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Domestic Labor and the Earnings of Professionals.

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DOMESTIC LABOR AND
THE EARNINGS OF PROFESSIONALS

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in

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by

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ABSTRACT

This dissertation focuses on how time allocated to domestic responsibilities affects the earnings of professionals. Although the earnings gap between women and men has narrowed, women are paid less than their male counterparts and a substantial part of the gender earnings gap remains unexplained. Women's growing entry into the full-time labor force has created new challenges for working women and dual-earner families. Professionals may manage domestic responsibilities differently than nonprofessionals because they are likely to have jobs that offer higher pay and more autonomy. With fewer domestic demands placed on these households, we would expect to observe more gender equality in professionals' earnings than between women and men in the population as a whole. However, the earnings gap is largest between men and women with the highest levels of education. Using two waves of data from the National Survey of Families and Households, I examine how various domestic labor tasks including daily grind tasks, female- and male-type tasks, parent-child interaction activities, and elder care affect earnings. My study revealed expected and unexpected findings that taken together lack a convincing explanation. For example, as expected, professional women earned less than professional
men, net of controls. The results also show that in the late 1980s, performing daily grind tasks reduced both women's and men's earnings and these inflexible tasks explained an additional 18 percent of the gender gap in earnings. I found evidence that female- and male-type tasks affected earnings differently than daily grind tasks by either increasing or not affecting professionals' earnings. This finding is consistent with the idea that flexible tasks do not interfere with paid labor and thereby do not reduce earnings. However, what was unexpected was that female-type tasks actually increased earnings. Contrary to expectations, there was no evidence that domestic labor affected professionals' earnings five years later in the early 1990s, although a substantial gender gap in earnings remained. Explanations for why the domestic labor effects on earnings found in the late 1980s did not persist in the 1990s are not clear-cut. It appears that domestic labor inconsistently affects the earnings of professionals.
CHAPTER 1

INTRODUCTION

Overview

The status of women relative to men has improved significantly since the mid 20th century. Between 1967 and 1997, the proportion of women workers in the full-time, year-round, U.S. labor force grew from 29 to 40 percent (U.S. Census 1998a). Women are now slightly more likely than men to graduate from high school and enroll in college, and more women than men earn Bachelor’s and Master’s degrees (U.S. Census 1998b). One consequence of these trends is that the earnings gap between women and men has narrowed. In 1997, among full-time, year-round workers, women earned approximately 74 cents to every dollar that men earned (compared to 57 cents in 1973) (U.S. Census 1998a).

Although these developments are certainly signs of progress, they have also created new challenges for working women and dual-earner families. Among these challenges is how couples negotiate the division of household labor. In theory, women’s increasing labor force participation has encouraged a reorganization of the household division of labor. In practice, however, employed women continue to be largely responsible for home and family (Berk 1985; Shelton...
and John 1996; Spain and Bianchi 1996; South and Spitze 1994).

Interestingly, professional workers are apt to manage domestic responsibilities differently than non professional workers. Because professionals have jobs that offer higher pay and more autonomy than other workers, they are more likely to employ the services of others to do domestic labor tasks in their homes (DeStefano and Colasanto 1990; Hochschild 1989; Oropesa 1993). As a result, we would expect more equitable earnings between professional women and men than between women and men in the population as a whole.

Unfortunately, however, this is not the case. Despite their progress, women are paid less than their male counterparts and a substantial part of the pay gap between men and women remains unexplained. The earnings gap is largest between women and men with the highest levels of education. For example, in 1990 among full-time, year-round workers, women with advanced graduate degrees earned only 64 percent of comparably educated men’s earnings (Roos and Gatta 1999:Table 6.4). Thus, despite the fact that advanced education has historically been considered the key to higher earnings, educational equity does not insure equality in the earnings of women and men.
Prior studies show that employed women continue to perform a greater proportion of domestic labor than men (Berk 1985; Greenstein 1996b; Ross 1987; Shelton 1990; Shelton and Firestone 1988, 1989; South and Spitze 1994). Research focusing on all types of workers have found that time spent doing domestic labor reduced earnings for both women and men (Coverman 1983; Hersch and Stratton 1997; Noonan 1999). In addition, studies show that the earnings penalty for performing domestic labor was stronger for women than men (Hersch and Stratton 1994, 1997; Hersch 1991a; Shelton and Firestone 1988, 1989). Scholars have proposed that domestic labor reduces earnings (1) by diminishing workers' energy and effort on the job; (2) by constraining career opportunities; and (3) because there are perceptions that employees with domestic labor responsibilities are less committed to their jobs. On the whole, these findings suggest that time devoted to domestic labor may help explain an additional part of the gap between professional men's and women's earnings.

**General Research Objectives**

In this dissertation, I focus on how time allocated to domestic responsibilities, including time spent on household maintenance tasks, parent-child interaction activities, and elder care, affects the earnings of
professionals. Of the few existing studies on the topic, all focused on the effects of domestic labor on earnings without making any distinction by worker's occupation (Coverman 1983; Hersch and Stratton 1994, 1997; Noonan 1999; Shelton and Firestone 1988, 1989) and only Noonan (1999) examined differences by types of tasks. In my study, I focus on men and women in the professions. These occupations are unique in that they offer higher pay and more autonomy than other jobs. I also examine a variety of domestic labor tasks. To my knowledge, no study has addressed how domestic labor affects the earnings of professional women and men, and how the effects differ for various dimensions of domestic labor.

In this dissertation, I develop and test a series of hypotheses focusing on the effects of domestic labor on the earnings of professionals. I expect that time spent doing domestic labor reduces the earnings of professional men and women. In addition, I argue that the effects on earnings of domestic labor differ by type of task, in part because some are performed on a regular basis, whereas others are carried out whenever it is convenient. Finally, I expect that domestic labor will explain an additional part of the gap between professional men's and women's earnings, and that domestic labor will have short and long term effects on earnings.
Organization of the Dissertation

In Chapter 2, I begin by defining professions and show how the participation of men and women in these occupations has changed over time. Then I provide an overview of the studies on domestic labor and its consequences for workers. This review suggests why I expect that the relationship between earnings and domestic labor differs for professionals and non-professionals. I finish the chapter with a review of what we know about the effects of domestic labor on earnings.

In Chapter 3, I describe how the gender earnings gap has changed over time. Then, I present a review of the literature showing that multiple factors help explain earnings differences between women and men. I discuss how the characteristics of workers affect their earnings and describe various determinants that have been identified as explanatory factors. Early literature on the gender earnings gap examined differences in worker's attributes and job characteristics to explain differences in the earnings of women and men. In general, these studies found that sex differences in human capital, occupation, and industrial location explained about fifty percent of the gender earnings gap (England 1992). This left almost one-half of the difference in women's and men's earnings...
unexplained. I argue that including dimensions of domestic labor will explain an additional part of the gender earnings gap.

I present my conceptual framework and state my hypotheses for studying the effects of domestic labor on professionals' earnings in Chapter 4. In Chapter 5, I describe the data, the variables, and methods used in the analysis. I present results from my statistical analyses in Chapters 6 and 7, and a final discussion of the results and conclusions appear in Chapter 8.

End Notes

1. Note that various reports of the earnings gap document different dollar amounts. These differences relate to (1) whether the median or the mean is used in the calculation, and (2) what restrictions on the age and work status of workers is used.
CHAPTER 2

PROFESSIONALS AND DOMESTIC LABOR

In this dissertation, I focus on the gender earnings gap between professional women and men. I am particularly interested in these workers for several reasons. First, there is evidence that the gender gap in pay is largest between women and men with the highest levels of education (Farley 1996; Roos and Gatta 1999:Table 6.4). Second, over time, professionals have dramatically increased in number, especially the number of women. Third, the characteristics of professional jobs differ in important ways from others (e.g., more autonomy and higher pay), and these differences may allow easier integration of work and family demands.

I begin this chapter with a brief overview of professions and how these occupations have changed over time. Then, I make a transition to the literature on domestic labor. The topic of housework has received considerable attention in family sociology, especially the effects of the division of household labor on various social psychological outcomes (e.g., marital well-being and psychological well-being). By reviewing this body of literature, I present what is known about the effects of domestic labor and show why I expect it affects the earnings of professional workers.
The Professions and Professionals

Professional workers are considered experts in terms of technical skill and theoretical knowledge in their field, and they receive extensive formal educational training. As a result, they have been defined as a "somewhat exclusive groups of individuals applying somewhat abstract knowledge to particular cases" (Abbott 1988:318). Professionals regulate their occupations by licensing workers, forming associations, producing ethics codes, establishing schools, and maintaining professional journals. In addition, workers in professions are characterized as sensitive to issues of autonomy and self-direction, have a rationalist outlook on problem solving, and expect a middle-class or higher status of life (Brint 1994).

Originally, professionals maintained their status in society by emphasizing an orientation to social service rather than self-interest. While this focus still exists for some professions, Brint (1994) argues that in the latter half of the 20th century professions shifted away from community service to emphasize expert knowledge. This has resulted in higher economic rewards for those employed in these occupations.
Professions first developed in the 19th century and have expanded in number and size throughout the last century (Abbott 1988). Specifically, the proportion of professional workers to all other workers in the labor force has grown from 1 to 12 percent in the last fifty years (Brint 1994:3). This occurred as the economy shifted from goods to service producing industries and increased the demand for educated workers, especially women workers (Kasarda 1995). During the 1980s, increased demand for occupations that have been traditionally dominated by women (such as health care, social services, and education) contributed more to women’s professional employment than to men’s. Specifically, in the professional services industry group (i.e., educational, social, and other professional services) 7.8 million additional jobs were created between 1979 and 1989 with women filling 5.6 million and men filling 2.2 million (Wetzel 1995:75). The increased educational attainment and job experience of women qualified them for jobs that offered higher pay and good benefits (Bianchi 1995).

Figures 2.1 and 2.2 illustrate the growth of professional workers over the last half of the 20th century. Figure 2.1 shows that the proportion of professional workers to all workers has increased steadily
since 1950. The upward trend occurred for both men and women, but especially for women beginning in 1970.

Figure 2.2 shows the proportion of men and women professionals. Through 1970, men dominated professional occupations. However, in the early 1980s, the proportion of women professionals rose. On the whole, the dramatic increase in women’s professional employment has been striking. By 1997, there were slightly more women than men among professionals.\(^2\) This is a sure sign of progress given that professional occupations in general offer higher pay than non-professional occupations, and women’s earnings have improved by moving into professional occupations (Bianchi 1995; Cooney and Uhlenberg 1991; Farley 1996; Wetzel 1995).

In sum, the growth of professions since 1950 has changed workers’ occupational distribution, especially women’s. However, although improvement in occupational status should be accompanied by greater equality (Bianchi 1995), professional women still earn less than comparable men. Moreover, as the following section shows, employed women continue to be the primary caretakers of family and home.
Figure 2.1: Professionals as a Percentage of all Full-Time, Year-Round Employed Workers

Figure 2.2: Percentage of Full-Time, Year-Round Professionals by Sex
Domestic Labor

Despite changes in their labor force participation, employed women continue to be largely responsible for the home and family (Barrett 1987; Berk 1985; Bird 1999; Kamo 1988, 1991; Greenstein 1996b; Ross 1987; Shelton 1990; Shelton and John 1996; Spain and Bianchi 1996; South and Spitze 1994). In the following sections, I describe why domestic labor became an important research topic, the general frameworks that have guided studies on domestic labor, and review findings about how domestic labor affects workers. These studies show that despite women's increased labor force participation, the division of labor in the home reflects traditional roles with wives performing a greater proportion of domestic labor than husbands. I conclude this chapter by reviewing what is known about the effects of domestic labor on professional workers.

Domestic Labor as a Research Topic

The topic of domestic labor has only received scholarly attention as an issue of critical concern since the early 1970s. From the Industrial Revolution through the 1950s, the idea of separate spheres for men and women defined men as breadwinners and women as homemakers (Reskin and Padavic 1994). Early functionalist research on the
work-family connection argued that this arrangement was appropriate because it served to minimize competition between men and women, ensure cohesive families, and maintain the power structure in the family (see Bielby 1992 for review; Parsons and Bales 1955). As women increasingly entered the full-time workforce and took on the breadwinner role, the separation of spheres blurred and managing work and family demands became an issue, especially for women.

The American family has been described as a greedy institution that makes demands of women (Coser and Rokoff 1971). Working women are expected to commit to their jobs as men do, but they are also expected to accept and maintain the cultural mandate that places family as women’s top priority. Domestic labor is especially worthy of study... “because it shapes and orders the constraints, opportunities, and costs of everyday existence” (Berk 1980:17). Thus, due to changes in women’s labor force participation domestic labor became an important topic of research that continues to be studied today.

**Conceptual Frameworks for Studying Household Labor**

There are four major conceptual approaches have been used to explain inequality in the division of household labor: (1) relative resource-power, (2) economic dependency, (3) time availability, and (4) gender
ideologies (for review and critique see Berk 1985 and Shelton and John 1996; Greenstein 1996a; South and Spitze 1994). Although these approaches have a common grounding in exchange theory, each emphasizes something unique. First, the relative resource-power model assumes that domestic labor is not desirable productive work. The division of household labor results from negotiation between spouses based on each individual's resources and power. Whoever has more resources (e.g., education, earnings) has more power and does less domestic labor. Because men have earned more than women, this model is useful for explaining why they do less domestic labor. Research by Perry-Jenkins and Folk (1994) supported this model by showing that women's job status and earnings affected her power in the household which then was reflected in the division of household labor.

Linked to the relative resource-power viewpoint is the economic dependency model. It assumes economic relations in the household and that women exchange domestic labor for economic support. Married women who are economically dependent on their husbands may lack power and be more likely to do much of the domestic labor (Brines 1994). They are also likely to perceive the division of labor in their households as fair (Lennon and Rosenfield 1994). However,
for men, Brines (1994) found no support for the dependency model because husbands who depended on the income of their wives did less housework than other men.

The time availability perspective is based on Becker’s (1985) work. He argues that whomever expends greater effort and time at paid work also expends less at domestic labor. Because women have traditionally been responsible for domestic labor, they subsequently expend less effort on market work, acquire less work experience, and seek less demanding jobs. This logic has been scrutinized recently given that women’s labor market hours increasingly match men’s, and women exert the same effort at work as men (Bielby and Bielby 1988; England 1992).

Finally, the gender ideology approach focuses on how gender-linked marital and family roles affect the division of household labor (Greenstein 1996a). Those with traditional gender role ideologies expect women will do the majority of domestic labor tasks, of which most will be segregated by gender (i.e., women clean and cook, and men take care of the car and mow the lawn). In contrast, individuals with egalitarian gender role ideologies tend to share domestic labor and there is less gender segregation of tasks (Blair and Lichter 1991; Ross 1987). Amato and Booth (1995) report an increase in egalitarian attitudes from the early to late 1980s, and that women were more
egalitarian than men. Although there are some mixed findings, the general pattern shows that those with egalitarian ideologies are more dissatisfied by inequality in the division of household labor. In addition, studies show that men’s gender ideology is more important than women’s as a determinant of the division of household labor (Greenstein 1996a; Greenstein 1996b; Hochschild 1989; Kamo 1988; Ross 1987).

**A Review of Research Findings on Domestic Labor**

**The Division of Household Labor**

Scholars of marriage and the family have conducted a great deal of research on inequality in the division of household labor and its consequences. Studies shows that the gender gap in domestic labor time is widest among married couples, and men’s actual time spent on housework does not markedly differ whether they are married, never-married, or cohabiting (South and Spitze 1994; Shelton 1990). Wives do about two times more household labor than husbands (e.g., women do about 36 hours compared to about 16 hours for men) (Bird 1999; Greenstein 1996b; South and Spitze 1994). Although the number of hours employed reduces women’s time spent in domestic labor, they continue to do the majority of domestic labor (Barrett 1987; Berk 1985; Kamo 1988, 1991; Ross 1987; Shelton 1990; Shelton and
Men with employed wives increase their domestic labor time compared to men with wives not working for pay, but only by one to two hours per week (Berk 1985). Studies show that even wives who earn more and work more hours than their husbands spend significantly more time on domestic labor (Hersch and Stratton 1994; Ross 1987).

Over time, there has been a modest decline in women’s time spent on domestic labor. However, this is not due to advances in time-saving domestic labor devices but rather to women’s increased labor force participation and having fewer children (Cowan 1983; Robinson 1980). Moreover, studies suggest that men do less domestic labor and child care than women because of the social pressures on both sexes mandating what roles are appropriate. Structural constraints such as rigid work schedules and an earnings gap favoring men, also contribute to gender differences in domestic labor (Greenstein 1996b; Presser 1994).

Satisfaction with the division of household labor increases marital quality for both husbands and wives (Amato and Booth 1995; Hochschild 1989; Perry-Jenkins and Folk 1994; Suitor 1991). Over the life course, Suitor (1991) found women’s, but not men’s, marital satisfaction followed a U-shaped curve. For women, marital satisfaction was lowest during early child-rearing stages that required more domestic labor, and highest during pre- and post
child-rearing stages that required less effort. Studies also show that women’s greater likelihood of depression, compared to men, is explained in part by the inequitable division of household labor (Bird 1999; Glass and Fujimoto 1994).

**Types of Household Maintenance Tasks**

Studies have shown that domestic labor tasks are highly segregated by gender (Blair and Lichter 1991; Greenstein 1996a; Lennon and Rosenfield 1994; Presser 1994). Women typically spend more time than men doing tasks traditionally considered women’s work such as cooking, cleaning, and washing, whereas men typically do automobile maintenance, household repair, and lawn maintenance. Lennon and Rosenfield (1994) report women’s tasks consume more time and having less flexibility than men’s tasks. They found that both men and women believed that they are responsible for more than one-half of their gender-type tasks.

Prior studies of domestic labor have grouped household tasks into three categories: (1) female tasks, (2) male tasks, and (3) neutral tasks (Greenstein 1996a; Lennon and Rosenfield 1994; Noonan 1999; Perry-Jenkins and Folk 1994; Presser 1994). In a study of dual-earner couples, Presser (1994) reported that wives performed about 19 more
hours of female tasks and two more hours of neutral tasks than their husbands, whereas husbands spent about six more hours than their wives doing male tasks (Presser 1999:353). Blair and Lichter (1991) calculated an index of dissimilarity in household maintenance tasks using data from the 1987-88 National Survey of Families and Households (NSFH). They reported that men would have to reallocate over 60 percent of their domestic labor to other tasks to make the gender division of household labor equal (Blair and Lichter 1991:109).

