detailed occupational distribution of the two sex groups to be the same. One reason for this is that the relatively rapid changes in managerial and professional jobs have not been matched in most of the other occupations.

A question that must also be raised is to what extent the observed trends reflect real improvements in opportunities for women.¹⁴ In some cases, firms have responded to government pressures by placing women into nominal management positions that involve little responsibility and little contact with higher levels of management. In other instances, jobs have become increasingly female when skill requirements declined because of technological changes. In such cases, integration may turn out to be a short-run phenomenon, as women increasingly come to dominate such occupations. One example of this trend is the case of insurance adjusters and examiners. Women increased their share of this occupation from 29.6 percent in 1970 to 72.0 percent in 1989. Yet they are employed primarily as "inside adjusters" whose decision making has, to a considerable extent, been computerized and involves little discretion. "Outside adjusters," a better-paid and more prestigious group, remain largely male.¹⁵

In yet other instances, women may gain access to a sector of an occupation that was always low-paying. For example, the representation of women among bus drivers increased from 28.3 percent in 1970 to 54.8 percent in 1989. But men continue to comprise the majority of full-time workers in metropolitan transportation systems, whereas women are concentrated among part-time school bus drivers.

It is important to point out, however, that women are expected to benefit from the increase in the demand for female labor that results when they are able to enter additional occupations from which they were previously excluded, even when the new jobs are qualitatively similar to those formerly available to them. Moreover, it is likely that much of the observed decline in occupational segregation does represent enhanced labor market opportunities for women and that the

¹⁴These examples are from Barbara F. Reskin and Patricia A. Roos, *Job Queues, Gender Queues: Explaining Women's Inroads into Male Occupations* (Philadelphia: Temple University Press, 1990).

¹⁵For a study of the insurance industry, see Barbara Baran and Suzanne Tegarden, "Women's Labor in the Office of the Future: A Case Study of the Insurance Industry," in *Women, Households, and the Economy*, Lourdes Beneria and Catharine R. Simpson, eds. (New Brunswick, NJ: Rutgers University Press, 1987).

COMPANY TRIES HARDER TO FIGHT DISCRIMINATION

The evidence presented in this chapter shows that the situation in the workplace has been changing for women and minorities, albeit slowly. In recent years, these changes have been spurred on by some large, progressive employers who have introduced a variety of innovative programs to attract and retain such workers, and to give them the opportunity to move up to the management level from which they had largely been excluded. Brief excerpts from a newspaper account* provide some information about what one such firm has been doing.

When a black job candidate comes here to Corning Inc. for interviews, managers have a real incentive to hire him. Raises and bonuses for the executives, most of whom are white men, depend largely on recruiting blacks and women and on their success in training and promoting them.

Not only that. One interviewer is a black from the department where the recruit would start work. The interviewer helps put the candidate at ease, and afterward joins in assessing the candidate to guard against intrusions of racism. Once hired, most black recruits and many women are assigned a "coach," someone from another department who shows them the ways of Corning and steers them around the pitfalls that can thwart promotions.

Corning, the giant family-controlled maker of Pyrex, Corning Ware and Streublen crystal, is engaged in one of corporate America's most ambitious experiments in cultural engineering. The company accommodates women and blacks in a score of ways, all ultimately intended to assure them of a good crack at the top jobs in the company. Eventually, the company wants to do the same for other minority members, who are fewer around Corning.

Pressed by advocacy groups and Government, and above all by their own economic self-interest, many big companies nowadays are trying to make affirmative action work better than it did five and 10 years ago. Corning, like many others, managed to hire women and blacks quite easily then, but many promptly fled, blaming entrenched, if often subtle, discrimination....

In their departure interviews, women and blacks said their biggest gripe was evidence that their progress up the ranks was restricted. "We found the reason was not the town but the perceived opportunities,"....

To prosper and grow in the next decades, Corning says it needs competent managers, scientists and engineers, and irreversible demographic trends oblige the company to turn to women and blacks....

