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FROM MILL TOWN TO BOARD ROOM: THE RISE OF WOMEN'S PAID LABOR

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ABSTRACT

In the twenty-first century many of the professional and high ranking managerial workers in the United States and in other OECD countries will be women. This change in women's social and economic status represents a dramatic break with the past, but one that can only be understood by looking to the past. The rise of the career woman would not have been possible without the entry of previous generations of women into the labor market. This entry was determined both by contemporaneous demand factors and by the characteristics, expectations, and social norms regarding work and family of different cohorts of women. History suggests that change in women's labor force experiences may be slow because it must await the entry of new cohorts of women (and also of men)into the labor market.

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In the twenty-first century many of the professional and high ranking managerial workers in the United States and in other OECD countries will be women. At the end of the 1990s women earned 55 percent of all bachelor's degrees and 40 percent of all doctoral degrees (National Science Foundation 1999). They represented over 40 percent of all graduates from medical and law schools (American Medical Association; American Bar Association). The entry of women into "careers," that is work that requires a lengthy period of training and that offers promotions, represents a fundamental break with the past. In 1970 only 14 percent of all doctoral degrees were awarded to women, only 8 percent of all students enrolled in law schools were women, and only 8 percent of all medical school graduates were women (National Science Foundation 1999; American Medical Association; American Bar Association). Those women who had careers were primarily involved in teaching. If we go back even further in time to 1930 or 1940, married women had neither careers nor jobs. They rarely participated in the labor force. The unmarried did participate (though at much lower rates than they do today) but had little hope for promotion to higher paying jobs.

This dramatic change in women's social and economic status can only be understood by looking to the past. Each generation of women set the stage for the next. The rise of the career woman would not have been possible without the prior entry of married women into the labor force, even though this entry was primarily in dead-end jobs in the clerical sector. The unmarried office girl in turn paved the way for the entry of married women into the clerical sector and into the labor force. Finally, the office girl may never have existed but for the factory girl of an earlier generation.

This essay surveys the growth in women's labor force participation. In the past the gulf between the labor force participation of men and women was large. In the United States only 20 percent of all women older than 15 worked for pay in 1900. Less than 6 percent of all married women older than 15 labored for pay. By the century's end the gap in men and women's labor

force participation rates had narrowed considerably in many countries. In the United States the labor force participation of all women older than 16 had risen to 60 percent and that of all married women older than 16 to 62 percent.[1]

This increase in women's paid work since the beginning of the twentieth century has had enormous social and political significance. Increased retirement has decreased the paid labor of older men and increased education has reduced the paid labor of the young. The one major countervailing trend in the twentieth century has been the increased participation of women. Goldin (1986) estimates that their greater participation across the twentieth century has increased the aggregate labor force participation rate of 25 to 44 year olds by about 50 percent. Women's greater participation has led to the growth of market substitutes for such home-produced goods as food and clothing. Their greater work for pay has altered the power relationships between husbands and wives, has influenced family formation and dissolution, and has affected the distribution of resources within the family (Lundberg and Pollack 1996). In a study of working class families, a husband complained that his wife "doesn't know how to give respect ... Because she's working and making money, she thinks she can argue back whenever she feels like it" (cited in Goldin 1990: 11).

We have not yet seen the full social and political impact of the rise in women's paid labor, because the more fundamental changes come from women's entry into careers and this entry is still a relatively recent phenomenon. Work for money, regardless of type of work, generates different attitudes and relationships among family members. Two careers, by bringing true equality into marriage, generate yet another set of attitudes and relationships between husband and wife. The increased importance that both husbands and wives attach to her career has been felt in all sectors of the economy. The rise of dual career households has benefited large metropolitan areas and

[1] See Figure 1 and Table 1 later in the text.

has hurt the ability of smaller cities to attract highly skilled individuals because these individuals are increasingly bundled with an equally skilled spouse and need the larger labor markets offered by larger metropolitan areas to solve their colocation problem (Costa and Kahn, forthcoming). Because since the 1960s labor force participation rates have increased fastest among the wives of college educated men (Juhn and Murphy 1997), the rise of the dual career household has affected household income inequality. The increased supply of professional women has benefited firms needing highly skilled workers but women's expanding career opportunities have hurt such as education that traditionally depended upon women's labor (Flyer and Rosen 1997).

This essay begins with a description of trends in women's labor force participation rates in the United States, France, and Great Britain over more than 100 years.[2] It examines the types of jobs women held and the lifecycle of paid work in the United States over the last two centuries. It also describes trends in several OECD countries since 1960. In some countries women's participation rates have barely changed since the 1960s whereas in others the growth in women's participation has been dramatic. In those countries where women's labor force participation rates have risen since the 1960s (and the United States is among these), they have risen because of the growth in the participation of married women. This essay then examines why in the United States married women have increased their participation. It concludes with a look towards the future.

[2]Not all countries can be examined in a short review essay. Britain and France present two extreme cases because Britain was highly industrialized whereas a large proportion of France's population worked in agriculture.