**Child Care**

Prior studies also suggest that women spend more time in child care than men (Berk 1985; Bond, Galinsky, and Swanberg 1998; Cowan 1983; Denham et al., 1991; DeStefano and Colasanto 1990; Hersch and Stratton 1994; Kamo 1991; Moorehouse 1991; Pleck 1993; Rexroat and Shehan 1987; Yogev 1981). Although having children under age 12 leads to a weekly increase of about nine hours in husband’s domestic labor time, wives continued to do over twice as much, spending about 20 hours per week caring for their children (Hersch and Stratton 1994). With each additional child, women reported spending about four more hours on domestic labor and men reported less than two additional hours (Kamo 1991:211). Rexroat and Shehan’s (1987) study showed that
when children under 13 years old are part of the household, women do considerably more housework and about 3-4 times more child care than husbands (Rexroat and Shehan 1987: 745).

Employed mothers also continue to participate in child-related activities ranging from PTA to Little League (Denham et. al., 1991; Moorehouse 1991). Furthermore, women are more likely than men to take time off work to care for a sick child. DeStefano and Colasanto (1990) reported that 9 out of 10 working mothers rearranged their work schedule when a child was sick, compared to only one in 10 working fathers.

Other studies suggest that men do take short temporary leaves when children are born, and fathers miss more work, or are late for work, more often than men without children (Pleck 1993). Fagot and Leinbach (1995) report that gender role attitudes affect father’s level of interaction with their children. For example, egalitarian fathers interacted with children as frequently as their wives, and twice as much as traditional fathers did with their children.

Research on parent-child interaction suggests that it is important for children’s development and educational aspirations to have parents involved with the child’s school and teachers, helping with homework, and talking with children about school matters (Carter and Wojtkiewicz 20
2000; Fehrmann, Keith, and Reimers 1987; Otto and Atkinson 1997; Schneider and Coleman 1993; Snow et al., 1991). For example, research shows that parental involvement positively affected the grades and mathematics test scores of adolescent students (Muller 1993, 1998). Furthermore, having parents involved with children’s education decreased the odds of a student dropping out of high school (Teachman, Paasch, and Carver 1996), had positive effects on the grades of high school seniors, and increased the amount of time students devoted to homework (Fehrmann et al., 1987). Useem’s (1992) study found that parental involvement also contributed to successful placement of students in higher ability mathematics groups.

Elder Care

Women have traditionally been the caregivers of elder relatives and friends (Horowitz 1985). In the past, because women were less likely than men to work for pay, caretaking responsibilities did not interfere with their paid labor. However, women’s increased labor force participation and an aging U.S. population has increased the numbers of persons who are employed but who also provide assistance to an ill or disabled elderly person (Allen 1993; Bond et al., 1998; Doress-Worters 1994; Horowitz 1985; U.S. Department of Labor 1998). In 1996, approximately 25 percent of U.S. wage
and salary workers reported having elder care responsibilities (Bond et al., 1998).

Most elderly do not live in nursing homes, and the number who do has decreased since 1985. Elderly may live with the caretaker or in their own homes (U.S. Department of Labor 1998). Elder care covers all types of assistance given to an elderly person ranging from helping them with bathing and eating, to driving the person to appointments and doing their grocery shopping.

Studies of elder care measure this type of responsibility in various ways (see Doress-Worters 1999 for review). Some research focuses on the type and amount of elder care using measures of frequency for doing particular caregiving activities (Gignac, Kelloway, and Gottlieb 1996; Horowitz 1985; U.S. Department of Labor 1998), or the number of hours spent doing elder care (Bond et al., 1998). Whereas other studies examine the effects of elder care using information on primary caregivers (Suitor and Pillemer 1992, 1994; Watson and Mears 1996).

Currently, women continue to be more likely than men to care for an elderly relative (Allen 1993; Bond et al., 1998; Gignac et al., 1996; Horowitz 1985; U.S. Department of Labor 1998). About 80 percent of elder care is provided by relatives (Doress-Worters 1994:601). A report by the
U.S. Department of Labor (1998) showed that 72 percent of those doing elder care in 1997 were women, and 64 percent were working full- or part-time. Many persons with elder care responsibilities are also caring for their own children at the same time. The "sandwich generation" refers to persons who in their late 30 to 50s have both child and elder care responsibilities (Zal 1992).

In 1997, about half of employed caregivers stated that elder care affected their jobs. They reported being late for work, taking time off from their job, and working fewer hours to accommodate elder care responsibilities (U.S. Department of Labor 1998). Research shows that for both women and men, doing elder care increased absenteeism. For women, elder care also increased their role conflict between work and family and raised their job dissatisfaction (Gignac et al., 1996). Watson and Mears (1996) interviewed women caregivers who reported that their elder care responsibilities had lead them to decline careers opportunities, cut back on hours worked, change jobs, and forgo educational and training pursuits.

In summary, this review reveals that women, despite their employment status, perform more household maintenance tasks, child care, and elder care than men. Furthermore, men and women perform tasks that are traditionally gender
appropriate. In the next section, I specifically address how domestic labor affects professionals.

**Domestic Labor and Professionals**

Included in Coser and Rokoff’s (1971) list of greedy institutions were professions. The authors argued that women’s participation in high status occupations is hindered by the role conflict that women face. Professions as predominately men’s occupations have been organized around the lives that men lead. That is, these occupations do not expect family demands, such as domestic labor and child care, to interfere with work (Kaufman 1999). They often require long work hours, taking work home, doing business-related entertaining in the evenings and on weekends, and traveling.

These kinds of activities create conflicts for those attempting to accommodate work and family demands, especially women because they are largely responsible for domestic labor. Professional workers who refuse to meet these expectations are likely seen as less committed employees which may decrease chances for promotions and raises (Chafetz 1997). Also, as Hochschild’s (1989) study shows, domestic labor takes time from work-related socializing, “down time,” and leisure—all of which are
crucial for refueling the creativity and energy needed for many professional jobs.

Over the last two decades, female participation in professional occupations has grown dramatically. A few studies examined differences in domestic labor by class or occupation. For example, Presser (1994) reported that women professionals and managers do less domestic labor than women who are non professionals. This reduced the gender difference in domestic labor among professional women and men, but the decrease was due to professional wife's doing less domestic labor, not due to professional men doing more domestic labor.

Other studies found that as education increased, time in housework decreased (Brines 1994; Rexroat and Shehan 1987). A report from the Gallup Poll indicated that the likelihood of hiring domestic labor help (i.e., a cleaning person) increased with household income. Although 14 percent of all Americans hire others to help with domestic labor, about 29 percent of those earning annual salaries of $50,000 or more reported hiring domestic labor help (DeStefano and Colasanto 1990:29).

Satisfaction and perceptions of fairness with the division of household labor also differ by class. Perry-Jenkins and Folk (1994) found that middle-class wives who perceived the division of household labor as unfair were
more likely than working class wives to report marital conflict. Katchadourian and Boli’s (1994) study of elite couples found that the higher the wife’s income, the more egalitarian the division of household labor. Furthermore, women’s satisfaction with the division of household labor was eased by hiring outside help and about forty percent of the sample employed household help (although it was not stated the frequency or regularity of the help) (p. 213).

Using data from University women in the early 1980s, Yogev (1981) reported that professional women held the traditional view that housework and child care was largely their responsibility. Although they viewed their husbands as equals, professional women expected an unequal division of household labor (and they reported doing about three times more domestic labor than their husbands). Biernat and Wortman’s (1991) study of married women professionals with young children reported similar findings and concluded that equality in the work world did not produce gender equity in the division of household labor and child care.

On the whole, these studies show that professionals differ from non professionals in time spent, equality in the division of household labor, and beliefs about fairness in the division of household labor. Although professional jobs may offer some flexibility not found in other occupations, there are penalties for being less committed
to work. In the following section, I present the studies that have specifically examined the relationship between earnings and domestic labor.

**The Relationship between Domestic Labor and Earnings**

Although human capital, industrial placement, and occupational sex segregation account for part of the difference in the earnings of women and men, almost half of the difference remains unexplained (England 1992). Some scholars have argued that differences in the domestic roles of women and men may explain part of the gender earnings gap. Of the few existing studies, most report that domestic labor investments reduce women's earnings, but there is mixed evidence for men's earnings. In addition, several interesting differences were uncovered regarding the class of worker, their characteristics, and the type of housework task.

In a study of white married workers, Coverman (1983) found that domestic labor as measured by housework and child care reduced the earnings of both men and women, but the effect was much stronger for women. However, when the sample was disaggregated by class, the negative effect of housework on earnings was not significant for working-class women, yet it remained strong and reduced the earnings of non-working-class women. The findings suggested that
housework was detrimental to women who had greater earnings potential. For men, the effects were opposite. Only working-class men's earnings were reduced by time spent doing domestic labor, and the earnings of non-working-class men were not affected. This study is one of the few that attempts to understand class differences in the effects of domestic labor on earnings. Unfortunately, it relies on a dichotomous class categorization that fails to provide a distinction between professional and non-professional workers.

Using a sample of white married workers, Shelton and Firestone (1988) found that time spent on housework and child care reduced women's, but not men's, earnings. After accounting for differences in worker's characteristics (e.g., work experience, educational attainment, occupation, and industry), they found that gender differences in domestic labor was a contributing factor to the earnings gap. Hersch (1991a) used data collected in 1986 from non professional workers in 18 companies located in Eugene, Oregon and also found that housework significantly decreased the earnings of women, but not men. Note, however, that in this study, adding information about domestic labor did not reduce the unexplained variance of the gender earnings gap.
Using 1987 data from the Panel Study of Income Dynamics (including married and single workers with and without children) Hersch (1991b) found women spent more time in domestic labor than men, and housework decreased only women’s earnings. From these findings, she suggested that women’s earnings are reduced by housework because employers often place women with family responsibilities on the “mommy-track,” resulting in fewer opportunities for promotions and raises. She also suggested that the nonsignificant finding for housework on men’s earnings may exist because (1) men’s housework tasks do not interfere with paid labor, or (2) men’s time spent in domestic labor is minimal and thus does not reach the point of depressing their earnings.

However, in a recent study, Hersch and Stratton (1997) reported that domestic labor decreased the earnings of both men and women, and explained 10 percent of the gender difference in earnings (p. 301). Furthermore, the negative effect of domestic labor on earnings was twice as large for women than men. The gender difference in the effect was due to the amount of time spent doing housework. They found that performing less than 10 hours of domestic labor did not affect earnings, whereas 10 or more hours of domestic labor reduced earnings. Noonan (1999) reported that the larger negative effect of housework on women’s earnings was
explained by the type of housework chore. For both women and men, female housework chores decreased earnings, whereas male and neutral housework chores did not affect earnings.

As stated earlier, domestic labor often involves child care. Using a pooled data from the National Longitudinal Survey of Young Women (NLSYW) collected from 1968 to 1988, Waldfogel (1997) focused on how children affect women's earnings. After controlling for labor market experience, part-time work, and human capital, Waldfogel found that having children reduced women's earnings. Women with one child received four percent less, and those with two or more children received 12 percent less, than women without children (p. 452). Furthermore, the negative effect of having children on earnings increased with women's education level, suggesting that highly educated mothers are the most penalized. In another study, Waldfogel (1999) reports that at age 21, women with children earned 82 percent of men's earnings and childless women earned 86 percent. By age 30, the earnings of women with children dropped to 70 percent of men's earnings, compared to childless women's earnings increasing to 90 percent of men's earnings (p. 32).

This body of research suggests that (1) domestic responsibilities may be a key part of gender differences in
earnings; and (2) that time spent in domestic labor, as well as actual housework tasks, contribute to the explanation of why women earn less than men. However, prior studies tell us very little about how domestic labor affects different groups of workers. Only Coverman’s (1983) study investigated differences by class (using broad categories of working-class versus non-working-class) and she found significant differences. It is reasonable to think that professionals are expected to have a career commitment and perhaps devote more off-time hours to their jobs. Consequently, they may be penalized for any time spent performing domestic responsibilities. Therefore, untangling the effects of domestic responsibilities on the earnings of professional workers will help us understand gender differences in their earnings.

Conclusion

In this chapter I described the rise of professions and women’s increasing involvement in these occupations. Then, to link the relationship between family and work, I discussed the ways that domestic labor differs for women and men, and concluded with findings on the relationship between domestic labor and earnings. Clearly, the demands of work and family are difficult to manage, and I argue that examination of how domestic labor affects the earnings
of professional workers will add to a growing body of literature on the relationship between work and family. The gender earnings gap has a long history; however, there has been progress over time toward gender equality in pay. In the next chapter I review studies examining the numerous factors determining workers' earnings.

**End Notes**

1. The occupation and industry classification system was revised by the Census Bureau in 1980, and the changes affect only the comparison between 1970 and 1980 (U.S. Bureau of the Census 1989). Because my examination focuses on major occupation groups, the changes are not a problem here. Figures 2.1 and 2.2 show that the general trends established prior to 1970 continued after 1980.

2. It should be noted however, that professional occupations are sex segregated (this will be discussed further in Chapter 3). This means that professional women and men are generally in different types of jobs and typically these jobs have different pay scales (Roos and Gatta 1999).
CHAPTER 3

THE GENDER EARNINGS GAP

Early Origins and Developments

Comparing the earnings of men and women reveals that no matter how earnings are measured, women earn less than men. Using a ratio of women’s to men’s earnings, if the earnings of women and men were equal, the value of the ratio would be one. However, throughout U.S. history, the earnings ratio has been far below equality (Goldin 1990). Part of the difference in women’s and men’s earnings is explained by various factors on which workers differ. However, the part of the difference in earnings that cannot be accounted for by group differences in attributes such as job experience, education, occupation, and number of hours worked is referred to as earnings discrimination (England 1992; Goldin 1990). In this chapter, I describe how women’s earnings have compared with men’s over time and show how earnings discrimination began as women increasingly acquired education and job experience.

Historically, gender differences in earnings were largely due to differences in women’s and men’s characteristics. For example, in the late 1800s, women in the manufacturing sector earned 56 percent of men’s earnings and all but 20 percent of the difference in
earnings was accounted for by differences in the attributes of workers, particularly job experience (Goldin 1990:105). In the early 20th century, as the clerical sector expanded rapidly, women filled many of these new jobs. Women’s labor force participation increased as they delayed marriage and child bearing (Bianchi 1995). As mechanization made skilled workers less mandatory, more and more young women were hired directly from high school into clerical jobs with no opportunity for mobility. By 1930 women clerical workers earned 71 percent of men’s earnings (Goldin 1990:107).

Occupational sex segregation in the clerical sector was an important determinant of earnings as both women and men were barred from certain jobs. For example, men were excluded from dead-end jobs that lacked advancement opportunities like typist and switchboard operators. Whereas women were excluded from a variety of jobs that prepared workers for advancement, including department head, executive, accounting, and some low-skill entry-level jobs that were considered preparatory jobs. Part of the gender difference in clerical earnings may be explained by the fact that men were placed on, and promoted to, higher paying tracks than were women. This practice started the movement of the male labor force into high paying professional jobs that continued into the 1970s (Goldin 1990).
The labor force participation rates of single women rose steadily from 1890 to 1960 (Goldin 1990). However, in the 1950s and 1960s as an expanding economy demanded more workers, the labor force participation rates of married and educated women grew dramatically (Oppenheimer 1970). This change in women’s labor force participation was most likely produced by cohort effects rather than shifting social attitudes about married women working outside the home. Specifically, employers hired married women because the supply of young single women had dwindled due to women’s improved educational opportunities and increased marriage rates. These trends, combined with the changing nature of jobs such as the rise of white-collar work, increased the labor force participation of all women (Evans 1987).

White-collar work narrowed the gender gap in earnings and increased women’s participation, but it also produced many barriers to jobs and promotions. Historically, earnings equality between the sexes was hindered by perceptions that women workers were young workers who were marginal and transient employees. These beliefs resulted in the passage of protective legislation (such as restricting the number of hours worked women worked and regulating their work conditions) that subsequently hindered efforts toward gender equality in jobs (Goldin 1990).
Since the late 1960s, the largest increase in labor force participation occurred among married women in their 20s and 30s who were middle-class, well-educated, and most likely to be raising children (Barrett 1987). In addition, more mothers began entering the labor force because rising rates of divorce and single motherhood made some women largely responsible for supporting their families (England 1992). In 1960, about 18 percent of married women with children under six years old were in the labor force. By 1970, this rose to about 30 percent, then to about 45 percent by 1980, and by 1997, almost 64 percent of married mothers with young children were in the labor force (U.S. Bureau of the Census 1998a).

Despite growth in women's labor force participation since 1960, the earnings gap between women and men remained unchanged through 1980. During this time, women earned about 59 percent of men's earnings (England 1992:23). This well-known statistic became the symbol of inequality between women and men during the feminist movement's resurgence in the 1970s (Goldin 1990). The 1980s, however, witnessed a dramatic rise in women's pay relative to men's and by the end of the decade women earned 68 percent of men's earnings (England 1992:24). Declining labor market discrimination against women, growth in the relative quality of women's labor, and their increased participation
in managerial, professional, and technical work were all partial explanations (Sorensen 1991). In addition, the economic shift in the United States from goods producing to services affected men's jobs more than women's and this contributed to a rise in pay equity between the sexes (Lorence 1991).

In contrast, research by Bernhardt, Morris, and Handcock (1995) suggested that prior studies overstated the progress of women relative to men. They concluded that earnings inequality between men and women did not change much between 1967 and 1987. Despite women's increased educational attainment and job experience, most were concentrated in the lower end of the men's earnings distribution. In 1987, 80 percent of women earned less than men's median earnings, and less than two percent of women earned the same earnings as men in the highest 10 percent of the men's distribution. Therefore, the authors show that most of the economic progress accomplished by women occurred at the bottom of the earnings distribution.

A distinct characteristic about the gender earnings gap is that it differs by age. Although young women start their careers earning about the same as young men, women's earnings relative to men's decline with age (Goldin 1990; Marini 1989). For example, in 1990, comparing women's and men's median annual earnings, the gender gap in pay for
those aged 16-24 was 87 percent, among those aged 35-39 it was 67 percent, and among those aged 50-54 the difference increased to 58 percent (Roos and Gatta 1999:Table 6.3). In part, this is due to job experience differences between men and women. Older women are likely to have experienced periods out of the labor force for child bearing (England 1992).