Mr. Houghton [the company Chairman] has set two goals for Corning: one, the better mix of women and blacks in the company's management and professional ranks, and two, making a virtue of the mix. He says he wants a salad, not a purée—blacks who are proud to be black and women who are proud to be mothers and engineers....

White men still far outnumber other groups at Corning, and they still get most promotions. But more are bypassed than ever, too, and there is little the company intends to do about it....

*Peter T. Kilborn, "A Company Recasts Itself to Erase Years of Job Bias," *New York Times* (October 4, 1990), pp. A1, C21. Copyright © 1990 by the New York Times Company. Reprinted by permission.

Some white men assert that management has set lower job standards for women and blacks, but Mr. O'Brien [director of education, training and recruiting] flatly denies it.... "It wouldn't work," he said. "Women and blacks would be the first to complain. And the people would fail...."

Some things the company has done might not seem like much to a white man who can find basic amenities even in a town of 12,000 like Corning. But Corning's blacks could not find programs they liked on radio or television, just as they could not find barbers.

So the company prevailed on the cable television outlet to pipe in a black radio station from Rochester and the Black Entertainment Network from Washington. The company has also helped recruit black teachers for the public schools and an assistant principal who is black.

To recruit women and blacks to Corning, the company offers well-paid internships to [female and black] undergraduates more readily than it offers them to white male students. Blacks and women, much more than white men, tend to drop out of advanced science and engineering courses, and.... the internships help keep them on course....

More than most companies, Corning also goes to great lengths to find jobs at Corning for recruits' spouses or "significant others," as one official puts it. Several hundred couples work for the company, all subject to only one firm rule—that one spouse not work for the other. In hundreds of other cases, Corning has helped recruits' spouses get jobs around town, including many in businesses that deal primarily with Corning....

"The corporation has been very receptive to just about everything that women and blacks have said they need to be able to do their work better," said Gail Bailey, a black woman who started in industrial relations at Corning 14 years ago. She now conducts an intensive two-day course to purge employees of racist attitudes. This course and one on sexism are required for thousands of managers and professional employees....

Blacks and women say the company could do still more. Corning operates a day care center for children 3 to 5 years old, for example, but young parents say they have just as much need for one for infants and toddlers. Some also want paid paternity leave. The company permits unpaid leave for fathers, and so far only one has taken it....

The economics of Corning's accommodations are hard to gauge. The classes, the day care center, the personnel who manage the affirmative action efforts all cost something, but far less than the \$4 million a year that Mr. Houghton says the company was spending a few years ago to recruit and train women and blacks to replace those who were quitting. And of course, people who do not anguish over racial and sexual abuse tend to work harder and more happily, helping Corning make money....

For its efforts, the Company has begun to show some real gains. It says 52 percent of the salaried employees it has hired over the past three years are women, and 16 percent are black. Three years ago, the roughly 150 top managers included four white women and one black man. Today the same group has seven women and five blacks, including a black woman who is double counted.

Of 5,365 salaried personnel, the source of the top managers of 20 or 30 years from now, the percentage of women has climbed to 33.6 percent from 17.4 percent. Among blacks the gain has been much smaller, to 5.5 percent from 5.1 percent. But that is well above the levels of most companies, and the percentage of blacks who quit the company has dropped to 10.9 percent last year from 15.1 percent in 1987....

With the change in Corning's personnel mix, a change in the company's gentlemanly ways seems well under way. White men must now contend with women like Wendy E. Luce, 35, who as operations manager of a factory here is the highest-ranking woman in the overwhelmingly male manufacturing side of the company. Ms. Luce says she has no compunctions about yelling when she sees fit. "I'd rather see people get excited," she said.