1 Trends

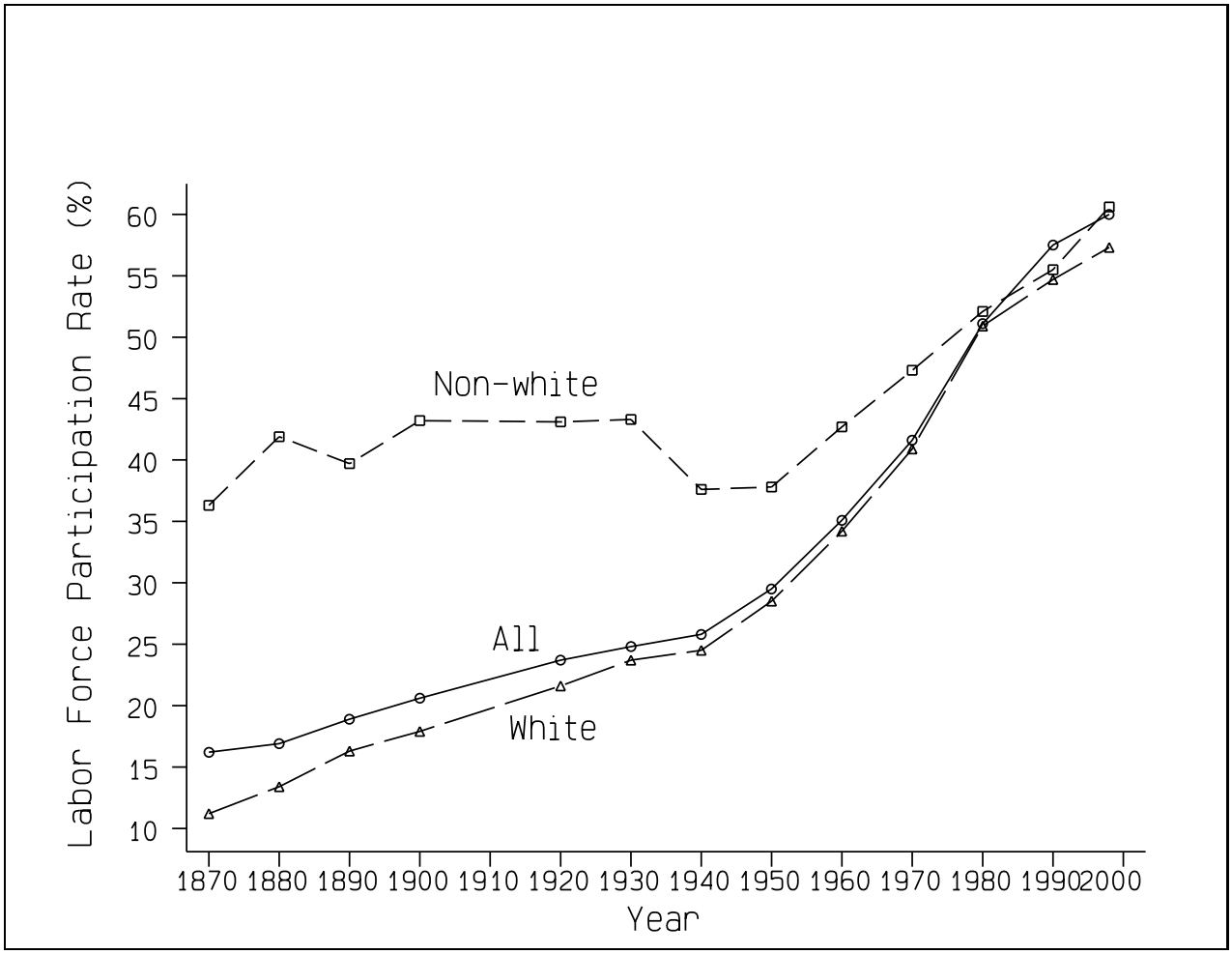
1.1 Long-run Participation Rates

The history of women's participation in market work is complicated by issues of measurement. The labor force concept is fraught with ambiguities. In the United States prior to 1940 only women who reported a usual occupation were considered to be "gainfully employed" and therefore enumerated as being in the labor force. Beginning in 1940 the definition of the labor force changed to include all individuals working for pay, unpaid family workers, and the unemployed seeking work during the survey week. These differences in definition are unlikely to affect the enumeration of the adult male labor force, but will affect the enumeration of female labor at a time when many women worked as unpaid farm wives, as boarding house keepers, or as industrial home workers. Although consistency over time suggests that these women should be included in the definition of the labor force, their exclusion does not affect the measurement of women's paid work outside of the home.

Figure 1 shows the growth in women's labor force participation rates in the United States. In 1890 only 18 percent of women worked for pay and by 1930 only 26 percent. By 1998 the figure was 60 percent. Most of the growth prior to 1940 was in the labor force participation of white women. Rates for black women were constant at about 43 percent prior to 1940, fell during the depression, and then began their modern rise. Participation rates were traditionally higher for black than for white women because black incomes were lower and because the legacy of slavery may have made paid work less socially stigmatized among black than among white married women (Goldin 1977). Because women's work was undercounted, Figure 1 overstates the nineteenth and early twentieth century increase in women's economic activity rates (but not the increase in their paid work outside of the home).

Figure 2 shows labor force participation rates in Great Britain and France. In Great

Figure 1: Labor Force Participation Rates by Race, United States, 1870-1999



Note. Participation rates for 1870-1960 are for women age older than 14. Participation rates for 1970-1999 are for women older than 15. Rates for 1890-1980 are from Goldin (1990: 17). Rates for 1870 and 1880 were estimated from the integrated public use micro census samples (Ruggles and Sobeck 1998). Rates for 1990 and 1999 are from the Bureau of Labor Statistics web site.

Britain women's participation rates dipped from 37 percent in 1881 to 34 percent in 1921 before rising to 37 percent again in 1961. By 1998 participation rates were 53 percent. French participation rates were higher than the British until about 1961. French rates trended upwards during the nineteenth century to reach a peak of 48 percent in 1911, declined in the first half of the twentieth century, and then rose beginning in the 1960s. French participation rates may have been higher than the British because French agriculture employed many women and France industrialized only very slowly. France may also not have developed the male breadwinner ideology associated in Britain with industrialization (Marchand and Thélot 1991; Humphries and Horrocks 1995). As in the American case, British and French labor force participation rates prior to the second half of the twentieth century are probably understated because they undercount employment in family enterprises and casual labor (Higgs 1987; Grantham and Grimard 1999). Joshi and Owen (1987) argue that even later censuses do not fully enumerate married women working only a few hours a week and that the rise in women's participation rates after 1951 may be overstated.

In both the United States and in Great Britain the biggest increase in participation rates in the twentieth century has been for married women and in both countries most of the increase was after 1940 (see Table 1).[3] Among British women of working age, the participation rate of non-married women was roughly constant between 1911 and 1998 whereas that of married woman hovered at about 10 percent between 1911 and 1931 but by 1998 surpassed that of not married women. In the United States the labor force participation rate of single women older than 15 or 16 rose from 41 to 51 percent between 1890 and 1970 and then to 68 percent in 1998.

[3]Although World War II is often credited with changing attitudes towards working women, the direct impact of the war was small. The majority of women who entered the labor force during the war exited it after the war (Goldin 1991). Finegan and Margo (1994) argue that in the 1930s married women were very unresponsive to short-run movements in aggregate demand but that their responsiveness to sustained increases in aggregate demand, such as that during World War II, was quite large.

Figure 2: Labor Force Participation Rates in Great Britain and France

Note. French participation rates for 1820-1990 are from Marchand and Thélot (1991: 175). The French participation rate for 1995 is from the INSEE web site. British participation rates for 1891-1961 are from Matthews, Feinstein, and Odling-Smee (1982: 563-565). Those for 1971-1998 are from the Office for National Statistics website. Participation rates for 1891-1971 are for ages older than 14 and those for 1981-1998 are for ages older than 15.

Table 1: Labor Force Participation Rates by Marital Status, United States and Great Britain

United States				Great Britain			
Age	Year	Married	Single	Age	Year	Married	Unmarried
15+	1880	4.6	37.6				
	1890	4.6	40.5				
	1900	5.6	43.5				
				15-64	1911	9.9	66.0
	1920	9.0	46.4		1921	9.0	67.0
	1930	11.7	50.5		1931	10.6	69.6
	1940	13.8	45.5				
	1950	21.6	50.6		1951	23.6	72.3
	1960	30.6	47.5		1961	32.6	71.8
16+	1970	39.5	51.0		1973	48.2	62.3
	1980	50.1	61.5	16-59	1981	60.0	75.0
	1990	57.6	66.4		1990	71.0	71.0
	1998	61.8	68.1		1998	74.0	67.0

The United States figure for 1880 is compiled from the 1880 micro-census sample (Ruggles and Sobeck 1998). No figure is given for 1910 because this census enumerated unpaid family workers and is therefore not consistent with the others. Those for 1890-1900 and for 1920-1980 are from Goldin (1990: 17). Those for 1998 are from *Handbook of U.S. Labor Statistics* (1999). The numbers for Great Britain for 1911-1973 are from Matthews, Feinstein, and Odling-Smee (1982: 563-565). The figures for 1981 and 1990 are from graphs in various issues of *Social Trends* and are therefore not precisely calculated. The numbers for 1990 and for 1998 are for married/cohabitating and not married/not cohabitating. The 1998 figures are from the Office for National Statistics website. Note that only prime-age groups are examined in Great Britain so rates cannot be compared across countries.