Recent changes continue the trends observed earlier: rising labor force participation of women and narrowing of the gender earnings gap. By 1994, 75 percent of women ages 25-54 were in the labor force compared to only 37 percent in 1950. In 1996, 59 percent of all women were working for pay producing a labor force that was almost 50 percent women (Spain and Bianchi 1996:194). The female-to-male earnings ratio also narrowed and in the early 1990s, among full-time, year-round workers, the median annual earnings of women were 71 percent of what comparable men earned (Spain and Bianchi 1996:Table 5.1). The median annual earnings ratio for all workers reached an all-time high in 1993, when it was 77 percent. But, by 1997, the ratio had dropped slightly to 75 percent suggesting a slowdown or stagnation in the progress toward earnings equality (Roos and Gatta 1999:96).

In part, the slowdown was due to the fact that men continued to reap greater returns for their education
compared to women. For example, in 1980, a college educated woman aged 25-34 who worked full-time, year-round, earned less than a man with a high school degree. In 1990, among full-time, year-round workers aged 35-55, a woman with a college education earned considerably less than a similarly educated man ($32,000 compared $51,000) (Spain and Bianchi 1996:Table 5.6).  

In sum, this overview of the origin and developments of the gender earnings gap shows that the issue of earnings inequality between women and men has a long history in the United States. Although there has been considerable progress in narrowing the earnings gap, substantial inequality exists, especially among the highly educated. Thus far in this chapter, I have discussed changes in women’s labor force participation and the gender earnings gap to illustrate how the two operated together, although not always in the expected pattern. Next, I will review determinants of earnings identified in prior studies and reveal several remaining gaps in our knowledge about gender earnings differences.

**Determinants of the Gender Earnings Gap: A Review**

In this section, I review determinants of the gender earnings gap discussed in prior research. From this literature review, we see that multiple factors help
explain earnings differences between women and men. These explanatory factors are discussed in terms of choices versus constraints. For example, differences in the personal attributes and job characteristics of workers are generally considered to originate in the choices of individual workers. In contrast, structural factors serve to constrain worker's earnings. Overall, the following review is intended to identify the important choice/constraint determinants from earlier studies, and to reveal limitations in our knowledge about determinants of earnings.

**Choices**

**Human Capital Theory**

Early studies of earnings inequality drew on neoclassical human capital theory. According to this view, economic outcomes of individuals are due to their choices about investing in human capital, such as education, skill, and job experience (Becker 1985). Because employment relations and production are efficient, any discrimination that exists in the market is due to imperfect cultural values, such as racism and sexism that interfere with the functioning of the market. Therefore, if an individual obtains needed skills, they may maximize their returns and freely compete in the open market for the best jobs and the
best pay (see Kalleberg and Sorenson 1979 for review). Early studies that relied on human capital variables to predict the earnings of women and men explained approximately 50 percent of the pay gap (Corcoran and Duncan 1979:18).

Similarly, status attainment research focuses on individuals' attributes and social background to explain inequality in education, occupational attainment, and earnings (Blau and Duncan 1967; Featherman and Hauser 1978; Jencks et al., 1972). Much like human capital theory, differences in earnings are due to individual differences in human capital (Beck, Horan, and Tolbert 1980). As a result, those workers with the most human capital get the best jobs.

**Education**

Educational attainment is a type of human capital that has increased among women since 1970. In fact, recent trends show that women are slightly more likely than men to graduate from high school and enroll in college (Bianchi 1995; Mare 1995). Table 3.1 documents this dramatic social change. As shown in columns 1 and 2, in the early 1970s, the percentage of Bachelor's and Master's degrees awarded were almost evenly split between men and women, while only five percent of first professional degrees, and 13 percent
of doctoral degrees were awarded to women (shown in columns 3 and 4). By 1980, an upward trend in women’s education was apparent, and by 1990 more women earned Bachelor’s and Master’s degrees than men. In addition, more women earned professional and doctoral degrees than in the past, particularly in traditionally male-dominated fields of architecture, business, law, medicine, and dentistry (Spain and Bianchi 1996; U.S. Department of Education 1997). In the last two columns of Table 1, we see that eight times more women earned professional degrees, and three times more women earned doctoral degrees, in 1995 compared to 1970.4

Table 3.1: Percent of Men and Women Earning Degrees, 1970-1995

<table>
<thead>
<tr>
<th>Year</th>
<th>Bachelor's Degrees (Men)</th>
<th>Bachelor's Degrees (Women)</th>
<th>Master's Degrees (Men)</th>
<th>Master's Degrees (Women)</th>
<th>First Professional Degrees (Men)</th>
<th>First Professional Degrees (Women)</th>
<th>Doctor's Degrees (Men)</th>
<th>Doctor's Degrees (Women)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969-70</td>
<td>57</td>
<td>43</td>
<td>60</td>
<td>40</td>
<td>95</td>
<td>5</td>
<td>87</td>
<td>13</td>
</tr>
<tr>
<td>1979-80</td>
<td>51</td>
<td>49</td>
<td>51</td>
<td>49</td>
<td>75</td>
<td>25</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>1989-90</td>
<td>47</td>
<td>53</td>
<td>47</td>
<td>53</td>
<td>62</td>
<td>38</td>
<td>64</td>
<td>36</td>
</tr>
<tr>
<td>1994-95</td>
<td>45</td>
<td>55</td>
<td>45</td>
<td>55</td>
<td>59</td>
<td>41</td>
<td>60</td>
<td>39</td>
</tr>
</tbody>
</table>


Increased levels of education have provided inroads into professional occupations that offer women higher pay; however, even in these occupations, a gender earnings gap still exists. In fact, the gender earnings gap is largest between men and women with the highest levels of education.
For example, in 1990, women with advanced graduate degrees earned only 64 percent of their male counterpart’s earnings, compared to 71 cents for all workers (Roos and Gatta 1999:Figure 6.1, Table 6.4; Spain and Bianchi 1996: Table 5.1). Although advanced education is necessary for women to make inroads into professional occupations (this will be discussed in more detail later), England (1992:28) notes that the amount of education explains “virtually none” of the gender earnings gap because the median education of women and men is similar.

**Job Experience**

One type of human capital that does explain gender earnings differences is job experience. Despite women’s increased labor force participation, men have more tenure on the job than do women, which explains part of the gender earnings gap. Although women are increasingly likely to work full-time, year-round, they are still more likely than men to have interrupted labor force participation (due in part to their choice to bear and raise children). However, less job experience may also be due to the fact that women are often in dead-end jobs, thereby increasing their odds of leaving jobs because of low-pay and lack of advancement opportunities (England 1992).
Wellington (1994) examined how changes in women's education and job experience affected the gender difference in earnings using data from 1976 and 1985. She found that employment history variables including the number of years employed full-time, years of training, and years out of the labor force since graduating, explained the largest portion of the gender earnings gap (even though more than 50 percent of the gap remained unexplained). Furthermore, job tenure factors gained importance over time and they explained more of the gap in 1989 than in 1976. This trend toward increased returns for job experience was detrimental to women's earnings because they continued to lag behind men in the number of years on the job.

**Other Individualistic Attributes**

Other worker characteristics that are viewed as choices include gender differences in effort, intentions for continuous employment, and turnover rates. Becker's (1985) work is most widely known for arguing that women are paid less than comparable men because they conserve energy for household labor. Specifically, because women are largely responsible for domestic labor at home, they expend less energy and effort on the job and subsequently they earn less than men. While it is true that women do the majority of domestic labor (Shelton and John 1996), there
is evidence showing that they work hard at paid labor rather than conserving energy for their second shift of domestic labor work. In fact, Bielby and Bielby (1988) report that on average, women report expending more effort on the job than do men. This suggests that if women are conserving energy, this practice does not reduce their level of work effort compared to men's.

Sex differences in worker's intended duration of labor force participation has also been part of an explanation for earnings differences between men and women. Because historically women have not been considered breadwinners, there is the notion that women are less likely than men to have expectations for continuous employment (Goldin 1990). Thus, they may choose jobs with higher starting earnings offering smaller returns to experience, rather than jobs that offer on-the-job training and high returns to experience. However, there is no evidence supporting this contention and research shows that most women have lower starting salaries than men (England et al., 1988).

Studies examining sex differences in turnover to explain earnings differences contain ambiguous findings, although they agree that workers in low-paying dead-end jobs are more likely to quit (see England'1992 for review). Before 1940, about 80 percent of all women dropped out of the labor force after marrying, and employers used this
knowledge to track women into dead-end jobs (Goldin 1990). Currently, however, women who do enter the labor force are likely to remain employed full-time, year-round (Bianchi 1995). Thus, among recent cohorts of workers there are no longer distinct gender differences in the tendency to leave the labor force and consequently turnover has not helped to explain the contemporary gender earnings gap.

Men and women hold different types of jobs with characteristics that have been used as justification for the gender difference in earnings. For example, some argue that jobs dominated by men pay higher earnings because they require more skill, are physically demanding, and involve more onerous working conditions than jobs typically held by women. However, studies examining the effects of physical difficulties and skill requirements found no difference in rewards to skill, or that unpleasant work was economically rewarded (England 1992; Jacobs and Steinberg 1990; Kilbourne et al., 1994). Subsequently, examination of differences in job’s characteristics has not contributed much to our understanding of the earnings gender gap.

In short, some human capital attributes that reflect underlying choices are important determinants of earnings. Others, however, such as workers’ effort, intentions, and
turnover rates, do not differ for men and women and fail to provide much information about the gender earnings gap.

Constraints

Thus far, I have discussed individualistic approaches that center on the choices of workers to explain gender differences in earnings. Other approaches focus on structural factors, or the constraints that affect workers' earnings. Specifically, critiques of status attainment research argue that the focus on individuals' human capital, along with the assumption that individuals are free to be socially mobile, neglects structural factors that affect workers (Horan 1978). In the following sections, I describe the dual economy and labor market approaches and review the empirical work that attempts to explain the gender earnings gap by industrial placement.

Dual Economy

Drawing from dual economy theory, some scholars argue that earnings inequality is partly explained by the structure of capitalism (Beck, Horan, and Tolbert 1978; Horan, Beck, and Tolbert 1980; Tolbert, Horan, and Beck 1980). According to this view, our system of production has two distinct industrial sectors, the core and the periphery. The core sector is dominated by large corporations, whereas the periphery sector is characterized
by small firms. Employers in each sector have different strategies for managing, controlling, and evaluating their workforce. This means that the opportunity structures, experiences, and rewards to worker’s human capital differ by sector. Studies show that those working in core jobs generally reap greater benefits than those in periphery jobs (Averitt 1968; Edwards 1979; Horan et al., 1980; Tolbert et al., 1980).

Beck et al., (1978) found significant differences by sector in labor force composition with women being slightly more concentrated in the periphery compared to the core. Jobs in the core sector generally paid women and minorities less than white men, although this earnings disparity was not as obvious in periphery jobs. Furthermore, because the substantial gains earned by working in the core was not explained by worker’s labor force characteristics, it is the structure, not the individuals, that accounts for inequality in earnings.

Recent studies show that industrial placement strongly affects the gender earnings gap. Marini and Fan (1997) used data from 1979 to 1991, and found that after holding constant worker’s characteristics, 42 percent of the gender earnings gap at career entry was accounted for by industrial and occupational placement (p. 601). Using data collected from a large sample of workers in 16 industries...
during the period of 1974 to 1983, Petersen and Morgan (1995) also found that the combination of occupational and industrial establishment sex segregation accounted for more of the gender earnings gap than within job earnings differences between men and women.

Changes in the U.S. economy have been examined for their effects on earnings inequality. Beginning in the 1970s and continuing through the 1980s, the United States experienced what has been referred to as the "industrial transformation" whereby our economy shifted from manufacturing based to service based (Kasarda 1995; Farley 1996). During this time, the number of manufacturing jobs declined and the number of jobs in the service sector grew. The shift also increased the number of jobs requiring advanced skills which resulted in more emphasis on the educational credentials of workers (Kasarda 1995; Farley 1996).

Although these changes increased women's employment opportunities and earnings, the reduction in the gender earnings gap during the 1980s was largely due to the decrease in men's average earnings as they moved from high paying manufacturing jobs into lower paying service jobs (Bernhardt et al., 1995; Blau and Kahn 1997; Lorence 1991; Tienda, Ortiz, and Smith 1987). For example, Blau and Kahn (1997) reported that deunionization during the 1980s
affected the earnings of men more than women since women were less likely to be in unions. Together, these studies show that the industrial sector contributes substantially to explaining the gender earnings gap.

**Dual Labor Markets**

Dual labor market theory focuses on the structures and processes that differentiate the labor market into two distinct systems of organization, the primary labor market and the secondary labor market. Jobs in the primary market offer workers high earnings, employment stability, good working conditions, and chances of advancement. The secondary market offers small returns to education and lower paying jobs with poorer working conditions. Jobs in the secondary labor market offer only job-specific training, little chance of advancement, instability in employment, and consequently they have a high turnover of workers (Edwards 1979; Piore 1972, 1975). In an early study using 1977 data, Coverman (1986) found that women were more concentrated in the secondary market, and in both the primary and secondary markets they earned less than comparable men.

Piore (1972) maintained that once an individual is working in the secondary labor market there is little likelihood of upward mobility into the primary labor
market. However, over time the dual labor market has been affected by educational and economic trends. For example, after the industrial transformation, restrictions on worker's mobility decreased somewhat due to a decline in internal labor markets and increased use of external labor markets. The shift to outside hiring was related to equal employment opportunity (EEO) legislation, which facilitated access by women and minorities to jobs previously restricted by male-dominated internal labor market practices (Noyelle 1987). Thus, dual labor market theory offers unique insights into how structure and processes constrain workers and affect gender differences in earnings.

**Occupational Sex Segregation**

A line of research has focused on the ways in which another structural factor, occupational sex segregation, constrains opportunities and maintains earnings inequality. Occupational sex segregation refers to the fact that men and women have different jobs. A main reason for its salience is because it has persisted over time, and on average, occupations with more women pay less than those dominated by men. The index of occupational sex segregation ($D$) refers to the proportion of women (or men) that would have to change occupations to make the occupational...
distribution match across the two groups, thereby eliminating occupational segregation (England 1992).

Despite rather dramatic gender segregation in occupations, studies have reported that its explanatory power for the gender earnings gap varies, depending on how jobs are grouped into occupations (Polachek 1987) and the level of analysis. For example, some studies report that occupational sex segregation explained 19 to 40 percent of the gender earnings gap (Goldin 1990; Marini 1989; Spain and Bianchi 1996), while others found it explained as little as 14 percent (Cotter et al., 1995). A recent study analyzed occupational sex segregation at the macro-level using metropolitan area labor market data (rather than occupation- or job-level data) and explained more of the gender difference in earnings than previous studies (Cotter et al., 1997). In short, occupational sex segregation affects earnings, although it is not clear how much it contributes to explaining the gender earnings gap. In the following sections, I describe the historical trends in occupational sex segregation and review research explaining the reasons for its perpetuation.

**Historical Trends**

Sex segregation by occupation has declined by about 15 percent during the 20th century. From 1900 to 1970,
occupational sex segregation was between 65 and 68 percent, which meant that about two-thirds of women (or men) would have to change occupations to make the distribution equal (Golden 1990:75; Reskin and Roos 1990:11). The 1970s represented a turning point in occupational sex segregation and the $D$ statistic declined continuously, dropping from 68 in 1971, to 64 in 1977 (Beller 1984:12). This drop in segregation resulted from two trends. First, the resurgence of the women's movement and EEO legislation helped women, especially younger better educated women, move into some occupations traditionally dominated by men (e.g., law, medicine, and dentistry). Second, men moved out of jobs (e.g., pharmacists, editors, insurance salespersons) with deteriorating rewards and into better jobs, thus creating a worker shortage that forced employers to hire women (Bianchi 1995; Jacobs 1989: Goldin 1990; Reskin and Roos 1990).

By 1980, the $D$ statistic had dropped again to 58 percent and by 1990 it was 53 percent (Spain and Bianchi 1996:94). The decline in occupational sex segregation during the 1980s was due in large part to the feminization and resegregation of occupations previously dominated by men. To a lesser extent it declined because there was
faster growth of integrated occupations compared to segregated occupations.

Underlying the decline in occupational sex segregation over time is a large decline in gender segregation for professional and managerial level jobs that is directly related to the rising numbers of women graduating with college degrees (Bianchi 1995; Mare 1995). However, the gender earnings gap also exists in professional occupations. This was demonstrated by Roos and Gatta (1999: Table 6.5) using 1990 data for median annual earnings of full-time, year-round workers. Among those in professions dominated by men, such as physicians (21 percent female), women earned 51 percent of men’s earnings, and among lawyers (24 percent female), women earned 67 percent. In professional occupations dominated by women, in contrast, registered nurses (94 percent female) had one of the highest earnings ratios at 88 percent. The earnings ratio in other professional occupations with higher percentages of women was considerably lower. For example, for accountants and auditors (53 percent female), the median earnings ratio was 66, and for financial managers (46 percent female), it was 58. Thus, the pay gap in many professional occupations, especially those dominated by men, was wider than in professional occupations dominated by women.
Although considerable gender differences in earnings exist across occupations, earnings differences between men and women are also found within occupations. Bielby and Baron (1986) found that even when men and women are in the same occupations they are sex segregated by job titles. In their sample of 290 establishments, 96 percent of men (or women) would have had to change job titles to equalize the sex ratio in jobs. Different job titles for jobs requiring the same skill produces earnings discrimination by allowing employers to pay women less than men for performing the same work.

A related issue is the “glass ceiling” effect, or the invisible and impenetrable barriers that block the advancement of women into higher levels positions. The U.S. Department of Labor reported that women may begin their careers on par with men, but they fail to advance at the same rate and to the same level as men (Lorber 1994; Reich 1995). A recent study examined whether the gender earnings gap for engineers resulted from the glass ceiling effect, or from a cohort effect, whereby younger women faced fewer penalties relative to men when beginning their careers than did earlier cohorts of women. Using longitudinal data, Morgan (1998) found that time of entry (i.e., cohort effect) explained more of the earnings penalty for women
engineers than how long they had worked. Therefore, the earnings of younger cohorts of women were virtually the same as comparable men.