Roy A. Parr, 60, her deputy at the plant, called her a good boss, but different. "Wendy really feels for people," he said. "She is kinder than men, more considerate, but not to the point where it gets in the way of the business. She knows what she wants to do. She leads. Men demand. She seems to be setting the tone of where Corning wants to go."

decrease will continue in the future. The group that can most readily respond to new opportunities, given the difficulty in changing occupations in mid-career, is younger women. And, indeed, the decrease in occupational segregation has been particularly pronounced among this group. This means that change is necessarily something of a slow process but may be expected to gain momentum as more recent cohorts of women who are less occupationally segregated replace older ones.

EARNINGS

For many years, the single best known statistic relevant to the economic status of women in this country probably was that women who worked full-time, year-round, earned about 60 cents to every dollar earned by men working full-time, year-round.¹⁶ One reason for the public awareness of this figure was that the same earnings gap persisted for two decades with only modest fluctuations and no significant trend. As may be seen in Table 5.6 and Figure 5.1, the female-to-male earnings ratios based on annual data hovered close to the 60 percent figure throughout the 1960s and 1970s.¹⁷ In fact, the ratio was actually somewhat higher

¹⁶ Full-time is defined as 35 hours or more per week; year-round is defined as 50 weeks or more per year. The focus on full-time, year-round workers is an effort to adjust annual earnings for gender differences in hours and weeks worked. However, since even women who work full-time work on average 8 to 10 percent fewer hours a week than male full-time workers, a finer adjustment for hours would raise the earnings ratio; see June O'Neill, "Women & Wages," *The American Enterprise* 1, no. 6 (November/December 1990), 25-33.

¹⁷ Median rather than mean earnings are shown because more government data are presented that way. The definition of the median is that half the cases fall above it and half below. In this case, half the individuals have higher earnings and half have lower. The mean, or arithmetic mean, is calculated by adding up the total earnings of all the individuals concerned and dividing by their number. Since there is a relatively small number of persons who have extremely high earnings, the mean tends to be higher than the median.

TABLE 5.6 Female-to-Male Earnings Ratios of Full-Time Workers, Selected Years 1955-1991

Year	Annual Earnings of Full-Time, Year-Round Workers ^a	Usual Weekly Earnings of Full-Time Worker ^b
1955	63.9	
1960	60.8	
1965	60.0	
1970	59.4	62.3
1975	58.8	62.0
1980	60.2	64.4
1985	64.6	68.2
1989	68.7	70.1
1990	71.1	71.8
1991		74.0

^a Workers aged 16 and over. Prior to 1979, workers aged 14 and over.

^b Workers aged 16 and over.

Source: U.S. Department of Labor, Women's Bureau, Bulletin 298, *Time of Change: 1984 Handbook on Women Workers*; Bureau of the Census, Population Reports, Consumer Income Series P-60, *Money Income of Households, Families, and Persons in the United States*, and Bureau of the Census, Population Reports, Consumer Income Series P-60, *Money, Income, and Poverty Status in the United States*; various issues; Earl F. Mellor, "Investigating the Differences in Weekly Earnings of Women and Men," *Monthly Labor Review* 107, no. 6 (June 1984); Bureau of Labor Statistics, *Handbook of Labor Statistics*, Bulletin 2340, August 1989; Bureau of Labor Statistics, *Employment and Earnings*, various issues.