The participation rate of married women in the same age group was less than 5 percent at the end of the nineteenth century and by 1940 was still only 14 percent. Between 1950 and 1998 it rose from 22 to 62 percent, with particularly large increases between 1950 and 1980 when married women's participation rates rose by 9 to 10 percentage points in each decade. In contrast, between 1980 and 1990 participation rates rose by 8 percentage points and between 1990 and 1998 by 4 percentage points. The time trend among black women is similar, but participation rates were initially higher for married women (Goldin 1990: 17).

Although the labor force participation rates give in Table 1 are not comparable across

countries because different age groups are presented, participation rates of married women have always been very similar in Britain and in the United States while those of single women have differed. In both the United States and in Great Britain labor force participation rates of married women older than 15 were 9 percent circa 1920 and 22 percent circa 1950. In 1998 the participation rates of married women age 16 to 59 were 73 percent in the United States and 74 percent in Great Britain. In the United States participation rates increased for single women and increased despite the rise in years attending school. The same increase in unmarried women's labor force participation rates is not observed in Britain because unmarried women's participation rates were high even at the beginning of the century. Around 1920 62 percent of unmarried British women over the age of 15 were in the labor force compared to 46 percent of American women in the same age group. By 1998 the participation rate of unmarried American women exceeded that of unmarried British women. Among unmarried women between 16 and 59 years of age 74 percent of Americans were in the labor force compared to 67 percent of Britons.

Women's participation in market work has followed a different pattern from women's work for pay outside the home (documented in the figures and the table). Goldin (1995) argues that women's labor force participation, when measured to include unpaid family workers, is U-shaped. When incomes are low women are in the labor force as unpaid workers in family farms or businesses. As incomes rise their participation first falls and then rises only as their educational levels grow and their market work becomes more valuable than their household work. This U-shape is observed in the past. Correcting the 1890 United States figures for married women's participation rates to account for unpaid family farm workers and boarding house keepers implies that married women's activity rates were a full 10 percentage points higher than their paid labor force participation rates and therefore higher than participation rates in 1940 (Goldin 1990: 44). In Britain, there is evidence of a decline in wives' and daughters' contributions to household incomes between 1790 and 1865, coinciding with the commercialization of agriculture and the

decline of outwork activities (Humphries and Horrocks 1995). Revised estimates of the census figures for England and Wales that account for women's roles as unpaid workers show that participation rates declined between 1851 and 1891 (Higgs 1987). The enumeration of unpaid family workers in the French census of 1851 implies that women's participation fell with the contraction of agriculture beween 1850 and 1950 (Grantham and Grimard 1999). If we go back even further in time, women's participation may have more of an N-shape. De Vries (1994) and Voth (1998) argue that prior to the industrial revolution, there was an "industrious revolution" because the increased availability of consumer goods led both men and women to increase their hours of work.

1.2 Women's Work

In understanding the increase in married women's work for pay outside of the home, the concept of cohort matters. Cohorts differ in terms of their education and wealth, their fertility, their accumulation of labor market experience, and their socialization experiences when young. In the United States labor force participation rates among women in their 40s increased sharply beginning with the cohort born between 1906 and 1915. Among women in their 20s and 30s labor force participation rates have been increasing for all cohorts born since the 1940s (Goldin 1990: 21-23). In the following paragraphs I will therefore describe the experiences of American women who worked before 1890, between 1890 and 1940, 1940 and 1970, and after 1970, drawing heavily upon Goldin (1990).

At the beginning of the nineteenth century when the United States was still a heavily agricultural nation, wives and daughters of farmers who were economically active were most likely to be unpaid workers on the family farm. Industrialization divided the workplace and the home and decreased the economic activity of married women. It increased the participation of young, single women in paid labor prior to 1850 because the spread of new large-scale methods of

production facilitated the substitution of unskilled for skilled labor. Farmers' daughters flocked to the newly established mill towns where they earned higher wages than as servants and worked shorter hours. In the Northeast in 1820 approximately 9 percent of workers in manufacturing were women. This figure reached a peak of 33 percent in 1832 before falling (Goldin and Sokoloff 1982).

The mill town declined as industry became progressively urbanized. Whereas the mill girls worked at factories built at water sites and some even lived in boarding houses built by factory owners, the working girl of the second half of the nineteenth century was more likely to live at home and to give more of her earnings to her family. Beginning in the 1840s, working women were more likely to be immigrants and hours, wages, and conditions of work probably worsened.

The rise of the clerical sector transformed women's work. At the end of the nineteenth century most working women were employed in either the service or the manufacturing sector and most men were employed in either agriculture or manufacturing (see Table 2). By 1930, the service, clerical, and manufacturing sectors had become the most important sectors of employment for women, whereas manufacturing and agriculture remained so for men. Women also entered into the professions, particularly teaching.

Women entered the clerical sector because new technology allowed firms to replace skilled labor with the labor of women who had taken stenography or typing courses but who had little on the job training. At the end of the nineteenth century clerks and secretaries were trusted employees familiar with the entire operations of the firm. They were also employees who could be promoted to head. As firm size increased, as accounting departments within firms grew, and as departments run by middle managers were created, demand for clerical staff increased. The division of labor and specialization increased because the typewriter and other machines, including those for bookkeeping, accounting, and duplicating, allowed firms to hire workers who

Table 2: Occupational Distributional, 1890-1999

	1890/1900		1930		1970		1999	
	Men	Women	Men	Women	Men	Women	Men	Women
Professional	10.2%	9.6%	13.6%	16.5%	24.9%	18.9%	31.5%	35.9%
Clerical	2.8	4.0	5.5	20.9	7.6	34.5	5.5	23.4
Sales	4.6	4.3	6.1	6.8	6.8	7.4	11.3	13.0
Manufacturing	37.6	27.7	45.2	19.8	48.1	17.9	37.9	9.2
Service	3.1	35.5	4.8	27.5	8.2	20.5	9.9	17.4
Agricultural	41.7	19.0	24.8	8.4	4.5	0.8	3.8	1.1

The figures for 1890/1900-1970 are from Goldin (1990: 64). Those for 1999 are from the Bureau of Labor Statistics web site.

had either attended commercial schools or taken commercial classes in high school and to put them to work with very little on the job training. These workers were women because the growth in high school education between the 1890s and the 1940s provided them with the necessary general skills. The clerical sector provided them with better pay and cleaner, less arduous work than manufacturing. But, because women were expected to leave the labor force upon marriage they worked at jobs from which they were never promoted whereas men could rise from office boy to president of the company. It is therefore in this sector that we first observe substantial wage discrimination (Goldin 1990: 110-117).