In contrast, evidence from the Glass Ceiling Commission (established in 1991 by Congress) reported on all occupations and found that there were (1) serious barriers to women at high levels of business, (2) lower earnings for the few women who do hold high-level positions, and (3) few women in positions likely to lead to the top levels (Reich 1995). Other studies show distinct gender differences in advancement opportunities. For example, Baron, Davis-Blake, and Bielby (1986) examined the internal labor markets of one hundred establishments and found that job ladders were more likely to be organized for men's jobs than for women's jobs. This resulted in men having more promotion opportunities than women.

A study on academic jobs reported that rates of promotion to associate professor and to full professor were slower for women than men. Only about 50 percent of the difference in promotion was explained by gender differences in relevant factors (Long, McGinnis, and Allison 1993:719). Thus, a substantial opportunity discrepancy also exists in academia.
Hiring and promotion practices are affected by the sex composition of businesses. For example, Cohen, Broschak, and Haveman (1998) reported that higher proportions of women in managerial-level positions increased the likelihood that other women would be hired or promoted into that level. In businesses where women were a substantial minority in high-level positions, women were also more likely to be hired for lower-level positions that prepare workers for advancement. Thus, women were most likely to be promoted or hired into jobs where many women already worked, or conversely, they were less likely to be promoted or hired into jobs where few women worked, thereby replicating occupational sex segregation.

**Socialization and Occupational Sex Segregation**

Various ideas have been presented to explain occupational sex segregation and many of them relate to how men and women are socialized to seek and expect gender-typed jobs. Research shows that family influences, such as parents' differential treatment of daughters and sons, are key factors that determine gender differences in the occupational aspirations of adolescents (cf. Eccles, Jacobs, and Harold 1990; England and Browne 1992; Entwisle, Alexander, and Olson 1994; Marini and Brinton 1984; Sewell, Hauser, and Wolf, 1980; Smith 1992; Wellesley 1992). Gender
differences in occupational aspirations reflect the existing sex segregated occupational structure, and many studies report that adolescent occupational aspirations play an important role in determining later occupational attainment (see Marini 1978 for review). A recent study by Marini and Fan (1997) reported that gender differences in adolescents' occupational aspirations explained 16 percent of the gender earnings gap at career entry (p. 600).

Gender-role socialization combined with occupational sex segregation demonstrate to children early in life which occupations are considered appropriate for each gender. Subsequently, young women and men find different types of jobs interesting, respectable, and consistent with their gender identity (Marini and Brinton 1984; England and Browne 1992). Jacobs (1995) found this pattern in chosen college major. He reported that young women are under-represented in academic fields that will prepare them for high status high income occupations. Generally they choose fields of study that lead to traditionally gender-linked occupations rather than prestigious fields, such as engineering and the physical sciences which have higher proportions of men.

Although prior studies have shown that early socialization affects occupational aspirations, others question whether the effects remain influential over the
life course. Using data on two cohorts of young women from the National Longitudinal Surveys, Levine and Zimmerman (1995) found that the link between adolescent occupational aspirations when subjects were aged 14-16 and occupational attainment when subjects were aged 26-28 was very weak. These authors suggested that the tendency for women to enter occupations traditionally held by women might be largely due to other factors such as sexual harassment in the workplace and labor market discrimination rather than sex-type occupational aspirations. Other research by Reskin and Hartmann (1986) provided evidence about the difficulties women face in occupations dominated by men. They concluded that barriers constraining occupational choice (e.g., employer discrimination and sexual harassment) may be more important in perpetuating occupational sex segregation than gender-role socialization.

In short, there is some evidence that gender role socialization affects occupational aspirations and occupational attainment. In addition, other studies suggest that structural factors support early socialization and serve to maintain occupational sex segregation.
Other Perspectives on Occupational Sex Segregation

Neoclassical economists contend that occupational sex segregation is due to gender differences in employment plans that lead to different investments. Consequently, men and women qualify for different jobs with different earnings. In turn, this view suggests that gender earnings differences may be due to women’s crowding into a few certain jobs which serves to reduce their earnings.

Other scholars agree that occupational crowding occurs, but they maintain that it is due to statistical discrimination which constrains women’s job choices. Statistical discrimination refers to the practice by employers of making hiring decisions based on perceived group differences in productivity (e.g., women are less productive workers than men) and steering women into a smaller number of occupations traditionally held by women that are low-paying (England 1992; Spain and Bianchi 1996). Historical reasons for employers using statistical discrimination are based on beliefs that (1) women workers were likely to marry and leave their jobs, making them best suited for dead-end jobs; (2) men do not want to work with women, so employers attempted to keep men workers satisfied by not hiring women workers; and (3) men were concerned
that women workers would lower the prestige, earnings, and skill level of their jobs (Goldin 1990).

The main problem with occupational crowding and jobs dominated by women is that as percentage of women in the job increases, both men’s and women’s earnings are depressed (England 1992; Kilbourne et al., 1994). One explanation for this sex composition effect is the devaluation hypothesis. This view argues that work requiring traditionally feminine skills are undervalued, and subsequently occupations dominated by women pay less than comparable occupations. For example, studies show that jobs requiring feminine type skills, such as nurturance, pay less than other jobs (England 1992). However, Tam (1997) argues that the devaluation hypothesis explains much less of the gender gap in earnings than differences in worker’s occupation- and industry-specific training.

Occupational sex segregation is also affected by labor market conditions. Using data on 1990 metropolitan labor market areas, Cotter et al., (1998) found that as the demand for women’s labor increased in any particular labor market area, occupational sex segregation and the gender earnings gap decreased. In another study, Cotter et al., (1997) reported that segregated labor market areas depress the earnings of women in all occupations, but raise the earnings of men. Conversely, occupational integration helps
women’s earnings throughout the occupational distribution, in part because women are not confined to crowding into few occupations.

Others argue that a patriarchal social structure contributes to occupational sex segregation because women are in a lower social status. For example, the persistence of gender stereotypes contributes to the perception that women are less capable and less effective than men, thereby restricting women’s occupational options (Lorber 1994; Ridgeway 1997). Jackman (1994) suggests that in a patriarchal society, women are congratulated on their ability to do jobs traditionally held by women (e.g., child care and housework) to persuade them to perform jobs that men are not interested in acquiring.

In sum, this review of the determinants of earnings shows that numerous factors contribute to workers’ earnings. Although the gender earnings gap has a long history, there has been progress over time toward gender equality in pay and we know a considerable amount about characteristics that influence earnings. However, only about 50 percent of the difference in men’s and women’s earnings are explained by human capital and job characteristics. Less is known about whether and how family responsibilities and domestic labor contribute to the gender earnings gap of different types of workers.
In my dissertation, I add to literature on the work and family connection by focusing on how time spent performing various types of domestic labor affect the earnings of professional women and men. In the next chapter, I present my conceptual model and specify the hypotheses for my analysis of the gender wage gap among professional workers.

**End Notes**

1. The suffrage movement during the mid 1800s through the early 1900s is generally considered the first wave of feminism (O’Neill 1969).

2. It must be noted that comparisons for women’s and men’s earnings by education level do not take any occupational differences into account.

3. This typology of choices versus constraints draws primarily from England (1992).

4. Despite women’s increased educational attainment, there continues to be gender differences in chosen college major and subsequent occupational placement (Jacobs 1995) and these factors contribute to the gender earnings gap.

5. Differences in the magnitude of earnings ratios are due to whether the median or the mean is used in its calculation and the restrictions on the age and work status of the workers. For example, Spain and Bianchi (1996:Table 5.2) use 1990 Census data for all full-time, year round workers aged 25-34 and show that the earnings ratio using mean annual income was .77 and using median annual income it was .78. And, for full-time, year-round college educated workers aged 25-34, the earnings ratio using mean annual income was .76 and for median annual income it was .79. Roos and Gatta (1999:Table 6.4) used U.S. census microdata and calculated the earnings ratio using median annual earnings for full-time, year-round workers. The gender earnings ratios by educational level in 1990 were .65 for less than high school, .67 for high school, .66 for some college, .67 for college, and .64 for those with graduate school.

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6. Gordon, Edwards, and Reich (1982) provide an overview of the historical progression in this country toward a dual labor market system. They explain that the rise of capitalism in the United States brought with it an effort by management to control the labor force and increase production. This effort occurred in three distinct phases. The last phase (referred to as segmentation) began in the 1920s and lasts through the present. In this phase, employers decentralized production, created artificial divisions among jobs, and manipulated racial and gender differences in an effort to counter workers' unrest and encourage disunity. Large corporations initiated segmentation in an effort for gain reliable labor control. Segmentation divided workers and effectively inhibited the formation of working class unity. This phase is characterized by labor markets breaking into two important dimensions, the primary and secondary.

7. Using the term patriarchy in this way emphasizes inequality in power between men and women and refers to a system in which men dominate economic, social, and cultural spheres. The degree of patriarchy varies in social systems around the world and in many ways the United States is more egalitarian than other places. Nevertheless, our country is generally considered patriarchal because men continue to predominately hold the positions of power (see Lorber 1994; Reich 1995).
CHAPTER 4

CONCEPTUAL FRAMEWORK AND HYPOTHESES

The review of the literature on domestic labor in Chapter 2 showed clearly that women are largely responsible for the majority of domestic labor, and that inequality in the division of household labor has negative consequences for women. In Chapter 3, I presented findings on the substantial body of literature about determinants of earnings showing that no more than 50 percent of the gender gap in earnings has been explained by key factors. Some studies on the gender earnings gap have expanded models to include the effects of domestic labor and find that domestic labor reduces earnings, especially for women. Drawing on these studies, I present in this section my conceptual framework describing (1) how domestic labor affects the earnings of professional workers, (2) how specific domestic labor tasks differ in their effects on earnings, and (3) how domestic labor explains an additional part of the gender earnings gap.

In this dissertation I extend prior research in several ways. First, my focus on professional men and women allows an examination of inequality among workers that are expected to be the most equal, in part due to their high levels of education. In practice, however, women with
advanced graduate degrees earn less than comparable men. Prior studies show that employed women continue to do the majority of domestic labor, and domestic labor has been found to reduce earnings.

Second, extant studies that examined the effects of domestic labor on earnings have been limited to one point in time. With this panel data set I am able to examine the same respondents at two different points in time and assess changes in the effects of domestic labor on earnings. This is beneficial because I expect that the effects of domestic labor on earnings appear immediately and over time.

Third, I conceptualize domestic labor as three distinct constructs including household maintenance tasks, elder care, and parent-child interaction activities. Domestic labor is a multidimensional construct that prior studies have generally restricted to household maintenance tasks.¹ My study expands the research on domestic labor by including the additional dimensions of elder care and parent-child interaction activities. On the whole, some domestic labor tasks will be relatively inflexible in that they need to be performed on a regular basis at particular times, whereas others will not. I examine whether the flexibility of various domestic labor tasks affect earnings differently for women and men.
For example, a household maintenance chore that usually is carried out at a set time, every day of every week is preparing meals. Most individuals, and families, get hungry and eat meals at generally the same time every day because those needs must be met on a more time-specific schedule. On the other hand, other domestic labor tasks may be carried out whenever it is convenient and consequently they are less likely to interfere with paid work. For instance, shopping for groceries and household goods is the type of task that is somewhat flexible in terms of when it can be completed.

It must be noted that individuals may experience different priorities of domestic labor tasks. However, in general, I argue that various tasks have different time restrictions. Some are more inflexible than others and this determines how they affect earnings. Thus, I conceptualize household maintenance as three basic types of tasks including: inflexible type tasks, or those tasks that are part of the daily grind; flexible type tasks that have traditionally been done by women; and other flexible type tasks that have traditionally been done by men. This grouping is based on the idea that traditionally women have been responsible for certain types of households maintenance tasks such as cooking and cleaning, whereas men
have been responsible for other types such as automobile and household maintenance.

Elder care is my second dimension of domestic labor and this refers to helping an elderly person (usually a relative) who is ill or disabled. This activity is unique in its demands and as stated in Chapter 2, research shows there are increasing numbers of workers who are doing some amount of elder care. However, elder care is a task that has not been specifically included in previous research examining the effects of domestic labor on earnings.

The third dimension of domestic labor, parent-child interaction activities, attempts to capture the kinds of parental responsibilities that are likely to be missed when child care is studied. There are numerous things that parents do for, and with, their children that are important for child development and family relations. These activities are likely to have different time constraints. For example, doing activities such as going on picnics, to the movies, playing, and talking with children are things that are flexible in that parents are able to choose when to do the activities. In contrast, helping a child with homework or reading is not a flexible type activity because the work has to be completed in a specific time period.

My conceptual model is shown in Figure 4.1 and illustrates how the various factors affecting earnings tie
Figure 4.1: Conceptual Model
together. This model shows the hypothesized casual pathways of the key determinants of earnings including human capital, job, and demographic characteristics, and domestic labor. The model begins with human capital and demographic characteristics which affect job characteristics. The link between family and work, and the focus of this study, is shown in the conceptual model by domestic labor and earnings. This conceptual framework guides the following two sets of hypotheses that focus on the effects of domestic labor on earnings.

I. The amount of time spent doing domestic labor differs by occupation and gender.

It is likely that professional workers manage domestic labor responsibilities differently than do non-professional workers. Professional jobs offer higher pay and more autonomy than other jobs. These job attributes are likely to reduce the burden of domestic labor for these workers because they have greater resources to purchase domestic labor services and more control over their own time. Previous research on differences in domestic labor show that irrespective of women’s employment status, men do less domestic labor than women.

Hypothesis 1. Professionals engage in fewer hours of domestic labor than non-professionals.
Hypothesis 2. Both professional and non-professional women spend more time doing domestic labor than professional and non-professional men.

II. Domestic labor reduces earnings for both men and women and helps explain part of the unexplained variance in the gender earnings gap. However, effects for domestic labor on earnings differ by task.

Persons responsible for domestic labor tasks may find that the time spent performing domestic labor actually interferes (or is perceived by others as interfering) with their paid work. Subsequently, domestic labor is likely to reduce earnings in the short term by decreasing hours worked or diminishing effort on the job, as well as affect earnings in the long term by constraining career opportunities. Furthermore, it is likely that various types of domestic labor tasks affect earnings differently because some are performed on a regular basis at particular times, whereas other tasks are carried out whenever it is convenient.

Hypothesis 4. Time spent doing domestic labor reduces earnings for professional women and men.

Hypothesis 5. Inflexible domestic labor tasks will reduce earnings.
Hypothesis 6. Time spent doing domestic labor explains part of the difference between professional women’s and men’s earnings.

Hypothesis 7. Time spent doing domestic labor has immediate and long term effects on professionals’ earnings.

In summary, I have described in this chapter my conceptual framework and stated hypotheses about the effects of domestic labor on the earnings of professionals. In the following chapter, I describe the data and methods used to test my hypotheses. I also present the conceptualization and operationalization of all variables used in the analysis.

End Notes

1. In practice, domestic labor includes all types of things that individuals do for, and with, their families including vacationing or visiting relatives, scheduling appointments and arranging celebrations, preparing lunches, and keeping in touch with friends and relatives with phone calls or letter writing. These tasks are not captured in traditional domestic labor studies. Furthermore, important differences exist concerning the difficulty of various domestic labor tasks, and some tasks are more physically demanding than others. To my knowledge, there is not a data set that provides information on the types of family responsibilities mentioned above or the degree of difficulty for domestic labor tasks. Thus, due to data restrictions, my measures of domestic labor are limited to household maintenance tasks, elder care, and parent-child interaction activities.

2. The increasing numbers of elderly persons and the rising costs of nursing home care has resulted in more elderly persons moving in with relatives or staying in their own homes with outside assistance (U.S. Department of Labor 1998). As described in Chapter 5, my measure specifically
refers to assisting someone who does not live with the respondent.

3. In theory, household maintenance tasks may include much of what is done for children, making a separate measure of child care unnecessary in studies of domestic labor. This may be especially true for very young children, but unfortunately, measures of domestic labor in existing data sets do not capture the time demands of older children.
For this study, I use data from two waves of the National Survey of Families and Households (NSFH, Sweet and Bumpass 1997). The NSFH is a panel data set gathered from a national, stratified, multistage area probability sample of U.S. households. One adult per household, age 19 years and older or married, was randomly selected as the primary respondent producing a sample of 13,008 male and female respondents who were first interviewed in 1987-1988. Demographic, employment, and life history data, along with detailed information about time spent doing various types of domestic labor were gathered from the primary respondent (and from spouses or cohabiting partners if present). These respondents were interviewed again five years later in 1992-1994 resulting in a sample of 10,008. NSFH oversampled on minorities, single parent households, persons with stepchildren, cohabiters, and those recently married. Thus, for all analyses, sample weights are used to achieve the proper representation of respondents in the U.S. population.
Sample

The unit of analysis for this research is the individual. From the NSFH respondents, I selected only employed professionals for analyses. Professional workers were selected using Census occupational codes and descriptions of occupational requirements from the *Occupational Outlook Handbook* (U.S. Department of Labor 1986). The sample includes those in executive, administrative, managerial, professional speciality, and technical occupations. Because I wanted to take advantage of this longitudinal data, I selected only those respondents who reported being employed in professional occupations in both waves. To capture the largest number of workers, I used a broad selection to determine employed workers and defined employed as those working at least 10 hours per week and at least 10 weeks a year. Lastly, I selected only those professionals who had completed a least a Bachelor’s degree and this produced a sample of 585 professional women and men. Appendix A provides a detailed description of my sample selection of employed professional workers.
Measurement

Dependent Variable

This analysis focuses on the effect of domestic labor on earnings. My dependent variable is earnings, measured as logged annual earnings. The natural logarithm was used to adjust for the skewed distribution of annual earnings. Using annual earnings (rather than weekly or hourly earnings) is especially appropriate for professionals because many of them are salary workers.

Key Independent Variables

I conceptualize domestic labor as three distinct dimensions including household maintenance tasks, parent-child interaction activities, and elder care. These measures of domestic labor are the key independent variables in my analysis. Table 5.1 shows the questions in NSFH questionnaire that I used to construct these three measures. My analysis makes an important contribution to the literature by measuring domestic labor in terms of these dimensions.