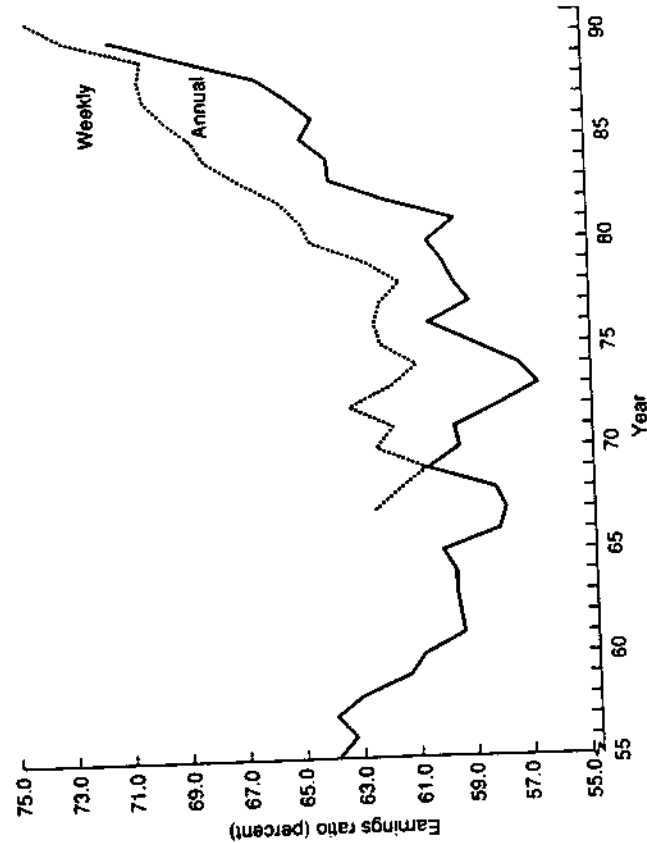


FIGURE 5.1 Female-to-Male Earnings Ratios of Full-Time Workers, 1955-1991

in the 1950s than in the subsequent decades. In the early 1980s, the ratio began to rise. Between 1981 and 1990 it increased from 59.2 percent to 71.1 percent.¹⁸

Table 5.6 and Figure 5.1 also show the female-to-male earnings ratio calculated using data on the usual weekly earnings of full-time workers. For a variety of reasons, the earnings ratio computed on the basis of weekly earnings is generally higher than the annual figure.¹⁹ Of more interest, however, is that the data for weekly earnings also show a fairly consistent upward trend dating from the late 1970s. Between 1978 and 1991, the earnings ratio, defined in these terms, increased from 61.3 to 74.0 percent.

Changes in the earnings gap between men and women over the life cycle are indicated by the data in Table 5.7. Data are presented for the annual income of full-time, year-round workers by age over the 1960–1990 period.²⁰ Although women earn less than men in all age groups, the gap tends to widen with age.²¹ This fanfanning out of the male and female earnings profiles in part reflects that women on average accumulate less work experience than men do as they age. This was particularly the case for earlier cohorts.

As was the case for the overall earnings gap, the figures in Table 5.7 suggest that earnings differentials within age groups have also been narrowing. All age groups of women experienced rising relative earnings over the 1980s. For women under 45, earnings ratios began to rise as early as the 1970s, although the 1980s gains were considerably larger. Younger women also experienced the largest increases. Between 1970 and 1990, the earnings ratio among 25- to 34-year-olds increased from 64.9 to 79.1 percent, a rise of 14.2 percentage points. For 35- to 44-year-olds the increase was from 53.9 to 68.9 percent, a rise of 15.0 percentage points.

The fact that the earnings ratio tends to widen with age raises a question as to whether younger women will retain these gains as they age over the life cycle. One way to address this question is to ask what has happened to the relative earnings of prior cohorts as they aged. Using the data in Table 5.7, we can compare the earnings ratio for 25- to 34-year-olds in 1980 to the earnings ratio for 35- to 44-year-olds 10 years later in 1990. This is not by any means a perfect measure of how a given cohort of workers in fact fared over the period, because some of

¹⁸ Focusing on all workers, rather than simply those employed full-time, year-round, Francine D. Blau and Andrea H. Beller found evidence of some earnings gains for women during the 1970s, after adjustment for hours and weeks worked; see "Trends in Earnings Differentials by Gender, 1971–1981," *Industrial and Labor Relations Review* 41, no. 4 (July 1988), 513–529.

¹⁹ The reasons for the differences in the weekly and annual series are discussed in Nancy Rytina, "Comparing Annual and Weekly Earnings from the Current Population Survey," *Monthly Labor Review* 106 (April 1983): 32–38.