The clerical sector transformed the work of married women. Female manufacturing workers were heavily penalized for changes in occupation and firm, retaining only 20 percent of their experience related increase in earnings. Women in the clerical sector kept more than 60 percent (Goldin 1990: 108). Women in the clerical sector could therefore leave the labor force when their first child was born and then re-enter the labor force when their children were of school age without paying a heavy penalty for time spent out of the labor force. Members of the cohort born between 1906 and 1915 were among the first to follow this pattern of exit when their children were young and re-entry when they were in their 40s. By 1970 35 percent of all working

women were in the clerical sector, compared to 8 percent of men (see Table 2). This sector drew not only from the ranks of high school graduates, but also from those of college graduates.

The emergence of part-time work after 1950 altered the paid work opportunities of married women. A working woman in 1890 was faced with an average work day of 9.5 hours (e.g. Costa 2000), six days a week. The length of the work day was rigid, with penalties for tardiness (Atack and Bateman 1992). Only outwork, with its low pay, or boarding house keeping, with its requirement of home ownership, provided opportunities for part-time work. This changed after 1950 when firms were faced with a declining supply of young, unmarried female workers because of increases in school attendance, declines in age at first marriage, and the baby boom. Firms sought to accommodate the work schedule demands of married women (Goldin 1990: 175, 181). Much of the growth in women's employment between 1950 and 1970 consisted of growth in part-time work. In 1950 23 percent of all working married women in couples where both spouses were between ages 25 to 39 were working fewer than 35 hours a week. By 1970 this proportion was 35 percent and in 1998 was still a high 33 percent.[4] In Britain the increase in women's part-time employment between 1950 and 1970 was even larger (Joshi, Layard, and Owen 1985). The proportion of women working part-time is now greater in Britain than in the United States (40 percent versus 20 percent working less than 30 hours a week in 1997), whereas the proportion of men working part-time is the same (8 percent working less than 30 hours a week in 1997).[5]

Since 1970 women have begun to enter careers in large numbers. The college educated women who graduated in the 1950s majored in such fields as education and nursing where few men got degrees and upon graduation were tracked into traditionally female sectors, regardless of their majors. They left the labor force when their first child was born and only re-entered when

[4]Estimated from the integrated public use census samples (Ruggles and Sobeck 1998) and the 1998 Current Population Survey.

[5]The proportions working part-time are from the OECD website.

all children were in school. Goldin (1997) characterizes their experience as "family then job." The cohorts who graduated 20 years later, aspired to "career then family" or "career and family" (Goldin 1997). Their college majors and their graduate degrees became more similar to those of men. In 1970 only 10 percent of undergraduate economics degrees were awarded to women, but by 1996 the figure was 30 percent. The fraction of economics doctoral degrees that went to women rose from 5 to 22 percent between these years. The increase in the proportion of professional degrees awarded to women was even sharper. In 1970 6 percent of all first-professional degrees awarded in health went to women but by 1996 the figure was 43 percent (National Science Foundation 1999). Women are now more likely to be in non-traditional professions. Whereas in 1970 only 10 percent of all physicians were women, by 1998 29 percent were.[6] At 43 of the top economics departments in 1972, 9 percent of the assistant professors were women, 4 percent of the associate professors, and 2 percent of the full professors. At the same schools in 1997 22 percent of the assistant professors were women, 13 percent of the associate professors, and 6 percent of the full professors (Bartlett 1998).

Table 3 illustrates trends in married women's labor force participation rates and part-time work since 1940 by examining their participation rates by their own and their spouse's education. Since 1960 labor force participation rates have increased more sharply among college educated women married to college educated men than among high school educated women married to high school educated men.[7] Wives' labor force participation rates also increased sharply among couples in which only one spouse had a college education because the proportion of couples in which the wife was college educated rose from 27 percent in 1940 to 50 percent in 1998. In 1960 and 1970, when most college educated women entered either non-professional jobs in

[6]Estimated from the integrated public use census sample (Ruggles and Sobek 1997) and the BLS web site.

[7]This phenomenon of increasing participation among women married to high wage men was first pointed out by Juhn and Murphy (1997). It is also observed in Britain and in France (e.g. Dex, Walters, and Alden 1993).

Table 3: Participation Rates and Part-time Work Among Married American Women by Own and Husband's Education

	1940	1960	1970	1980	1990	1998
Wife's labor force participation						
Both spouses college educated	19.7%	28.1%	40.8%	63.8%	72.9%	76.7%
Only one spouse college educated	18.4	22.2	33.1	56.8	70.3	78.2
Neither spouse college educated	16.7	27.3	36.7	52.5	64.8	69.3
Couples in which wife works: % wives working part-time						
Both spouses college educated	26.7%	36.7%	39.4%	30.6%	28.3%	33.4%
Only one spouse college educated	22.0	33.3	38.5	33.1	29.7	30.1
Neither spouse college educated	23.0	29.8	33.7	31.4	29.9	33.8

The data consist of matched couples where both spouses are between ages 25-39. The figures for 1940-1990 were estimated from the integrated public use census samples (Ruggles and Sobek 1997). The 1950 census provides information on the education of only one spouse. The 1998 figures were estimated from the Current Population Survey (United States Department of Commerce 1998). Population weights are used for 1940 and 1990. Part-time work is defined as less than 35 hours per week.

the clerical or sales sector or traditional professional jobs (such as that of nurse, schoolteacher, librarian, or social worker) part-time work was more common among college educated women married to college educated men than among high school educated women married to high school educated men. After 1970, when college education became increasingly associated with careers, the proportion of wives working part-time no longer varied by own and spouse's education. The fraction of wives (and also of husbands) working part-time increased between 1990 and 1998.