Regarding household maintenance, I have argued that earnings penalties for allocating time to domestic labor differs by type of task because some tasks are performed on a regular basis at particular times, whereas others are not. Thus, I operationalized household maintenance as three
TABLE 5.1: Domestic Labor Measures of Employed Professional Workers

**HOUSEHOLD MAINTENANCE**

The approximate number of hours per week normally spent doing the following things:

1. preparing meals;
2. dishwashing;
3. cleaning house;
4. outdoor and other household maintenance tasks;
5. shopping for groceries and other household goods;
6. washing, ironing, and mending clothes;
7. paying bills and keeping financial records;
8. automobile maintenance and repair;
9. driving other household members to work, school, or other activities.

**PARENT-CHILD INTERACTION**

How often do you spend time with the children

1. in leisure activities away from home (picnics, movies, sports, etc.),
2. at home working on a project or playing together,
3. having private talks;
4. helping with reading or homework?

**ELDER CARE**

Sometimes people help take care of persons who are seriously ill or disabled, and who do not live with them.

Have you provided such care at any time during the last 12 months?

1. In about how many different weeks during the past 12 months did you help take care of him/her?
2. During those weeks, about how many hours, on the average, did you spend helping take care of him/her?

*Workers are those employed at least 10 hours per week and 10 weeks per year.*

Source: Sweet and Bumpass, NSFH 1997
basic types of tasks. (1) Daily grind tasks include inflexible tasks such as preparing meals; cleaning house; and washing, ironing, and mending clothes. (2) Female-type tasks includes household tasks traditionally done by women, but they are more flexible than daily grind type tasks. This includes shopping for groceries and other household goods; dishwashing; paying bills; and driving family members to work, school, or other activities. (3) Male-type tasks includes those tasks traditionally done by men including outdoor work such as yard maintenance, household repair, and automobile maintenance. I created a measure for each of the three types of household maintenance tasks by adding the time spent per week doing the specific tasks noted above.

My second dimension of domestic labor is parent-child interaction activities. The respondents reported on how frequently they engaged in certain activities with their children. I coded the frequency for doing each of these activities from 0 to 3 with 1=not often, 2=occasionally, and 3=frequently (0 was coded for those respondents who did not have children). These activities fall into two categories: flexible and inflexible. Doing activities such as (1) going on picnics or to the movies, (2) playing or doing projects, and (3) talking with children are things that are flexible in that parents are able to choose when
to do the activities. I created a measure of flexible type
parent-child interaction activities by adding the frequency
reported for each of three activities. The range on this
measure is 0 to 9 with the most parent-child interaction
indicated by a score of 9. In contrast, helping a child
with homework or reading is not a flexible type activity
because the work needs to be completed in a specific time
period. This type of activity remains a separate variable
representing inflexible parent-child interaction activities
and it ranges from 0 to 3, with the highest frequency of
this type of activity indicated by a 3.

Elder care is my third dimension of domestic labor. The
NSFH asked respondents to report on whether they
assisted someone living outside their home and if so, how
much time they spent assisting in the last year. Unfortunately, there were problems with missing data and
too few cases to use the hourly measure of elder care.
Thus, due to these data limitations, I use a dichotomous
measure of elder care in the multivariate analysis (coded 1
for assisting someone in the last year and 0 otherwise).

Other Independent Variables

Research has shown that human capital, job, and
demographic characteristics affect earnings. Therefore, I
included the following variables as control variables in
all analyses. Education is my primary indicator of human capital. This measure is handled differently than in typical models because everyone in my sample has received at least a Bachelor’s degree. I created a dichotomous variable coded 1 for having an advanced degree (Master’s, Doctorate, or professional) and 0 otherwise.

Job characteristics include the number of hours worked per week on the job. This variable is a continuous measure. Percent female in occupation has been shown to reduce the earnings of both men and women and there is evidence of sex segregation among professional occupations (England 1992). I used U.S. Census data and Current Population Survey (CPS) data to code a continuous measure of percent female in each professional occupation. This measure also serves as a control on the type of occupation. Industrial placement affects individual’s earnings for reasons affecting the industry as a whole. I followed the sector assignment developed by Tolbert et al. (1980) and assigned a value of 1 to respondents who work in core industries, and a value of 0 to those working in the periphery.

Demographic characteristics used in my analysis include the presence of children, coded as 1 for having children and 0 for no children. Research shows that the earnings of women and men are affected by the presence of children (Hill 1979; Waldfogel 1997). Marital status is a
dichotomous variable, coded as married or not. Studies show that being married raises men's earnings, but reduces women's (Cooney and Uhlenberg 1991). Age is included as a continuous measure. The effect of age on earnings is not linear and I included age squared in the regression equations to adjust for this relationship. Region affects earnings with the South and West experiencing booms in employment during the 1980s and into the 1990s (Kasarda 1995). This variable also proxies for gender norms with those in South more likely to report traditional gender norms (Hurlbert 1989; Suitor and Carter 1999). Region is a dichotomous variable coded 1 for South and 0 otherwise. There are race/ethnicity differences in both earnings and domestic labor so I control for these differences with a dichotomous variable coded 1 for white and 0 for all others.

In the last phase of my analysis I assess the effects of domestic labor on earnings over time. For these models I recalculated the control variables described above to reflect change across the two waves. Because I wanted to control on the factors other than domestic labor that might explain differences in earnings over time, I created change variables to reflect 1 for a change across waves, and 0 for no change. The only exceptions to this manipulation of variables were the indicators of gender and race.
**Method**

The analysis in this dissertation has several components. In this section, I describe the statistical techniques and tests that are used to test my hypotheses. My focus is on professional workers, but I begin with a comparison of professional workers to non professionals to test whether these two groups of workers differ in the domestic labor-earnings relationship. I do this by comparing means and conducting T-tests to assess if the differences between the groups are significant.

In the multivariate phase of the analysis, I employ elaboration techniques using ordinary least squares regression (OLS) to determine whether domestic labor explains an additional part of the gender earnings gap. I also estimate an interaction model to examine whether the effects of domestic labor vary by gender. Lastly, I use OLS regression to assess the effects of domestic labor at Wave 1 on earnings five years later.

**Conditional Change Model**

The last phase of the analysis examined whether domestic labor reduced earnings over time by regressing earnings at $T_2$ on domestic labor at $T_1$. I have argued that time spent performing domestic labor takes time away from work pursuits and this reduces earnings. Panel data, like
the NSFH, are well suited to test changes over time because measuring the variables at two points in time makes it possible to estimate models predicting a current value (earnings in Wave 2) from variables occurring earlier (time spent performing domestic labor in Wave 1), and thereby infer a causal relationship (Finkel 1996). To assess this relationship, I estimated a conditional change model regressing earnings in Wave 2 on gender, domestic labor and earnings in Wave 1, and the change control variables. OLS regression is the appropriate technique to estimate the following equation:

\[ X_{i2} = \alpha + \beta_{12}X_{i1} + \beta_{13}G_{i1} + \beta_{14}D_{i1} + \beta_{15}C_{i1} + \epsilon_i \]

where \( X_{i2} \) = earnings of the \( i \)th individual at Wave 2, \( X_{i1} \) = earnings of the \( i \)th individual at Wave 1, \( G_{i1} \) = gender, \( D_{i1} \) = total hours of domestic labor and elder care at Wave 1, \( C_{i1} \) = change variables, \( \alpha \) = the constant, and \( \epsilon_i \) = error term.

In this chapter, I presented the conceptualization and operationalization of all variables used in my analysis examining the effects of domestic labor on earnings. I described the methods I used to test my hypotheses. In the next chapter, I present the results from the statistical tests of my hypotheses.
1. The NSFH used the 1980 Census occupation codes for coding the Wave 1 data, and the 1990 Census occupation codes were used for Wave 2. There were no differences between the two time periods for workers in professional occupations.

2. The NSFH contains numerous measures of child care and parent-child interaction activities. However, the respondents were asked to respond to the child care questions regarding only one child (referred to as the focal child). This focal child was chosen at random from the household rooster and the child could have been aged 0-4, 5-11, or 12-18 years. Due to this procedure much of the information about child care (e.g., bathing, feeding, dressing) was not uniformly available for all parents in both waves because some parents answered questions about a young child, while others answered questions pertaining only to an older child. Fortunately, the NSFH contained a self-administered questionnaire which asked all parents questions about the frequency of parent-child interaction activities with their children. These questions were uniformly available for all parents in both waves and I used only those questions that appeared in both waves.

3. The original questions for the four parent-child interaction activities provided respondents with six response categories: 1=never/rarely, 2=once a month or less, 3=several times a month, 4=about once a week, 5=several times a week, 6=almost everyday. To obtain a clearer distinction of time investment, I collapsed these six categories into three and the categories became 1= not often (1&2), 2=occasionally (3&4), 3=frequently (5&6).

4. Smock and McCormick (1995) report that forty-seven percent of parents are involved on a daily basis with their children’s homework.

5. On average, the persons who required assistance because of disability or chronic illness were aged 72 years.

6. The NSFH contains various questions about caregiving. However, the only questions that appeared in both waves and pertained to the respondent’s caregiving activities, asked about assistance given to a person living outside their home. If the respondent reported that they assisted someone, they were asked to report how many weeks in the last year they assisted, and in those weeks how many hours...
they spent. For descriptive purposes, I computed hours
spent last year by multiplying these two variables.
However, in the multivariate analysis, data limitations
forced me to use a dichotomous variable of doing elder care
or not.

7. The percent female in each professional occupation for
Wave 1 was obtained using unpublished detailed occupation
data from the Current Population Survey, 1987 (provided to
me by Karen Kosanovich, U.S. Bureau of Labor Statistics,
Division of Labor Force Statistics). The percent female in
each professional occupation for Wave 2 was obtained from
1990 Census data (provided by Patricia Roos, personal
communication, 1999).

8. I conducted a series of F-test to determine if
constraining the continuous variable of number of children
significantly changed the fit of the model (i.e., the R^2).
I found that constraining the measure in the dichotomous
form of having children or not did not significantly reduce
the fit of the model and substantively this constraint is
reasonable.

9. Many studies of earnings determination include job
tenure and prior job experience because both increase
earnings and they measure job-specific skills and general
occupational experience. However, my exploratory analyses
showed that these two variables were highly collinear with
age. Also, there was a missing data problem in the Wave 2
job history. Because the three variables would have
introduced multicollinearity into the regression models,
only one could be used. I decided to include a continuous
measure of age in the analysis since age of the respondent
is traditionally used to predict earnings.

10. The NSFH had nine categories of race/ethnicity
including (1) Black, (2) white, (3) Mexican American,
Chicano, Mexican, (4) Puerto Rican, (5) Cuban, (6) other
Hispanic, (7) American Indian, (8) Asian, and (9) other.
The majority of the respondents in my sample were white
(89%) with Blacks constituting the next largest category
(6%) and very few respondents in the remaining categories.
Thus, I collapsed the measure into white versus all other
categories.

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CHAPTER 6

DOMESTIC LABOR

Comparison of Means

In the first phase of my analysis I examine whether professionals spent less time doing domestic labor than non professionals. The results for both waves are presented in Table 6.1. In Wave 1, comparing professional men to non professional men we see no difference in the total time spent doing household maintenance tasks: both groups spent about 18 hours per week performing these tasks. Note that all men spent more time doing outdoor tasks compared to other tasks. However, two tasks significantly differed among men. Professional men spent more time preparing meals and less time doing automobile maintenance than non professional men.

Among men in Wave 2, again, we see no significant difference between professionals and non professionals in the total number of hours spent doing household maintenance tasks. However, occupational differences appeared for five of the nine household maintenance tasks. Professional men spent more time than non professional men dishwashing and grocery shopping, whereas non professional men spent more time than professional men cleaning house, doing outdoor tasks, and doing automobile maintenance. Furthermore, men
did not differ on elder care or parent-child interaction activities.

More dramatic differences between professionals and non professionals are found when comparing professional women to their non professional counterparts (shown in Table 6.1). In Wave 1, professional women spent significantly less time than non professionals doing six of nine household maintenance tasks. For example, professional women spent less time preparing meals, dishwashing, and cleaning house than non professionals. And, only grocery shopping, automobile maintenance, and driving others did not differ among women. As a result, non professional women spent significantly more total time doing household maintenance tasks than professional women (approximately 34 versus 26 hours respectively). Women spent more time preparing meals than any other household maintenance task. Professional women spent more time doing inflexible parent-child interaction activities (i.e, helping with reading and homework) than non professionals, but women did not differ on doing elder care.

On the whole, Table 6.1 shows similar patterns among women in Wave 2. Professionals spent significantly less time than non professionals doing seven of nine household maintenance tasks. Only two tasks, doing automobile maintenance and driving others, did not vary for women by
occupation. In addition, similar to Wave 1, the total time spent doing household maintenance tasks varies significantly between professional and non professional women (25 hours compared to 33 hours respectively) and professionals reported more time spent doing inflexible parent-child interaction activities than non professionals. Overall, these differences in time spent doing household maintenance tasks might reflect the greater likelihood that professional women have household help more so than non professionals.

Table 6.1 also compares differences between women and men within occupations. Prior research shows that women do more domestic labor than men (Barrett 1987; Berk 1985; Greenstein 1996b; Shelton 1990; Shelton and Daphne 1996; South and Spitze 1994). This gender difference appears in both waves for professionals and non professionals. First, in Wave 1, among professionals, women spent significantly more time than professional men in all tasks, except bill paying, and women’s total time spent doing household maintenance tasks (26 hours) differed significantly from men’s (18 hours). In Wave 2, gender differences exist for all tasks. Men increased their total time doing household maintenance tasks by one hour, but they continued to spend less time than women in these tasks (19 versus 25 hours respectively). In both waves, among professionals, women
were significantly more likely than men to do elder care and to spend time doing inflexible parent-child interaction activities. Only in Wave 1, were men and women the same on flexible parent-child interaction activities.

For non professionals in Wave 1, women spent significantly more time than men in all tasks, without exception. The total time spent by non professionals in all household maintenance tasks was significantly higher for women (34 hours) compared to men (18 hours). Similarly, in Wave 2, non professional women spent significantly more hours doing household maintenance tasks (33 hours) compared to non professional men (21 hours) and only bill paying was not significantly different by gender. And, in both waves, non professional women were more likely than non professional men to do elder care and both types of parent-child interaction activities.

Comparing means from Wave 1 to Wave 2, we see very little change in the time spent doing household maintenance tasks for two groups: professional men and non professional women. However, for non professional men, their total time doing household maintenance tasks rose slightly from 18 to 21 hours per week, and they increased time spent preparing meals and driving others. Professional women significantly reduced the time spent preparing meals, paying bills, and doing automobile maintenance. Over time, the percentage of
both professionals and non professionals reporting elder care responsibilities increased. Furthermore, professional men’s time with children did not change, but professional women significantly increased time spent doing both types of parent-child interaction activities. And, among non professionals, both men and women increased time spent doing inflexible parent-child interaction activities.

In sum, Table 6.1 shows that men and women differ on time spent doing household maintenance tasks, regardless of occupation. Comparing women, professionals spent less time doing household maintenance tasks than non professionals. Among men, there were few occupational differences in Wave 1, however, in Wave 2, non professionals increased their total time on household maintenance tasks while professionals did not. Generally, women more frequently interacted with children and were more likely to do elder care than men. Interestingly, over time, the percentage of both men and women reporting elder care responsibilities increased.

**Professionals and Domestic Labor**

**Household Maintenance Tasks**

As noted earlier in Chapter 2, prior studies on domestic labor tasks have divided domestic labor tasks into three groups: female-type, male-type, and neutral-type
### TABLE 6.1: Domestic Labor Tasks of Employed Workers,' Wave 1 and Wave 2

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<thead>
<tr>
<th>Weekly time spent</th>
<th>Professionals</th>
<th>Nonprofessionals</th>
<th>Professionals</th>
<th>Nonprofessionals</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Mean (S.D.)</td>
<td>Mean (S.D.)</td>
<td>Mean (S.D.)</td>
<td>Mean (S.D.)</td>
</tr>
<tr>
<td>Preparing meals</td>
<td>3.6* (4.8)</td>
<td>2.7 (3.5)</td>
<td>3.4 (4.7)</td>
<td>3.2* (5.6)</td>
</tr>
<tr>
<td>Dishwashing</td>
<td>2.4 (2.5)</td>
<td>2.0 (3.1)</td>
<td>2.7* (2.5)</td>
<td>2.2 (2.7)</td>
</tr>
<tr>
<td>Cleaning house</td>
<td>1.8 (2.1)</td>
<td>2.0 (3.0)</td>
<td>2.0* (2.2)</td>
<td>2.4 (3.0)</td>
</tr>
<tr>
<td>Outdoor tasks</td>
<td>4.2* (4.9)</td>
<td>4.6 (5.8)</td>
<td>4.1* (4.5)</td>
<td>4.9 (8.7)</td>
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<tr>
<td>Grocery Shopping</td>
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<td>1.5 (2.0)</td>
<td>1.8* (2.1)</td>
<td>1.5 (2.0)</td>
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<tr>
<td>Washing clothes etc.</td>
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<td>1.0 (1.6)</td>
<td>1.2 (2.2)</td>
<td>1.2 (1.8)</td>
</tr>
<tr>
<td>Paying bills</td>
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<td>1.5 (2.1)</td>
<td>1.7 (2.3)</td>
<td>1.5 (3.5)</td>
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<tr>
<td>Auto maintenance</td>
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<td>2.2 (3.8)</td>
<td>1.1* (1.3)</td>
<td>2.2 (6.6)</td>
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<tr>
<td>Driving others</td>
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<td>1.0 (2.1)</td>
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<td>1.3* (4.0)</td>
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<td>19.3 (12.2)</td>
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<td>6.6 (1.6)</td>
<td>6.1 (1.7)</td>
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<td>2.1 (1.8)</td>
<td>2.4 (1.7)</td>
<td>2.4* (1.8)</td>
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<tr>
<td>% doing elder care</td>
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<td>7.5</td>
<td>24.9*</td>
<td>19.2*</td>
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<table>
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<td></td>
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<td>Mean (S.D.)</td>
</tr>
<tr>
<td>Preparing meals</td>
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<td>8.1 (5.2)</td>
</tr>
<tr>
<td>Dishwashing</td>
<td>4.1* (3.4)</td>
<td>5.5 (4.2)</td>
</tr>
<tr>
<td>Cleaning house</td>
<td>4.8* (4.4)</td>
<td>7.0 (5.3)</td>
</tr>
<tr>
<td>Outdoor tasks</td>
<td>1.4* (2.0)</td>
<td>2.0 (3.1)</td>
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<tr>
<td>Grocery shopping</td>
<td>2.4 (1.6)</td>
<td>2.9 (2.8)</td>
</tr>
<tr>
<td>Washing clothes etc.</td>
<td>3.0* (2.2)</td>
<td>4.0 (3.1)</td>
</tr>
<tr>
<td>Paying bills</td>
<td>1.4* (1.4)</td>
<td>1.8 (2.3)</td>
</tr>
<tr>
<td>Auto maintenance</td>
<td>0.3 (0.6)</td>
<td>0.3 (1.1)</td>
</tr>
<tr>
<td>Driving others</td>
<td>1.4 (2.9)</td>
<td>1.8 (3.2)</td>
</tr>
<tr>
<td>Total time all tasks</td>
<td>26.1* (14.9)</td>
<td>33.5 (18.7)</td>
</tr>
<tr>
<td>Flexible p-c activities</td>
<td>6.4 (1.7)</td>
<td>6.4 (1.7)</td>
</tr>
<tr>
<td>Inflexible p-c activities</td>
<td>2.6* (.6)</td>
<td>2.4 (.8)</td>
</tr>
<tr>
<td>% doing elder care</td>
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<td>10.2</td>
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<tr>
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</table>

'Table contains data on domestic labor tasks performed by employed workers in Waves 1 and 2. Data is presented as mean (standard deviation) for professionals and nonprofessionals. Significant differences at p<.05 (two-tailed tests) are indicated by asterisks. Underlined means indicate no significant differences by sex within occupation at p>.05 (two-tailed tests). Means with * in Wave 2 indicate a significant change over time at p<.10 (paired t-tests).
tasks (Greenstein 1996a; Lennon and Rosenfield 1994; Noonan 1999; Perry-Jenkins and Folk 1994; Presser 1994). This grouping is based on the idea that traditionally, women have been responsible for certain types of household maintenance tasks, whereas men have been responsible for other types. And, some tasks are neutral in that they are equally shared by women and men. Although this may be true, no prior study examined the empirical evidence supporting such a classification. In this section, I do so.