²⁰ The focus on income is dictated by data availability. Income includes such items as interest, dividends, and transfer payments, as well as earnings. However, because these items are rather small for the great majority of year-round, full-time workers, income ratios tend to be quite similar to earnings ratios.

²¹ An exception to this pattern is that the relative earnings of women increased somewhat in the oldest age group.

TABLE 5.7 Female-to-Male Income Ratios of Full-Time, Year-Round Workers by Age, 1960–1990

Ages	1960	1970	1980	1990
25–34	65.1	64.9	68.6	79.1
35–44	57.6	53.9	56.2	68.9
45–54	58.0	56.3	54.3	61.4
55–64	64.5	60.3	56.7	62.6

Source: 1960–1980: June O'Neill, "Women & Wages," *The American Enterprise* 1 (November/December 1980), p. 29. Reprinted by permission of the American Enterprise Institute for Public Policy Research, Washington D.C. 1989; Bureau of the Census, Consumer Income Series P-60, no. 174, *Money Income of Households, Families, and Persons in the United States: 1990*.

the original group will have exited the labor force by 1990 and some new, less experienced workers will have entered. Such labor force turnover is higher among women than among men, and this will lower their earnings relative to men over the period. Bearing these limitations in mind, the results of such a comparison are nonetheless of interest.

Using this approach, we find a negligible increase in the earnings ratio with age for the group aged 25–34 in 1980—from 68.6 percent to 68.9 percent—while a large decline would be expected on the basis of the 1990 data alone. That is, when we compare 25- to 34-year-olds in 1990 to 35- to 44-year-olds in the same year, the decline in the ratio is much larger, from 79.1 percent to 68.9 percent. Further, the annual income of the 45- to 54-year age group in 1990 was also a larger percentage of men's income than that of 35- to 44-year-olds 10 years earlier, but in this case the increase was 5.2 percentage points. These findings reflect the gains in relative income that women have received in recent years. That is, the comparisons would have been less favorable, particularly for the younger group, had we compared cohorts across 1960 and 1970 or across 1970 and 1980.

These data suggest that younger women may well retain a substantial amount of the improvement in their relative earnings as they age. Moreover, the observation that young women are now entering less traditional occupations and are spending more time in the labor market reinforces our conclusion that they are likely to continue faring better than their predecessors at each point in the life cycle. The overall gender gap in earnings should decline considerably more as earlier cohorts of women with relatively low earnings are replaced increasingly by the more recent cohorts with higher earnings.

These relatively optimistic conclusions must, however, be tempered by the recognition that, although the earnings gap has been closing, men's real wages in many occupations have been declining. Insofar as this is the case, women's progress relative to men does not represent improvement in absolute terms. It is also worthy of note that, as we shall see in Chapter 10, the male-female earnings differential is still considerably larger in the United States than in the Scandinavian countries and Australia. This is the case even though women's qualifications relative to men's

Chapter 6

DIFFERENCES IN OCCUPATIONS: AND EARNINGS: THE HUMAN CAPITAL MODEL

In this chapter, we present supply-side explanations for the gender differences in earnings and occupations described in Chapter 5. Initially, we simply summarize the arguments of scholars who emphasize this point of view and leave the evaluation of their contributions and the exposition of alternative interpretations for later. In addition, to the extent that supply-side factors are important in causing gender differences in market outcomes, we review government and employer policies that may help to increase women's human capital investments and labor force attachment.

Supply-side explanations focus on the observation that men and women may come to the labor market with different tastes and with different qualifications, such as education, formal training, and experience, or other productivity-related characteristics. Gender differences in tastes might mean, for example, that one group or the other has greater tolerance for an unpleasant, unhealthy, or dangerous environment, for longer work hours or inflexible work schedules, for physical strain, or for boredom, and is more willing to accept these in return for higher wages. Many examples could be offered of gender differences in qualifications related to job performance. A woman may have a college degree in English whereas a man may have a college degree in engineering. Or again, while in the labor market, a woman may make different decisions, even when faced with the same