1.3 International Trends Since 1960

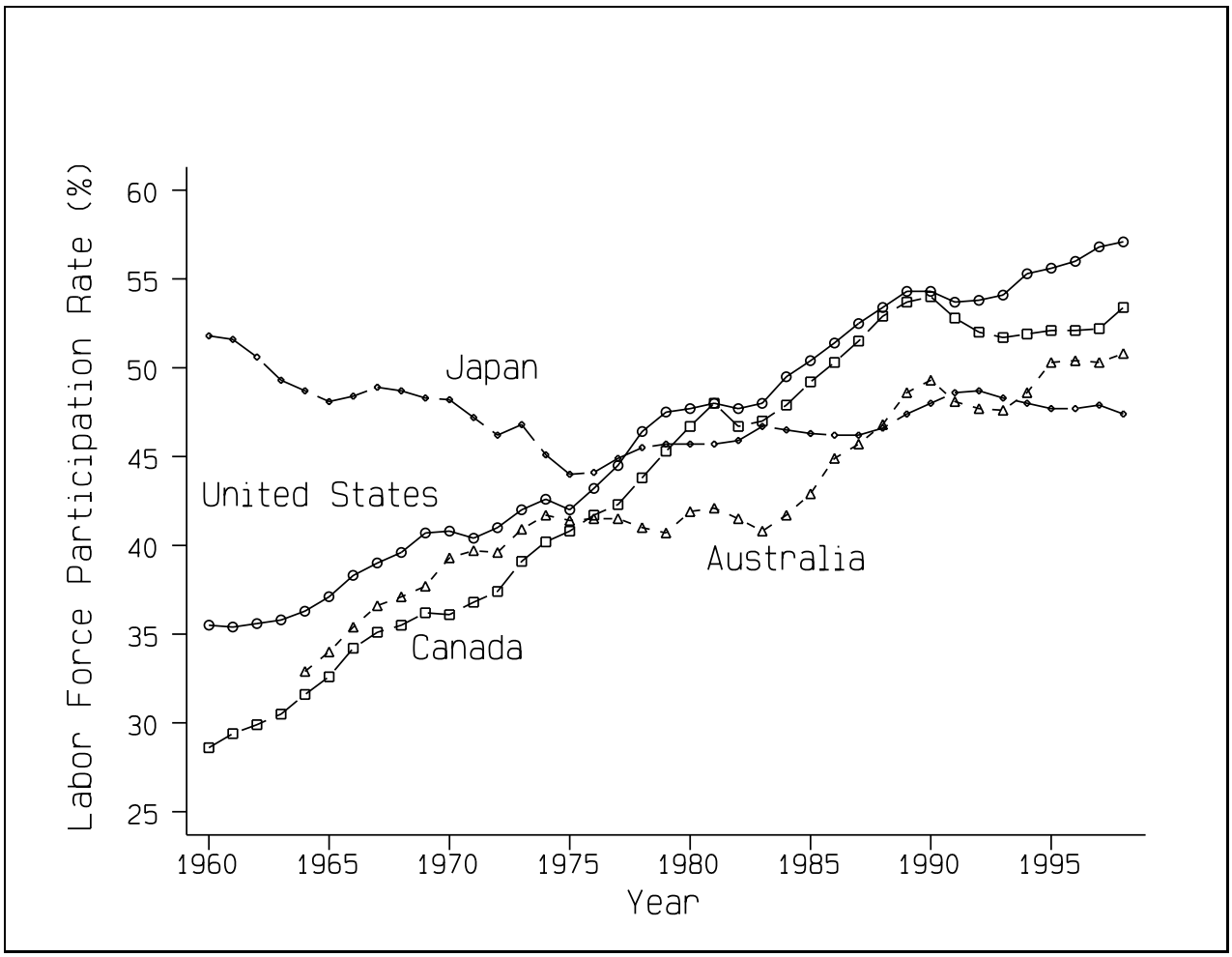
How unique is the recent American story of rising women's labor force participation rates? Australia, Canada, Sweden, the Netherlands, and the United Kingdom all experienced sizable increases in aggregate labor force participation rates since 1960 because the participation of married women rose. In Sweden participation rates fell beginning with the recession of the early

1990s, but the percentage point decline was the same for men as for women. The French increase in aggregate participation rates since 1960 was smaller than that observed in Australia, Canada, Sweden, the Netherlands, and the United Kingdom, but was higher than that in Germany (once the rise in participation rates with unification is excluded) or Italy (see Figures 3 and 4). In these two countries, the participation rate of married women barely changed. In Italy, women's participation rates fell as the size of the agricultural sector declined and then rose as women's educational levels rose and as the service sector and manufacturing industries that employed women became more important (del Boca 1988).

With the exception of Japan, the labor force participation rates observed in Figures 3 and 4 are good indicators of women's participation in the paid, formal sector. In Japan women's participation rates have been relatively high because a large fraction of the female labor force (21 percent in 1984 compared to 1 percent in the United States) consists of family workers (Hill 1988). Japanese participation rates are now lower than they were in 1960 because of the decline of family enterprises.

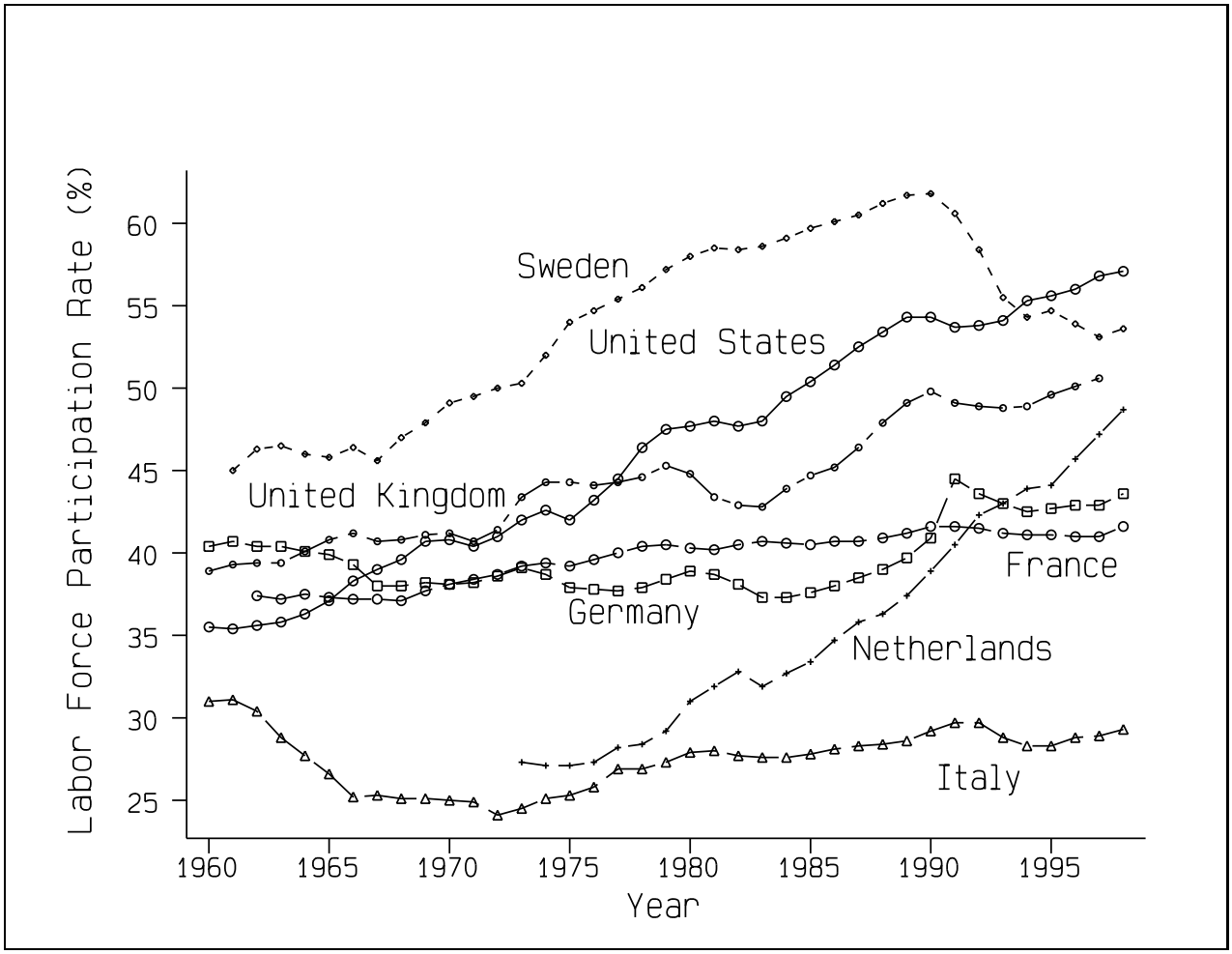
Several factors account for differences in women's paid participation rates across countries. In Japan, discrimination and social norms have hindered the movement of married women into paid labor. In contrast, Sweden has both actively encouraged paid female labor force participation and promoted pronatalism since the 1930s. Swedish taxation provides substantial incentives to be a dual earner couple whereas taxation in Germany penalizes dual-earner couples and taxation in the Netherlands penalized dual earner couples until 1990 and is now neutral (Gustafsson and Bruyn-Hundt 1991). Subsidized child care in Sweden reduces the negative effect of children on women's earnings (Gustafsson and Stafford 1992). In Germany pronatalism has taken the form of child allowances paid to the parent who has no income or who works less than 20 hours a week (Vogelheim 1988). It has also taken the form of paid, parental leave of up to three years duration. In addition, the dominance of the manufacturing sector and of tool-making