I began by conducting a principal components factor analysis of all nine household maintenance tasks. Table 6.2 shows that seven tasks (preparing meals; dishwashing; cleaning house; grocery shopping; washing, ironing, and mending clothes; paying bills; and driving others) loaded strongly on one factor. Two other tasks, automobile maintenance and outdoor tasks loaded on a second factor. This same pattern appeared in both waves. These loadings on two factors support the categorization of tasks into female-type and male-type as found in earlier studies. In contrast, I found no evidence of a third factor that represents neutral-type tasks. Note that paying bills and driving others do not load as strongly on factor one as the other tasks. However, their loadings were weaker on factor two and they were not unique enough to produce a third factor. Thus, I retained them in factor one.

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TABLE 6.2: Principal Components Factor Analysis of Household Maintenance Tasks for Employed Professional Workers,1  Wave 1 and Wave 2

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<tr>
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<tbody>
<tr>
<td></td>
<td>Factor 1</td>
<td>Factor 2</td>
</tr>
<tr>
<td>Preparing meals</td>
<td>.701</td>
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<tr>
<td>Cleaning house</td>
<td>.726</td>
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<tr>
<td>Washing &amp; ironing clothes</td>
<td>.795</td>
<td>---</td>
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<tr>
<td>Dishwashing</td>
<td>.726</td>
<td>---</td>
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<tr>
<td>Grocery shopping</td>
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<tr>
<td>Paying bills</td>
<td>.400</td>
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<tr>
<td>Driving others</td>
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<td>Auto maintenance</td>
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<td>Outdoor tasks</td>
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<td><strong>Eigenvalue</strong></td>
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</table>

1Workers are those employed at least 10 hours per week and 10 weeks per year. These data are weighted.
Substantively, however, there is some heterogeneity in the seven tasks that represent the category of female-type tasks. Some are performed regularly at particular times, whereas others are not. I hypothesized that tasks which are inflexible are more likely to interfere with paid labor and thereby reduce earnings more than do flexible type tasks. To examine whether or not the seven female-type tasks affect earnings differently, I produced a correlation matrix of all the tasks and earnings for each wave (shown in Tables 6.3 and 6.4). These findings reveal that three inflexible tasks had a stronger negative association with earnings than the other tasks. In both waves, the bivariate correlation of earnings with (1) preparing meals; (2) cleaning house; and (3) washing, ironing, and mending clothes were all notable and negative. This examination provides limited evidence of earnings penalties for allocating time to household maintenance tasks, and it suggests that the penalties differ by type of task. Because of the strong bivariate correlation between the three tasks, the substantive similarity in their time flexibility, and in the interest of parsimony, I created a daily grind variable which is the total hours spent preparing meals; cleaning house; and washing, ironing, and mending clothes.1 This measure has an alpha coefficient of .63 in Wave 1 and .70 in Wave 2.
TABLE 6.3: Bivariate Correlations of Earnings and Household Maintenance Tasks for Employed Professional Workers,¹ Wave 1 (1987-88)

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<th>Variable</th>
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<td>3. Cleaning</td>
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<tr>
<td>(.54) (.04) (.32)</td>
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<tr>
<td>12. Inflex. P-C</td>
<td>0.07</td>
<td>0.01</td>
<td>0.13</td>
<td>0.09</td>
<td>0.13</td>
<td>0.11</td>
<td>0.08</td>
<td>-0.04</td>
<td>0.27</td>
<td>0.04</td>
<td>0.91</td>
<td>1.00</td>
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</tr>
<tr>
<td>activities (.07)</td>
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<tr>
<td>(.81) (.00) (.02)</td>
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</tr>
<tr>
<td>13. Eldercare</td>
<td>-0.01</td>
<td>0.06</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.08</td>
<td>0.01</td>
<td>0.04</td>
<td>0.04</td>
<td>0.00</td>
<td>-0.00</td>
<td>1.00</td>
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<tr>
<td>(.90) (.15) (.31)</td>
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</tr>
</tbody>
</table>

N=585

¹Workers are those employed at least 10 hours per week and 10 weeks per year. These data are weighted.
<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
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<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
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<tr>
<td>1. Earnings (In)</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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</tr>
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<td></td>
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<td></td>
<td></td>
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<td>3. Cleaning house</td>
<td>-0.16</td>
<td>0.54</td>
<td>1.00</td>
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<td></td>
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<td></td>
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<tr>
<td>4. Washing, ironing, mending</td>
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<td>0.42</td>
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<td>1.00</td>
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<td>5. Dish washing</td>
<td>-0.12</td>
<td>0.57</td>
<td>0.53</td>
<td>0.40</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6. Grocery shopping</td>
<td>-0.09</td>
<td>0.44</td>
<td>0.40</td>
<td>0.34</td>
<td>0.45</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>7. Paying bills</td>
<td>-0.01</td>
<td>0.13</td>
<td>0.19</td>
<td>0.25</td>
<td>0.28</td>
<td>0.40</td>
<td>1.00</td>
<td></td>
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</tr>
<tr>
<td>8. Driving others</td>
<td>0.03</td>
<td>0.14</td>
<td>0.16</td>
<td>0.15</td>
<td>0.18</td>
<td>0.21</td>
<td>0.21</td>
<td>1.00</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>9. Automobile maint.</td>
<td>0.09</td>
<td>-0.12</td>
<td>-0.06</td>
<td>-0.12</td>
<td>-0.00</td>
<td>0.06</td>
<td>0.36</td>
<td>-0.03</td>
<td>1.00</td>
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<td></td>
</tr>
<tr>
<td>10. Outdoor maint.</td>
<td>0.16</td>
<td>-0.09</td>
<td>-0.06</td>
<td>-0.11</td>
<td>0.03</td>
<td>0.05</td>
<td>0.14</td>
<td>0.06</td>
<td>0.29</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Flex. P-C activities</td>
<td>-0.01</td>
<td>0.08</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>-0.00</td>
<td>0.00</td>
<td>0.40</td>
<td>0.04</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Inflex. P-C activities</td>
<td>-0.01</td>
<td>0.08</td>
<td>0.11</td>
<td>0.12</td>
<td>0.04</td>
<td>0.00</td>
<td>0.00</td>
<td>0.39</td>
<td>0.02</td>
<td>0.95</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Eldercare activities</td>
<td>-0.09</td>
<td>0.03</td>
<td>0.03</td>
<td>0.10</td>
<td>0.54</td>
<td>0.01</td>
<td>0.01</td>
<td>-0.04</td>
<td>-0.08</td>
<td>-0.01</td>
<td>-0.02</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

N=585

Workers are those employed at least 10 hours per week and 10 weeks per year. These data are weighted.
In general, the remaining four tasks that loaded together on factor one were also correlated with earnings, but at a weaker magnitude. I view these tasks as more flexible in terms of time demands and I added together the time spent (1) dishwashing, (2) grocery shopping, (3) paying bills, and (4) driving others. Following previous literature, I named this variable female-type tasks, and its alpha coefficient is .56 in Wave 1 and .55 in Wave 2. Although dishwashing may be more of an inflexible task than flexible type task it correlated less strongly with earnings than preparing meals, cleaning house, and washing, ironing, and mending clothes. This encouraged me to add it to other female-type tasks rather than daily grind tasks.

The last two tasks loaded together on factor two and their bivariate correlation with earnings is positive. As a result, I created a male-type task variable by adding together the time spent doing (1) automobile maintenance, and (2) outdoor maintenance and its alpha coefficient in Wave 1 is .25 and in Wave 2 it is .28.

Table 6.5 shows the mean for each household maintenance task and the means for the three summary measures. In Wave 1, women spent more than twice as much time as men doing daily grind tasks (15 hours compared to six hours), and about two more hours per week doing female-type tasks (nine hours compared to approximately seven
hours). Whereas men spent about twice as much time as women doing male-type tasks (five hours compared to two hours). Almost identical gender patterns in domestic labor are found in Wave 2 compared to Wave 1.

As stated earlier, I conceptualize domestic labor as household maintenance tasks, parent-child interaction activities, and elder care. An exploratory factor analysis (not shown) with all household maintenance tasks, parent-child interaction activities, and elder care did not produce specific factors. Therefore, I interpreted this to indicate that these three measures were distinct separate measures of domestic labor.

**Parent-Child Interaction Activities**

Table 6.6 shows that the fertility profile of professional men and women is very similar. About half of the men and women have children in the home. Of these parents, only about 15 percent have young children under age five. For those who do have children, men are significantly more likely than women to have two children, and this difference is consistent in both waves. (Recall that these respondents are not married to each other).

Descriptive statistics for the activities done with children fall into two categories, flexible type and inflexible type. Doing activities such as going on picnics
<table>
<thead>
<tr>
<th>TABLE 6.5: Time Spent Per Week on Household Maintenance Tasks for Employed Professional Workers,¹ Wave 1 and Wave 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WAVE 1 (1987-88)</strong></td>
</tr>
<tr>
<td><strong>MEN</strong> &amp; <strong>WOMEN</strong></td>
</tr>
<tr>
<td>Mean &amp; S.D.</td>
</tr>
<tr>
<td>Daily Grind tasks</td>
</tr>
<tr>
<td>preparing meals</td>
</tr>
<tr>
<td>cleaning house</td>
</tr>
<tr>
<td>washing &amp; ironing clothes</td>
</tr>
<tr>
<td>Total for daily grind tasks (Alpha .63)</td>
</tr>
<tr>
<td>Female-type tasks</td>
</tr>
<tr>
<td>dishwashing</td>
</tr>
<tr>
<td>grocery shopping</td>
</tr>
<tr>
<td>paying bills</td>
</tr>
<tr>
<td>driving others</td>
</tr>
<tr>
<td>Total for female-type tasks (Alpha .56)</td>
</tr>
<tr>
<td>Male-type tasks</td>
</tr>
<tr>
<td>auto maintenance</td>
</tr>
<tr>
<td>outdoor tasks</td>
</tr>
<tr>
<td>Total for male-type tasks (Alpha .25)</td>
</tr>
<tr>
<td><strong>WAVE 2 (1992-94)</strong></td>
</tr>
<tr>
<td><strong>MEN</strong> &amp; <strong>WOMEN</strong></td>
</tr>
<tr>
<td>Mean &amp; S.D.</td>
</tr>
<tr>
<td>Daily Grind tasks</td>
</tr>
<tr>
<td>preparing meals</td>
</tr>
<tr>
<td>cleaning house</td>
</tr>
<tr>
<td>washing &amp; ironing clothes</td>
</tr>
<tr>
<td>Total for daily grind tasks (Alpha .70)</td>
</tr>
<tr>
<td>Female-type tasks</td>
</tr>
<tr>
<td>dishwashing</td>
</tr>
<tr>
<td>grocery shopping</td>
</tr>
<tr>
<td>paying bills</td>
</tr>
<tr>
<td>driving others</td>
</tr>
<tr>
<td>Total for female-type tasks (Alpha .55)</td>
</tr>
<tr>
<td>Male-type tasks</td>
</tr>
<tr>
<td>auto maintenance</td>
</tr>
<tr>
<td>outdoor tasks</td>
</tr>
<tr>
<td>Total for male-type tasks (Alpha .28)</td>
</tr>
</tbody>
</table>

¹Workers are those employed at least 10 hours per week and 10 weeks per year. These data are weighted. Underlined Mean indicates no significant gender difference at p<.05 (two-tailed tests).
or to the movies, playing, and talking with children are things that are flexible in that parents are able to choose when to do the activities. In contrast, helping a child with homework or reading is not a flexible type activity because the work has to be completed in a specific time period. Table 6.6 shows that in both waves, women were significantly more likely than men to help children with reading or homework.

The three flexible type activities of (1) going on outings, (2) working on a project or playing together, and (3) having private talks with the child are all substantively similar. A factor analysis (not shown) confirmed that these three activities all loaded on one factor which indicated that they were measuring a similar type of construct. Therefore, to create a stronger measure of flexible type activities, I added the frequencies of the three activities for a new variable of flexible parent-child interaction activities and its alpha coefficient is .67 in Wave 1 and .65 in Wave 2. This measure of flexible type parent-child interaction activities did not differ for mothers and fathers in Wave 1. But, in Wave 2, mothers were more likely than fathers to do these flexible type activities with their children.

100
TABLE 6.6: Employed Professional Workers' who are Parents, Wave 1 (1987-88) and Wave 2 (1992-94)

<table>
<thead>
<tr>
<th>CHILDREN IN THE HOUSEHOLD</th>
<th>WAVE 1</th>
<th>WAVE 2</th>
<th>t-test</th>
<th>WAVE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>t-test</td>
<td>Men</td>
</tr>
<tr>
<td>% with children (0-18 yrs)</td>
<td>55.8</td>
<td>49.6</td>
<td></td>
<td>54.5</td>
</tr>
<tr>
<td>% with young children (0-4 yrs)</td>
<td></td>
<td></td>
<td></td>
<td>14.7</td>
</tr>
<tr>
<td>(N)</td>
<td>(257)</td>
<td>(328)</td>
<td></td>
<td>(257)</td>
</tr>
<tr>
<td>Of those with children (0-18 yrs)</td>
<td></td>
<td></td>
<td></td>
<td>2.0</td>
</tr>
<tr>
<td>average number of children</td>
<td></td>
<td></td>
<td></td>
<td>(124)</td>
</tr>
<tr>
<td>PARENT-CHILD INTERACTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexible Type Activities:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent who frequently</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>go on outings with child</td>
<td>25.3</td>
<td>25.3</td>
<td>28.5</td>
<td>30.4</td>
</tr>
<tr>
<td>do projects with or play with child</td>
<td>71.5</td>
<td>67.9</td>
<td>45.8</td>
<td>59.3</td>
</tr>
<tr>
<td>have private talks with child</td>
<td>45.5</td>
<td>66.7</td>
<td>35.9</td>
<td>61.2</td>
</tr>
<tr>
<td>Average frequency of flexible activities index (Alpha coeff.)</td>
<td>6.3</td>
<td>6.4</td>
<td>6.6</td>
<td>7.2</td>
</tr>
<tr>
<td>(N)</td>
<td>(124)</td>
<td>(165)</td>
<td>(133)</td>
<td>(159)</td>
</tr>
<tr>
<td>Inflexible Type Activities:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent who frequently</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>help child with reading or homework</td>
<td>49.7</td>
<td>75.4</td>
<td>*</td>
<td>55.0</td>
</tr>
<tr>
<td>(N)</td>
<td>(121)</td>
<td>(160)</td>
<td>(101)</td>
<td>(123)</td>
</tr>
</tbody>
</table>

Workers are those employed at least 10 hours per week and 10 weeks per year. These data are weighted. *T-test (two-tailed tests) and chi-square tests by gender, significant p<.05.
Elder Care Responsibilities

The final measure of domestic labor is elder care. Table 6.7 shows that in both waves, women were significantly more likely than men to report doing elder care (14 versus approximately eight percent in Wave 1, and 36 versus approximately 25 percent in Wave 2 respectively). In Wave 1, women doing elder care spent over twice as many hours than did men (199 versus 86 hours respectively). However, in Wave 2, the time spent doing elder care decreased for women. This change reduced the gender difference in time spent doing elder care so that by Wave 2, the average number of hours spent assisting the elderly did not significantly differ for women and men. Furthermore, the percent of respondents reporting that they assisted an elderly person increased substantially from Wave 1 to Wave 2 (from 22 to 61 percent). For men, the percent doing elder care more than tripled, and for women the percent more than doubled. This change across the waves in the percent doing elder care may be largely due to the aging of the respondents and the population as a whole.

In summary, these findings show that professional men and women differed on the time spent doing domestic labor and the type of task performed. Specifically, women spent more time than men doing inflexible type tasks such as
TABLE 6.7: Elder Care Responsibilities of Employed Professional Workers:

<table>
<thead>
<tr>
<th>WAVE 1 (1987-88)</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>% who assisted someone outside household last year</td>
<td>7.8</td>
<td>14.0*</td>
</tr>
<tr>
<td>(N)</td>
<td>(257)</td>
<td>(328)</td>
</tr>
<tr>
<td>average number of hours spent assisting last year</td>
<td>86.1</td>
<td>198.9*</td>
</tr>
<tr>
<td>(N)</td>
<td>(19)</td>
<td>(44)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WAVE 2 (1992-94)</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>% who assisted someone outside household last year</td>
<td>25.3</td>
<td>36.0*</td>
</tr>
<tr>
<td>(N)</td>
<td>(257)</td>
<td>(328)</td>
</tr>
<tr>
<td>average number of hours spent assisting last year</td>
<td>120.3</td>
<td>117.3</td>
</tr>
<tr>
<td>(N)</td>
<td>(60)</td>
<td>(110)</td>
</tr>
</tbody>
</table>

*Workers are those employed at least 10 hours per week and 10 weeks per year. These data are weighted. *T-test (two-tailed tests) and chi-square by gender, significant p<.05.
daily grind tasks and elder care, as well as flexible female-type household maintenance tasks. As expected, men spent more time than women doing flexible male-type household maintenance tasks and less time doing inflexible parent-child interaction activities (such as helping children with homework and reading). Also, in Wave 1, there was no gender difference in flexible parent-child interaction activities, but, by Wave 2, men spent less time than women interacting with children in flexible type activities. I argue that inflexible type tasks are more likely to take time from work pursuits and these descriptives show that professional women spent more time doing inflexible type tasks than professional men.

End Notes

1. As stated earlier, I acknowledge that individuals may have different priorities of domestic labor tasks. However, in general, I argue that various tasks have different time restrictions. Some are more inflexible than others and this determines how they affect earnings.

2. I suggest that dishwashing is less demanding than the three daily grind tasks because dishwashers have substantially reduced the amount of time required by this task, and professionals are very likely to own this convenience appliance. Furthermore, an exploratory analysis showed that adding the hours spent dishwashing to the hours of doing the daily grind tasks did not change any of my results.
CHAPTER 7

DOMESTIC LABOR AND EARNINGS

I begin this chapter by presenting descriptive statistics for all the variables in the regression equations. Then I present multivariate models of the effects of domestic labor on the earnings of professional men and women. Throughout the chapter I assess empirical support for the prediction (1) that domestic labor reduces the earnings of both men and women, (2) that inflexible domestic labor tasks reduce earnings, and (3) that domestic labor explains an additional part of the gap between professional women's and men's earnings.

Descriptive Statistics

The descriptive statistics for all the variables that appear in the regression equations in this chapter are shown in Table 7.1. First, we see that women professionals earned significantly less than their male counterparts. Consistent with Roos and Gatta's (1999) finding that professional women earned 64 cents for every dollar earned by professional men, I found that professional women earned 63 cents for each dollar earned by professional men in 1987-88. Five years later, the earnings gap closed slightly and professional women earned 68 cents for every dollar earned by professional men. Over the five years, men's
earnings increased by almost eight thousand dollars ($37,129 to $44,743), while women’s earnings increased about seven thousand ($23,489 to $30,397).

The domestic labor measures show the same patterns highlighted earlier in Chapter 6. Women spent more time than men doing inflexible tasks such as daily grind tasks, helping children with homework and reading, and elder care, as well as performing more flexible female-type tasks. Whereas men spent more time on flexible male-type household maintenance tasks than women.

On the whole, descriptive statistics for the control variables used in the regression analyses are consistent with prior studies of professionals. In Wave 1, professional women and men were equally likely to have a graduate degree. However, gender differences were found for all job characteristics. Women worked fewer hours per week than men, women worked in female-dominated professional occupations that were on average about 63 percent female, and men were more likely than women to be working in core industries. As expected, men and women were similar on most demographic characteristics. About one-half of all professional men and women had children, over two-thirds were married, on average, men and women were the same age, and they were equally likely to live in the South. Most professionals were white, and there were significantly more
white professional men than white professional women in the sample. These same patterns are found in Wave 2. However, we see that five years later most professionals were married, but men were significantly more likely than women to be married.

Examining changes over time shows that only two characteristics did not significantly change (Table 7.1). Five years later, about half of professional men continued to work in core industries, and professional women still worked in occupations that were almost two-thirds female. Otherwise we see that over time, men increased their time spent performing the daily grind and female-type tasks, whereas women reduced their time spent on these household maintenance tasks. Both women and men reduced time spent performing male-type household maintenance tasks and increased parent-child interaction activities and elder care.

In the five year period, more professionals were awarded graduate degrees. Also, job characteristics changed as men reduced their hours worked on the job and women increased their hours. For men, the percent female in their occupation increased, and this is related to more professional women working in core industries. By Wave 2, the percent of professionals reporting having children at
home decreased, whereas more men and women reported being married and living in the South.

In summary, this examination revealed more differences than similarities between professional women and men. As presented earlier, gender differences were found in time spent doing domestic labor and in the types of tasks performed. Now we see gender differences in all three job characteristics. However, professional men and women were equally likely to have a graduate degree, and women and men were generally similar in terms of demographic characteristics.

The changes over time show that women became more similar to men on several characteristics. Specifically, by the early 1990s, women reduced their time spent performing inflexible and flexible household maintenance tasks. Also, in the five year period, more women earned graduate degrees, they increased the number of hours worked on the job, and more women were working in core industries. As stated earlier, the gender gap in earnings narrowed in Wave 2, and these changes observed for women over time may partly explain why women’s earnings grew closer to men’s.

**Multivariate Analysis**

I begin the multivariate analysis with models that show women’s earnings relative to men’s controlling on
### TABLE 7.1: Descriptive Statistics for Variables used in Earnings Equations for Employed Professional Workers, Wave 1 and Wave 2

<table>
<thead>
<tr>
<th></th>
<th>WAVE 1 (1987-88)</th>
<th>WAVE 2 (1992-94)</th>
<th>t-test</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MEN</td>
<td>WOMEN</td>
<td>MEN</td>
<td>WOMEN</td>
</tr>
<tr>
<td>DEPENDENT VARIABLE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average annual earnings</td>
<td>$37,129</td>
<td>* $23,489</td>
<td>$44,743</td>
<td>* $30,397</td>
</tr>
<tr>
<td>Gender earnings gap</td>
<td>.63</td>
<td>.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOMESTIC LABOR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average hours per week spent performing daily grind tasks</td>
<td>6.4</td>
<td>* 15.0</td>
<td>6.6</td>
<td>* 14.6</td>
</tr>
<tr>
<td>female-type tasks</td>
<td>6.7</td>
<td>* 9.4</td>
<td>7.4</td>
<td>* 8.9</td>
</tr>
<tr>
<td>male-type tasks</td>
<td>5.3</td>
<td>* 1.7</td>
<td>5.2</td>
<td>* 1.5</td>
</tr>
<tr>
<td>Flexible parent-child activities</td>
<td>6.2</td>
<td>* 6.4</td>
<td>6.6</td>
<td>* 7.2</td>
</tr>
<tr>
<td>Inflexible parent-child activities</td>
<td>2.3</td>
<td>* 2.6</td>
<td>2.4</td>
<td>* 2.7</td>
</tr>
<tr>
<td>% who report doing elder care</td>
<td>7.6</td>
<td>* 13.9</td>
<td>24.9</td>
<td>* 31.8</td>
</tr>
<tr>
<td>HUMAN CAPITAL CHARACTERISTICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% with a graduate degree</td>
<td>47.2</td>
<td>41.4</td>
<td>50.5</td>
<td>48.7</td>
</tr>
<tr>
<td>JOB CHARACTERISTICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average number of hours worked per week</td>
<td>45.2</td>
<td>* 40.4</td>
<td>44.8</td>
<td>* 40.9</td>
</tr>
<tr>
<td>Average % female in occupation</td>
<td>38.6</td>
<td>* 63.1</td>
<td>40.7</td>
<td>* 64.3</td>
</tr>
<tr>
<td>% working in core industry</td>
<td>50.2</td>
<td>* 20.5</td>
<td>50.7</td>
<td>* 27.4</td>
</tr>
<tr>
<td>DEMOGRAPHIC CHARACTERISTICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% with children</td>
<td>55.8</td>
<td>49.6</td>
<td>54.2</td>
<td>43.9</td>
</tr>
<tr>
<td>% married</td>
<td>72.0</td>
<td>66.8</td>
<td>82.9</td>
<td>* 70.1</td>
</tr>
<tr>
<td>Average age</td>
<td>38.3</td>
<td>38.0</td>
<td>44.1</td>
<td>43.8</td>
</tr>
<tr>
<td>% living in South</td>
<td>28.7</td>
<td>29.7</td>
<td>29.0</td>
<td>31.6</td>
</tr>
<tr>
<td>% white</td>
<td>93.0</td>
<td>* 84.5</td>
<td>93.0</td>
<td>* 84.5</td>
</tr>
</tbody>
</table>

**N** 257 328 257 328

'Workers are those employed at least 10 hours per week and 10 weeks per year. Annual earnings are presented in constant 1987 dollars. TT-test (two-tailed tests) and chi-square by gender, significant p<.05. Means in Wave 2 with a + indicate no significant change from Wave 1 to Wave 2 at p<.10 (paired t-tests). These data are weighted.'
various characteristics. This analysis demonstrates whether the gender difference in professionals earnings can be explained by domestic labor. In Table 7.2, Model 1 regresses logged annual earnings only on gender. In this baseline model, without controlling on any variables, we see that women earned significantly less than men (coefficient for women is -.479).

Model 2 shows earnings regressed on gender controlling for human capital, job, and demographic characteristics. In this model, the effect for women is reduced to -.315, indicating that gender differences in the control variables also explain earnings. Significant positive effects appear for having a graduate degree, the number of hours worked on the job, working in a core industry, and age.2

The last model adds the variables for domestic labor and elder care.3 In Model 3, the coefficient for women reduced further to -.257. This is evidence that domestic labor explains part of the earnings differences between men and women. In addition, note that the coefficient for the daily grind is negative and significant. This shows that earnings are reduced as the time spent performing these inflexible type tasks increased. In contrast, the coefficient for female-type tasks is positive and significant indicating that as time spent doing flexible female-type household maintenance tasks increased, earnings
also increased. The coefficients for male-type tasks and
eider care show that these tasks did not significantly
affect earnings.

Since the three models are nested, I used a
statistical test developed by Clogg, Petkova, and Haritou
(1995) to determine whether the reduction in the magnitude
of the gender coefficient between the models was a
significant change. This test allows me to assess whether
domestic labor variables contribute in a meaningful way to
the gender difference in earnings. The Clogg test showed
that the reduction in the gender coefficient from Models 1
to 2, and from Models 2 to 3 were significant. By adding
the control variables in Model 2, I reduced the magnitude
of the gender coefficient by 34 percent. Moreover, adding
the domestic labor variables further reduced it by 18
percent. This shows that domestic labor is in fact a
contributing factor to any explanation of why professional
men earn more than professional women.

In the next set of models, I regressed earnings on
gender in Wave 2. Like the earlier models, those in Table
7.3 show that professional women earned less than
professional men. This effect holds net of the control
variables. Factors that increase earnings include working
more hours, having a graduate degree, working in a core

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TABLE 7.2: OLS Regression Estimates of Annual Earnings (logged) on Gender and Domestic Labor for Employed Professional Workers, Wave 1 (1987-88)

<table>
<thead>
<tr>
<th>MODEL 1</th>
<th>MODEL 2</th>
<th>MODEL 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>S.E.</td>
<td>b</td>
</tr>
</tbody>
</table>

**GENDER**
- Men: contrast
- Women: \(-0.479^{**} 0.050\)  \(-0.315^{**} 0.052\)  \(-0.257^{**} 0.060\)

**DOMESTIC LABOR**
- Hours spent doing daily grind tasks: \(-0.015^{**} 0.004\)
- female-type tasks: \(0.016^{**} 0.004\)
- male-type tasks: \(-0.003 0.006\)
- Elder care (1=Yes/0=No): \(0.062 0.073\)

**HUMAN CAPITAL CHARACTERISTICS**
- Education (1=Graduate degree): \(0.156^{**} 0.048\)  \(0.133^{**} 0.048\)

**JOB CHARACTERISTICS**
- Hours worked on the job: \(0.013^{**} 0.002\)  \(0.013^{**} 0.002\)
- % female in occupation: \(-0.128 0.109\)  \(-0.102 0.108\)
- Industry (1=Core): \(0.183^{**} 0.054\)  \(0.177^{**} 0.054\)

**DEMOGRAPHIC CHARACTERISTICS**
- Children (1=Have children): \(0.012 0.056\)  \(0.016 0.056\)
- Marital status (1=Married): \(0.045 0.058\)  \(0.054 0.057\)
- Age in years: \(0.117^{**} 0.020\)  \(0.121^{**} 0.019\)
- Age squared: \(-0.012^{**} 0.002\)  \(-0.013^{**} 0.002\)
- Region (1=South): \(-0.012 0.050\)  \(0.001 0.049\)
- Race (1=White): \(-0.092 0.073\)  \(-0.100 0.073\)

<table>
<thead>
<tr>
<th>Intercept</th>
<th>Adjusted R²</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.383</td>
<td>0.133</td>
<td>585</td>
</tr>
<tr>
<td>7.117</td>
<td>0.330</td>
<td>585</td>
</tr>
<tr>
<td>7.091</td>
<td>0.346</td>
<td>585</td>
</tr>
</tbody>
</table>

*Workers are those employed at least 10 hours per week and 10 weeks per year.

Coeficient has been multiplied by 10 for presentation. These data are weighted.

*p<.10  **p<.05 (two-tailed tests)
industry, and being older. However, as the presence of women in an occupation increased, earnings dropped. Also, professionals in the South earned less than those in other regions.

In contrast to earlier findings, results from the Clogg test (Clogg et al., 1995) suggest that domestic labor did not have significant effects on earnings in Wave 2. Only the reduction in the gender coefficient from Models 1 to 2 was significant: it dropped by 44 percent. In Model 3, adding the measures of domestic labor to the model did not significantly reduce the gender difference in earnings. Thus, by the early 1990s, domestic labor investments no longer help us understand earnings differences between professional men and women. I will explore several explanations for the disappearance of this effect in my conclusions. Before doing so, however, I examine interaction models to see whether the effects of domestic labor vary by gender.

**Interaction Analysis**

It is possible that men’s and women’s earnings are effected differently by domestic labor. If so, the additive OLS regression models may have masked this gender difference. To investigate whether the effects of domestic labor on earnings varies by gender I interacted each of the
TABLE 7.3: OLS Regression Estimates of Annual Earnings (logged) on Gender and Domestic Labor for Employed Professional Workers,^ Wave 2 (1992-94)

<table>
<thead>
<tr>
<th></th>
<th>MODEL 1</th>
<th></th>
<th>MODEL 2</th>
<th></th>
<th>MODEL 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>S.E.</td>
<td>b</td>
<td>S.E.</td>
<td>b</td>
<td>S.E.</td>
</tr>
<tr>
<td>GENDER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>contrast</td>
<td></td>
<td>contrast</td>
<td></td>
<td>contrast</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>-.393**</td>
<td>.043</td>
<td>-.220**</td>
<td>.046</td>
<td>-.182**</td>
<td>.053</td>
</tr>
<tr>
<td>DOMESTIC LABOR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours spent doing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>daily grind tasks</td>
<td>-.004</td>
<td>.003</td>
<td>-.004</td>
<td>.002</td>
<td>-.004</td>
<td>.003</td>
</tr>
<tr>
<td>female-type tasks</td>
<td>.002</td>
<td>.004</td>
<td>.002</td>
<td>.004</td>
<td>.002</td>
<td>.004</td>
</tr>
<tr>
<td>male-type tasks</td>
<td>.003</td>
<td>.006</td>
<td>.003</td>
<td>.006</td>
<td>.003</td>
<td>.006</td>
</tr>
<tr>
<td>Elder care (1=Yes/0=No)</td>
<td>-.039</td>
<td>.044</td>
<td>-.039</td>
<td>.044</td>
<td>-.039</td>
<td>.044</td>
</tr>
<tr>
<td>HUMAN CAPITAL CHARACTERISTICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education (1=Graduate degree)</td>
<td>.187*</td>
<td>.041</td>
<td>.186**</td>
<td>.042</td>
<td>.186**</td>
<td>.042</td>
</tr>
<tr>
<td>JOB CHARACTERISTICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours worked on the job</td>
<td>.014**</td>
<td>.002</td>
<td>.014**</td>
<td>.002</td>
<td>.014**</td>
<td>.002</td>
</tr>
<tr>
<td>% female in occupation</td>
<td>-.354**</td>
<td>.103</td>
<td>-.333**</td>
<td>.104</td>
<td>-.333**</td>
<td>.104</td>
</tr>
<tr>
<td>Industry (1=Core)</td>
<td>.115*</td>
<td>.046</td>
<td>.117**</td>
<td>.046</td>
<td>.117**</td>
<td>.046</td>
</tr>
<tr>
<td>DEMOGRAPHIC CHARACTERISTICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children (1=Have children)</td>
<td>-.022</td>
<td>.046</td>
<td>-.022</td>
<td>.047</td>
<td>-.022</td>
<td>.047</td>
</tr>
<tr>
<td>Marital status (1=Married)</td>
<td>.051</td>
<td>.052</td>
<td>.051</td>
<td>.052</td>
<td>.051</td>
<td>.052</td>
</tr>
<tr>
<td>Age in years</td>
<td>.041**</td>
<td>.019</td>
<td>.040**</td>
<td>.019</td>
<td>.040**</td>
<td>.019</td>
</tr>
<tr>
<td>Age squared^2</td>
<td>-.004*</td>
<td>.002</td>
<td>-.004**</td>
<td>.002</td>
<td>-.004**</td>
<td>.002</td>
</tr>
<tr>
<td>Region (1=South)</td>
<td>-.073*</td>
<td>.043</td>
<td>-.076*</td>
<td>.044</td>
<td>-.076*</td>
<td>.044</td>
</tr>
<tr>
<td>Race (1=White)</td>
<td>-.080</td>
<td>.060</td>
<td>.090</td>
<td>.065</td>
<td>.090</td>
<td>.065</td>
</tr>
<tr>
<td>INTERCEPT</td>
<td>10.795</td>
<td>.029</td>
<td>9.213</td>
<td>.428</td>
<td>9.265</td>
<td>.441</td>
</tr>
<tr>
<td>Adjusted R^2</td>
<td>.123</td>
<td>.271</td>
<td>.270</td>
<td>.270</td>
<td>.270</td>
<td>.270</td>
</tr>
</tbody>
</table>

^Workers are those employed at least 10 hours per week and 10 weeks per year.
*Coefficient has been multiplied by 10 for presentation. These data are weighted.
^p<.10 **p<.05 (two-tailed tests)
domestic labor measures with the gender dichotomous variable. Results are shown for both waves in Table 7.4.