Figure 3: Labor Force Participation Rates in North America, Australia, and Japan, 1960-1998



Note. Rates are from the Bureau of Labor Statistics web site and were adjusted by the Bureau to be comparable to the the American concepts of the labor force, except in the treatment of age cutoffs and of layoffs. The US data relate to the population older than 15. The Canadian, Australian, and Japanese data relate to the population older than 14. The data are for the civilian noninstutionalized working age population, except for Japan, where the institutionalized working population is included.

Figure 4: Labor Force Participation Rates in Selected European Countries and the United States, 1960-1998



Note. Rates are from the Bureau of Labor Statistics web site and were adjusted by the Bureau to be comparable to the the American concepts of the labor force, except in the treatment of age cutoffs and of layoffs. The French, German, and Swedish data relate to the population older than 15. The British data relate to the population older than 14 prior to 1972 and older than 15 thereafter. The Dutch data relate to the population older than 13 before 1975 and older than 14 thereafter. Italian data relate to the population older than 13 before 1992 and older than 14 thereafter. The Swedish statistics were adjusted to include persons older than the upper age limit. The data are for the civilian noninstutionalized working age population, except for Germany, where the institutionalized working population is included. Beginning in 1991 the German data are for a unified Germany. The French and British figures differ from those presented in Figure 2 because of differences in the labor force concept.

and machine-building, in particular, has decreased demand for female labor in Germany (Erler 1988). Low Italian participation rates (as low as those observed in Spain and Greece) may arise from undercounting women in the informal sector or from the high costs to employers of part-time work (determined by legislation and by union contracts) and the heavy expectations placed upon mothers combined with little support (del Boca 1988). Additional explanations for the low female labor force participation rates observed in some countries include relatively low wages for women (the difference between male and female earnings in 1997 was highest in Japan at 40 percent and lowest in Sweden and France at less than 20 percent); high unemployment rates (rates that on the Continent are higher for women than for men); laws regulating store hours; school hours (including children being sent home from school for lunch); and weak or unenforced anti-discrimination legislation.[8]

Women's experiences across countries have differed not just in terms of their labor force participation rates, but also in terms of their jobs and careers. Rates of part-time work vary widely. The Netherlands had the highest percentage of women working less than 30 hours a week in 1997 (55 percent) followed by the United Kingdom and Australia (40 percent each). The United States, Italy, and Sweden had the lowest (20, 24, and 25 percent).[9] The types of jobs held by women also vary widely. Occupational segregation is higher in the Nordic countries than in other OECD countries. (It is lowest in the United States (Anker 1998: 176).) In the Nordic countries women are mainly employed in education, health care, child day care, and social services, all of which are monopolized by the state. In these countries the public sector accounted for 58 percent of total female employment in 1992 (Melkas and Anker 1998). Women's share of administrative

[8]For relative wages and high unemployment rates by sex see the OECD web site, *OECD in Figures, 1999*.

[9]Part-time statistics are available from the OECD web site (*OECD in Figures, 1999*). Among men the highest part-time rates in 1997 were in Australia, Japan, and the Netherlands (14, 13, and 11 percent, respectively) and the lowest in Germany, Italy, and France (3, 5, and 6 percent respectively).

and managerial jobs in 1994-1995 (jobs that range from the chief executive of a major corporation to the manager of a local fast food store) was 43 percent in the United States and Australia, 28 percent in Sweden, and 9 percent in Japan (International Labour Organization 1997: 15).

Whether women have achieved positions of power differs across countries and differs depending upon whether one examines the public or private sector. In the Nordic countries women play the largest role in government. In Sweden women held 30 percent of ministerial level positions in 1994 compared to 16 percent in Germany, 12 percent in Italy, 9 percent in the United Kingdom, and 7 percent in France (International Labor Organization 1997: 28). Positions of power in the Nordic countries do not translate into positions of power in the private sector. For example, in 1990 in Finland women held 39 percent of all seats in parliament, but only 6 percent of all board seats of the 100 largest private firms (International Labour Organization 1997: 27).

Although comparisons of women's success in business are harder to make across countries, the available data suggest that women in the United States fare relatively well. The number of chief executives who are women is tiny in all countries. But, a comparison of the boards of major corporations shows that women hold more seats in the United States than in Canada or the United Kingdom. In the United States in 1999 and in 1998 women held 11 percent of all board seats of the first 500 companies of the Fortune 1000 and in 1999 9 percent of the seats of the next 500 companies. In contrast, in Canada women held only 6 percent of the board seats of the Financial Post 500 in 1998.[10] In the United Kingdom a 1995 survey of over 300 enterprises reported that 3 percent of board members were women (International Labor Organization 1997: 20). Another survey that examined Times 200 companies plus a number of leading Building Societies reported that 6 percent of board members were women (McRae 1996). During these same years in the United States 9 percent of all board seats of the Fortune 500 were held by

[10]Findings are from *1999 Catalyst Census of Women Board Directors of Fortune 1000* and Catalyst Census of Women Board Directors of Canada. Excerpts can be found on the Catalyst web site.

women.[11]

2 The Participation of Married Women

The increase in married American women's work for pay outside of the home in the second half of the twentieth century represents a dramatic break with women's past experience. Why did this change occur? On the supply side more women may have been willing to enter the labor market because they were having fewer children (though better job opportunities may have helped lower fertility rates); because their time spent producing such household goods as food or cleanliness was falling thanks to new household technologies such as washing machines, cleaner lighting, and vacuum cleaners and to prepared foods; because their conditions, hours, and status of work were improving; and because their preferences for work may have changed. On the demand side firms may have been more willing to hire women because of the rise of the clerical and sales sector; the development of technologies that allowed firms to substitute the labor of women for that of men; the growth of formal education that could replace on the job training; and changes in the tastes of employers and their male employees or reduced discrimination. Provided that we know women's income and substitution elasticities, we can determine whether demand or supply factors were more important in increasing married women's participation.[12]

Numerous cross-city studies provide us with evidence on labor supply wage and income elasticities for married women over the course of the entire twentieth century.[13] For the first three decades of the twentieth century, married women's uncompensated wage elasticities of labor force

[11]See the Catalyst web site. Numbers are for 1994.

[12]See Goldin (1990: 119-158) for a more formal framework.

[13]These studies are listed in Goldin (1990: 132). Although cross-city studies are not the ideal way to estimate women's labor supply elasticities, they offer the only consistent way of doing so for the whole century.

participation were equal to 0. Their income elasticities of labor force participation were large (substantially greater than one) and negative and their compensated wage elasticities were small. At mid-century women's labor supply parameters were very different. Their uncompensated wage elasticities were quite high (up to 1.5 in some studies). Their income elasticities fell below one and their compensated wage elasticities may have been as large as 2. In the final decades of the twentieth century, women's wage elasticities were again very different. Their uncompensated wage elasticities were smaller (though not as small as 0), as were their income elasticities. Their compensated wage elasticities had fallen to around 0.5.

Goldin (1990: 133-135) provides an explanation for why income elasticities fell for the entire century and why wage elasticities first rose and then fell. Recall that in 1900 most women were employed in either service, manufacturing, or agricultural occupations. The working conditions in these occupations were poor and the hours long. A working wife implied that the household was in financial crisis, either because the husband was too poor to adequately provide for his wife, was unemployed, or ill. Income effects were large and substitution effects small because the only women in the labor force were those pushed in because their husbands' incomes were low. By 1950 the rise of the clerical sector, with its better conditions of labor, and the entry of college educated women into the clerical sector reduced the negative signal to a wife's working. Now a woman might be working because her value of time was high. Because of the reduced stigma to working, the income effect weakened and the substitution effect rose. The increased availability of market goods that could substitute for home goods weakened the income effect even further. After mid-century, the increase in divorce rates (which made a husband's income undependable), the increased status and meaning found in work, and the increased cost of intermittancy in the labor market made women's labor force experiences more like those men and reduced both the income and substitution effect.

Goldin (1990: 136-138) uses the estimated wage and income labor force participation

elasticities to conclude that supply explains virtually all of the increase in married women's participation between 1890 and 1930 and that demand explains almost all of the increase between 1940 and 1960 and that demand and supply share the increase between 1960 and 1980. She argues that the rise in women's labor force participation rates depended upon both contemporaneous changes in demand factors and upon the changing responsiveness of women's labor supply. She also points out that this responsiveness was a characteristic of specific cohorts and depended upon their fertility, education, occupations, and expectations.

The importance of cohort effects suggests that change in women's labor force participation rates may be slow because it must await the movement of cohorts, with their different set of expectations and characteristics, through time. The increase in participation for cohorts born around the turn of the century is connected to their particularly sharp fertility declines. These cohorts also benefited from the expansion of high school education from 1900 to 1930. Because they had relatively high participation rates in the clerical sector when single, re-entry into the labor force when they were in their 40s was easier. Of course, in retrospect, these cohorts may have underinvested in on the job training and in formal schooling. Because they could use only the experience of their mothers and grandmothers as a guide, they could not have predicted their re-entry into the labor force when their children were grown (Goldin 1990: 138-157). Change will therefore take time because expectations need to adjust.

Change in women's participation may also be slow because cohorts differ in their social norms regarding work and family. Eight-two percent of Americans (both male and female) told pollsters in 1936 that a married woman should not earn money if her husband was capable of supporting her.[14] Seventy-three percent of married women of child-bearing age in 1970 agreed that preschool children suffered if the mother works. By 1977 the figure was 58 percent and by

[14]Gallop poll of November 15, 1936.

1985 37 percent. In 1991 the figure was 34 percent (Rindfuss, Brewster, and Kavee 1996).

Finally, change in women's labor force participation may also be slow because of discrimination. This discrimination was institutionalized in the marriage bars in school districts and in firms that in the United States and in Britain prohibited the employment of married women. Demographic change that reduced the supply of young female employees led to the disappearance of the marriage bar (Goldin 1990: 160-179). Discrimination also affected the willingness of employees to work with women and the willingness of employers to hire women. Such discrimination is extremely difficult to prove, but a unique study of the adoption of "blind" auditions by orchestras with a "screen" to conceal the identity of the candidate from the jury suggests that the use of more impartial hiring procedures increased by 25 percent the percentage of women in orchestras from 1970 to 1996 (Goldin and Rouse, forthcoming). Pressure from the feminist movement and anti-discrimination policy, such as investigations in the United States of employment discrimination charges by sex in the early 1970s under Title VII of the 1964 Civil Rights Act and of discrimination in admissions to graduate and professional schools under Title IX of the Civil Rights Act, may therefore have played a role in increasing women's labor force participation.

Goldin's (1990: 135) work has emphasized that, relative to the past, married women's wage and income elasticities of labor force participation in the 1960s and 1970s were small and became more similar to those of men. There have been changes since the 1960s as well. From the 1960s to the end of the 1980s the relationship between wife's employment and husband's earnings has grown weaker while the relationship between wife's employment and her wages has grown stronger, though it is still small (Juhn and Murphy 1987). Examining the 1975-1994 period, Pencavel (1998) finds that increases in own wages account for about one quarter of the increased employment of women at younger ages and about half of the increase in employment at older ages. He concludes that market work has become relatively more hospitable and household

activity less attractive to women beyond that summarized in movements in wages.

The relatively small size of married women's wage and income elasticities suggests that those women who are out of the labor force today may very well have a very strong taste for remaining at home. Unless these tastes change the labor force participation rates of married women may not increase much above their current rate of 62 percent.

3 Future Generations

The entry of women into non-traditional careers has had the biggest impact on their economic and social status. The early 1970s were a turning point in women's entry into graduate and professional schools. In 1970 only 9 percent of all applicants to medical school were women but by 1976 24 percent were and by the end of the 1990s 43 percent. The fraction of women in entering classes mirrored this change in the applicant pool (American Medical Association). Trends in law schools were similar. In 1970 only 10 percent of all first year law school students were women but by 1976 28 percent were and by the end of the 1990s almost 50 percent (American Bar Assocation). The history of how women entered the professions is still being written. Goldin and Katz (2000) argue that the availability of the birth control pill allowed women to delay marriage and embark on a lengthy professional education. The availability of legal abortion may have assisted. On the demand side the passage of Title IX in 1972 applied Civil Rights legislation to universities and may have exerted direct pressure on graduate and professional school admissions committees.

The increasing proportion of women graduating from professional and graduate programs suggests that their entry into non-traditional careers will continue. Many, however, believe that there is a glass ceiling limiting the advance of women to the highest professional levels. Among Phd economists who enter tenure track positions in academia women have a harder time achieving tenure and take longer achieving it, controlling for the quality of the institution they

received their Phd from, among other things (Kahn 1993). While both college men and women majoring in business believe that that they will start with the same salaries, women anticipate lower earnings in subsequent years (Blau and Ferber 1991). These expectations are matched by the experience of previous cohorts. Among individuals who received their MBAs between 1975 and 1980 there were no gender differences initiallly in income but 6 years later the women were earning 9 percent less than the men (Schneer and Reitman 1995; see also Stroh, Brett, and Reilly 1992). In both 1973 and 1978 *Fortune* reported that only 0.2 percent of the highest paid officers and directors in the top 1,000 industrial and 300 service companies were women (Robertson 1978). This fraction was still small in 1990 when *Fortune* reported that 0.5 percent of the highest paid officers and directors of the top 799 companies on its combined lists of the 1,000 largest industrial and service companies were women (Fierman 1990). And this fraction was still small in 1995 and in 1999, when women held 1.2 and 3.3 percent, respectively, of the top-earner spots in the Fortune 500.[15]

The difficulty of combining career and family partially explains the slow advancement of women into positions of power. Career advancement may require relocation and frequent travel and that is difficult when both spouses have careers. Higher earners today work more hours than low earners (Costa 2000; Coleman and Pencavel 1993a, 1993b). Managers in Fortune 500 companies work an average of 56 hours a week (Brett and Stroh 1999). There is no job sharing or part-time work at the top, so time with children may be squeezed. Goldin (1997) finds that among college educated women who were age 34 to 44 in 1988 only 13 percent achieved career and family, where a woman was said to have achieved a career if in 1985, 1987, and 1988 she had hourly earnings exceeding that of the 25th percentile of college educated men. Among executives (vice-president level and above) surveyed circa 1990 37 percent of the women were childless

[15]See the 1995 and 1999 *Catalyst Census of Women Corporate Officers and Top Earners* on the Catalyst web site.

compared to 5 percent of the men.[16]

The significant negative impact on earnings and promotions of taking time off from work to care for children is well documented. Nonetheless, many women still do take time off. A study of University of Michigan Law School graduates concludes that even among lawyers who have invested heavily in their careers, women are more willing than men to sacrifice wages and promotions for the joys of parenting (Wood, Corcoran, and Courant 1993).

Women's prospects of combining career and family are improving, but they still face a difficult task. Their continued progress in careers may well depend upon men's willingness to share child rearing responsibilities. Although the gender gap in housework has narrowed since the 1960s both in the United States and in the United Kingdom (it is narrower in the United States where women spend less time in domestic work and men spend more time shopping), even women who work still disproportionately bear the brunt of domestic chores (Gershuny and Robinson 1988; Blau 1998). Among dual career households men are somewhat more likely than women (58 versus 49 percent) to classify their careers as equal, but they are also more likely than women to say their own careers are primary (33 versus 6 percent).[17] Although the fraction of female executives who are childless fell from 61 to 37 percent between 1982 and 1992, more than a third is still a high number.[18]

Not all of the glass ceiling phenomenon is attributable to children. Among Michigan law school graduates women earned 61 percent as much as men 15 years after graduation and even controlling for child care, work history, labor supply, school performance, and job settings, one quarter of the gap in male and female salaries was still unexplained. Whether this unexplained gap

[16]Korn/Ferry International and UCLA Anderson Graduate School of Management, *Decade of the Executive Woman*, 1993. Cited in Weeks (1993).

[17]See *Two Careers, One Marriage* on the Catalyst web site.

[18]Korn/Ferry International and UCLA Anderson Graduate School of Management, *Decade of the Executive Woman*, 1993. Cited in Weeks (1993).

was due to statistical or taste discrimination was unclear (Wood, Corcoran, and Courant 1993). As more women successfully combine career and family and as the attitudes of employers, co-workers, and husbands change discrimination is likely to fall. Certainly, perceived discrimination has fallen. In 1982 39 percent of female executives considered sexism the biggest obstacle to achieving success. By 1992 this figure was down to 27 percent.[19]

4 Conclusion

Since 1950 there has been an unprecedented increase in the participation of married women in paid labor in the United States. Between 1950 and 1998 their participation rates rose from 22 to 62 percent, with the largest increases between 1950 and 1980. Their increased participation depended in part upon contemporaneous changes in demand for the labor of married women because of the rise of the clerical sector. It also depended upon the labor supply responsiveness of different cohorts of women, a responsiveness that in turn was determined by cohorts' fertility, education, expectations, and social norms regarding work and family. Finally, the increase in women's labor force participation also depended upon the decline of institutionalized and overt discrimination.

The early rise in married women's participation rates coincided with their entry into the clerical sector and into part-time work. Although many women still disproportionately work part-time or in traditionally female jobs, women's entry into the clerical sector and part-time work has now slowed and the biggest change in women's work has been their entry into careers.

Women have made tremendous career strides within a generation. In 1960 only 7 percent of all lawyers and judges were women and 9 percent of all physicians. In 1970 these

[19]Korn/Ferry International and UCLA Anderson Graduate School of Management, *Decade of the Executive Woman*, 1993. Cited in Weeks (1993).

figures were still similar but by 1998 they were 29 and 26 percent, respectively.[20] But, despite their breakthroughs in the professions and in management, women are only slowly moving to the top. Women lawyers, physicians, and managers earn less than men. In 1999 women held only 3 percent of the top-earner spots in the Fortune 500. Nor are women currently well-positioned to break through to the top. In 1999 women corporate officers held only 28 percent of line jobs (posts with profit-and-loss or direct client responsibility) compared to 50 percent of men corporate officers.[21]

The difficulty of combining work and family has slowed women's move to the top. More women than men are willing to sacrifice their careers for time spent with children and those women who reach the top are disproportionately childless. This has led to calls for more family friendly policies, such as generous parental leave. But, an overly generous policy may raise the employment of women at the cost of lower relative wages and career advancement (Ruhm 1998). History suggests that changes in women's labor force experience can be frustatingly slow. Progress may have to wait for the entry of new cohorts of women, with different characteristics and expectations, into the labor market. It may also have to wait for the entry of new cohorts of men with different expectations regarding work and family into the labor market.

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