The interaction model for Wave 1 shows effects for daily grind tasks and female-type tasks that are similar to those in Table 7.2. However, interpretation of interaction models requires examination of both the original variable and the interaction term (Hardy 1993; Jaccard, Turrisi, and Wan 1990). In the interaction model, the coefficient for the original daily grind variable estimates the effect of this type of domestic labor on both men’s and women’s earnings. The interaction term (women*daily grind) estimates the difference between the net effect of domestic labor for women and men. Or, stated another way, it is the extra effect of daily grind tasks on women’s earnings.

However, the interaction term for gender and daily grind tasks is not significant suggesting that evidence of a gender difference in this type of task is weak. We see the same results for the interaction term of women*female-type tasks. Since the original variables of daily grind and female-type tasks are significant, this leads to the conclusion that the effects of these types of domestic labor on earnings operates irrespective of gender. Thus, for both women and men, time spent performing inflexible daily grind tasks reduced earnings, whereas flexible female-type tasks increased earnings.
In Table 7.4, Wave 1, both the original elder care variable and the interaction term are significant. However, after computing the extra effect of doing elder care for women (.215 + -.251 = -.036), the effect for women is negligible and not indicative of a gender difference in doing elder care.

The interaction model for Wave 2 shows that the interaction terms of domestic labor and gender are not significant. In addition, the F test on the change in the R² showed that the fit of the model did not significantly improve. This indicates that there was not a gender difference in the effect of domestic labor on earnings in Wave 2, and the additive model (Model 3, Table 7.3) is the most appropriate model to interpret.

In summary, this interaction analysis revealed that generally the effects of domestic labor on earnings operate in the same way for women and men. The model for Wave 1 was consistent with earlier findings and shows that for both women and men, time spent doing daily grind tasks reduced earnings, whereas time spent performing flexible female-type tasks raised earnings.

### The Relationship Between Domestic Labor and Earnings Over Time

In the final phase of my analysis I examine whether domestic labor reduces earnings over time. I have argued
TABLE 7.4: OLS Regression Estimates of Annual Earnings (logged) on Gender and Domestic Labor for Employed Professional Workers, Wave 1 and Wave 2

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>S.E.</td>
</tr>
<tr>
<td>GENDER (contrast=Men)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>-.220**</td>
<td>.089</td>
</tr>
<tr>
<td>DOMESTIC LABOR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours spent doing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the daily grind</td>
<td>-.011*</td>
<td>.006</td>
</tr>
<tr>
<td>female-type tasks</td>
<td>.012*</td>
<td>.007</td>
</tr>
<tr>
<td>male-type tasks</td>
<td>-.003</td>
<td>.007</td>
</tr>
<tr>
<td>Elder care (1=Yes/0=No)</td>
<td>.215*</td>
<td>.118</td>
</tr>
<tr>
<td>INTERACTIONS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women*daily grind</td>
<td>-.007</td>
<td>.008</td>
</tr>
<tr>
<td>Women*female-type tasks</td>
<td>.008</td>
<td>.009</td>
</tr>
<tr>
<td>Women*male-type tasks</td>
<td>-.000</td>
<td>.016</td>
</tr>
<tr>
<td>Women*elder care</td>
<td>-.251*</td>
<td>.148</td>
</tr>
<tr>
<td>HUMAN CAPITAL CHARACTERISTICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education (1=Graduate degree)</td>
<td>.131*</td>
<td>.049</td>
</tr>
<tr>
<td>JOB CHARACTERISTICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours worked on the job</td>
<td>.013*</td>
<td>.002</td>
</tr>
<tr>
<td>% female in occupation</td>
<td>-.107</td>
<td>.109</td>
</tr>
<tr>
<td>Industry (1=Core)</td>
<td>.184**</td>
<td>.054</td>
</tr>
<tr>
<td>DEMOGRAPHIC CHARACTERISTICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children (1=Have children)</td>
<td>-.012</td>
<td>.056</td>
</tr>
<tr>
<td>Marital status (1=Married)</td>
<td>.066</td>
<td>.059</td>
</tr>
<tr>
<td>Age in years</td>
<td>.124**</td>
<td>.020</td>
</tr>
<tr>
<td>Age squared</td>
<td>-.001**</td>
<td>.002</td>
</tr>
<tr>
<td>Region (1=South)</td>
<td>.000</td>
<td>.050</td>
</tr>
<tr>
<td>Race (1=White)</td>
<td>-.099</td>
<td>.074</td>
</tr>
<tr>
<td>Intercept</td>
<td>7.016</td>
<td>.392</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.346</td>
<td>.271</td>
</tr>
<tr>
<td>N</td>
<td>585</td>
<td>585</td>
</tr>
</tbody>
</table>

Workers are those employed at least 10 hours per week and 10 weeks per year.

*Coefficient has been multiplied by 10 for presentation. These data are weighted.

*p<.10 **p<.05 (two-tailed tests)
that time spent performing domestic labor constrains career opportunities and consequently reduces earnings in the long term. To assess whether time spent performing domestic labor in Wave 1 had a lagged effect and reduced earnings in Wave 2, I estimated a conditional change model (Finkel 1995). Earnings in Wave 2 were regressed on gender, domestic labor and earnings in Wave 1, and the modified control variables. (As described in Chapter 5, all of the control variables were recalculated to reflect change in status between the five years.)

Similar to earlier findings, the model in Table 7.5 shows that professional women earned less than professional men, net of controls. As expected, earnings in Wave 1 were related to earnings in Wave 2. However, after holding constant the changes that may have occurred between the two waves in all the control variables, domestic labor performed in Wave 1 did not significantly affect earnings in Wave 2. This indicates that time spent doing domestic labor did not have long term effects on professional men’s and women’s earnings.

In addition, the changes in human capital, job, and demographic characteristics were not important predictors of earnings in Wave 2. This is probably due to the minimal amount of change that professionals experienced in these characteristics. However, professionals who moved to the

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South in the five year period, earned less than professionals in other regions.

There are statistical reasons that could explain the lack of support for my prediction that domestic labor affects earnings over time including the estimates sensitivity to unaccounted for random and nonrandom measurement errors (Finkel 1995). Also, it is possible that we do not find lagged effects for domestic labor on earnings because five years is too long to accurately assess these types of effects. For professionals, earnings penalties incurred for time spent performing domestic labor tasks may appear in a shorter time span, perhaps within the same year, or the year after, rather than five years later.

Another important consideration is that some professionals changed jobs in the five year span. Unfortunately, these data do not provide the reasons for a job change and there could be numerous explanations. For example, it is possible that I did not find lagged effects for time spent performing domestic labor because the professionals that were having difficulty balancing work and family responsibilities experienced reduced earnings and consequently they changed jobs.

In summary, my analysis has consistently shown that net of controls, professional women earned less than professional men. In Wave 1, time spent doing domestic
TABLE 7.5: OLS Regression Estimates of Wave 2 Annual Earnings (ln) on Wave 1 Domestic Labor for Employed Professional Workers¹

<table>
<thead>
<tr>
<th></th>
<th>FULL SAMPLE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>S.E.</td>
</tr>
<tr>
<td>ANNUAL EARNINGS (Wave 1 ln)</td>
<td>.435**</td>
<td>.035</td>
</tr>
<tr>
<td>GENDER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men contrast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>-.168**</td>
<td>.050</td>
</tr>
<tr>
<td>DOMESTIC LABOR (Wave 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours spent doing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the daily grind</td>
<td>-.004</td>
<td>.003</td>
</tr>
<tr>
<td>female-type tasks</td>
<td>.004</td>
<td>.004</td>
</tr>
<tr>
<td>male-type tasks</td>
<td>-.006</td>
<td>.005</td>
</tr>
<tr>
<td>Elder care (1=Yes/0=No)</td>
<td>.058</td>
<td>.063</td>
</tr>
<tr>
<td>(Change variables)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HUMAN CAPITAL CHARACTERISTICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education (1=Graduate degree)</td>
<td>.059</td>
<td>.087</td>
</tr>
<tr>
<td>JOB CHARACTERISTICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours worked on the job</td>
<td>.016</td>
<td>.041</td>
</tr>
<tr>
<td>female in occupation</td>
<td>-.106</td>
<td>.112</td>
</tr>
<tr>
<td>Industry (1=Core)</td>
<td>.066</td>
<td>.041</td>
</tr>
<tr>
<td>DEMOGRAPHIC CHARACTERISTICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children (1=Have children)</td>
<td>.010</td>
<td>.040</td>
</tr>
<tr>
<td>Marital status (1=Married)</td>
<td>.014</td>
<td>.055</td>
</tr>
<tr>
<td>Age in years</td>
<td>.004</td>
<td>.019</td>
</tr>
<tr>
<td>Age squared²</td>
<td>-.000</td>
<td>.000</td>
</tr>
<tr>
<td>Region (1=South)</td>
<td>.183**</td>
<td>.091</td>
</tr>
<tr>
<td>Race (1=White)</td>
<td>-.076</td>
<td>.069</td>
</tr>
<tr>
<td>Intercept</td>
<td>6.302</td>
<td>.485</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.334</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>585</td>
<td></td>
</tr>
</tbody>
</table>

¹Workers are those employed at least 10 hours per week and 10 weeks per year. ²Coefficient has been multiplied by 10 for presentation. These data are weighted. ³P<.05
labor reduced the earnings of professionals and explained an additional part of the gender earnings gap. The reason that domestic labor helps explain some of the gender difference in earnings is due to women doing more domestic labor, not that they are penalized differently for doing domestic labor.

The results in Wave 1 supported my hypothesis that doing inflexible tasks reduced earnings. In the late 1980s, performing daily grind tasks reduced both women’s and men’s earnings. In contrast, flexible tasks including female-type and male-type tasks either increased or had no effect on the earnings of professional women and men. This finding supports my contention that various tasks affect earnings differently. I expected a difference by type of task because some types of household maintenance tasks do not interfere with paid labor and thereby do not reduce earnings. However, there is no clear explanation for why performing flexible female-type tasks results in financial rewards.

Although there were significant effects for some types of household tasks in Wave 1, these effects did not appear in Wave 2. Thus, the dimensions of domestic labor did not contribute to our understanding of gender differences in professionals’ earnings in the early 1990s. Furthermore, I did not find support for my prediction that domestic labor
reduces earnings over time. In the final chapter I address
the expected and unexpected findings of my analysis and
discuss possible explanations for the lack of consistent
results in both waves.

End Notes

1. For this comparison, I used the Consumer Price Index
(U.S. Bureau of Labor Statistics 1996) to create a deflator

2. In my analysis age is a continuous measure. To
investigate whether the effects of domestic labor on
earnings varied with age I conducted several exploratory
regression analyses using different transformations of age
including: age cohorts of those in their 20s, 30s, 40s, and
50 years or older; interaction variables with each domestic
labor variable interacted with a dichotomous for age (i.e.,
less than 45 years versus 45 years or older); interaction
variables with each age cohort and each domestic labor
task. Overall, the findings from these analyses were the
same as that found when using age as a continuous variable.
Thus, I concluded that domestic labor effects on earnings
do not vary with age.

3. Note that the parent-child interaction activities
variables were not included in the regression equations. As
might be expected, these variables were highly collinear
with each other (r= .91 in Wave 1, and r= .95 in Wave 2) and
with the dichotomous variable indicating the presence of
children. Furthermore, the bivariate correlations between
the parent-child interaction activities and earnings was
very weak, whereas, the association between presence of
children and earnings was notable. I conducted an
exploratory regression analysis (results not shown) with
the variables for parent-child interaction activities and
found no significant differences in any of my findings.
Thus, in the interest of parsimony and consistency with
prior studies on earnings, I dropped the variables for
parent-child interaction activities and included the
variable for presence of children in all regression
analyses.
CHAPTER 8
SUMMARY AND CONCLUSIONS

In this dissertation, I focused on how time spent doing domestic labor affected the earnings of professionals. These workers have received little attention in previous studies of domestic labor and earnings. My study revealed expected and unexpected findings that taken together lack a convincing explanation. For example, as expected, professional women earned less than professional men, net of controls. This is consistent with previous reports that women with the highest levels of education earn less than comparable men (Roos and Gatta 1999; Spain and Bianchi 1996).

The results also provided some support for my prediction that performing daily grind tasks reduced both women’s and men’s earnings. Irrespective of gender, performing daily grind tasks that are less flexible than other tasks reduced earnings. I also found evidence that female- and male-type tasks affected earnings differently than daily grind tasks. In fact, the former either increased or had no effect whatsoever on professionals’ earnings. This finding is consistent with the idea that flexible tasks do not interfere with paid labor and thereby
do not reduce earnings. However, what was unexpected was that female-type tasks actually increased earnings.

In support of one hypothesis, I found that domestic labor explained some of the unexplained gender difference in professionals' earnings. Specifically, domestic labor explained an additional 18 percent of the gap between professional women's and men's earnings in Wave 1. This finding contributes to our understanding of why women earned less than men in the late 1980s.

Contrary to expectations, there was no evidence that domestic labor affected professionals' earnings five years later in the early 1990s (Wave 2). However, a substantial gender gap in earnings remained. Explanations for why the domestic labor effects on earnings found in the late 1980s did not persist in the 1990s are not clear-cut. However, it may be helpful to consider other changes that occurred during this time, such as the rate of professionalization among women and economic conditions.

During the 1987 to 1994 period, there were two important changes affecting professionals. First, women were still relatively new to professions in the late 1980s because the largest increase in women professionals occurred in the early 1980s (Bianchi 1995). As a result, by the early 1990s, women became more similar to men on several characteristics. Specifically, compared to five
years earlier, women performed fewer hours of domestic labor, increased the number of hours worked on the job, were more likely to have a graduate degree, and more likely to work in core industry. These changes reduced gender differences in these characteristics among professionals.

Second, in the early 1990s, the United States experienced an economic recession. Relative to earlier recessions, white collar workers experienced more unemployment and reduced earnings during the early 1990s. The downsizing and restructuring that occurred during this recession especially affected men between the ages of 40 and 60 who worked in management and administrative positions. These workers experienced a 10 percent decline in earnings between 1989 and 1992 (Levy 1995:45). This white collar recession affected middle and upper class families directly. Many unemployed and underemployed white collar workers found themselves and their families facing unanticipated financial difficulties (cf. Newman 1988).

Although these shifts help to place the findings from the present study in context, another critical aspect to consider when examining the relationship between domestic labor and earnings is the issue of selection. It is very likely that some workers selectively choose jobs that help them manage their domestic labor responsibilities, even though these jobs may offer lower-pay. For example, women
may deliberately choose to be elementary school teachers because the occupation does not require summer work, thereby allowing them time off when children are not in school. Unfortunately, my data set does not allow for an empirical examination of worker's preferences for particular jobs. Examining how different types of jobs accommodate, or interfere with, family responsibilities (and how they vary in pay) is an empirical question for future research.

In the present study, after considering effects of domestic labor, human capital, job, and demographic characteristics, a gap in earnings between men and women remained. The gender gap in earnings may reflect discrimination in the workplace. Women have been the targets of many discriminatory practices in the past (Goldin 1990; England 1992). Discrimination can occur at the institutional level, whereby businesses benefit from the pay discrepancy between men and women, or at the individual level, whereby employers make decisions about employees' compensation based on their perception that women should earn less than men. Measuring discrimination directly is difficult and conclusions that explain exactly why women earn less than men are not yet possible. This is a direction for future research.
The present study addresses the limitations of prior studies by (1) examining the earnings of professionals, a group that has received little attention in previous research, and (2) conceptualizing domestic labor as a multidimensional construct that includes household maintenance tasks such as daily grind tasks, female- and male-type tasks, parent-child interaction activities, and elder care. The latter is particularly relevant because prior studies of domestic labor and earnings have not included elder care in their model specification.

The search for answers about the best way for workers to juggle their work and family needs is on-going. My investigation of professionals is important because it demonstrated how the relationship between domestic labor and earnings operates among workers who typically earn higher pay and have more autonomy on the job. As the effort toward gender equality in earnings continues, it is helpful to know that taking time to care for an elderly relative, prepare meals, clean the house, and wash clothes inconsistently penalizes earnings. What lies ahead is the challenge of disentangling the true nature of this relationship.

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APPENDIX

SAMPLE SELECTION

The NSFH Sample Over Time

In Wave 1, the NSFH was administered to 13,007 respondents. Of those respondents, 763 (5.9 percent) were deceased at the time of the Wave 2 interview. At Wave 1, most of these persons were 65 years or older, married, white, there were more women than men, most had eight years of education and reported having no children under 18 years living in the home.

After subtracting the deceased, NSFH had a sample of 12,224 respondents from Wave 1 to interview again in Wave 2. Of these respondents, 2,233 (18.3 percent with 45 percent women and 55 percent men) were not interviewed in Wave 2. These persons did not complete the second interview because of the following reasons: too ill (2.3 percent), unable to trace (6.1 percent), other reason (1.9 percent), or refused (8.0 percent). The two categories of unable to trace and refused included the largest number of non respondents (14.1 percent of the 18.3 percent). The data in Wave 1 shows that the respondents that the researchers were unable to trace or who refused to participate in Wave 2 had the following characteristics: in 1987-88 they were 25-30 years old, married, white, they had no children under age
18 living in the home, had 12 years of education, and there were more women than men.

My Sample Selection Procedure

The following section describes the criteria I used to determine the sample of professional workers for my analysis using two waves of NSFH data. First, I selected respondents from Wave 1 if they reported (1) working at time of survey or worked in 1987, (2) being a wage and salary worker and due to my research question I dropped those who were self-employed or working in family business, and (3) working 10 or more weeks in 1987. Then, of the Wave 1 workers who also appeared in Wave 2, I used the same three employment criteria to determine their work status in 1992.

After selecting workers in both waves I then determined those respondents working in professional occupations. Defining this category of workers is difficult because there is a great deal of heterogeneity among and within these occupations. Freidson (1986) states that definitions of professions are largely arbitrary. Indeed, after reviewing the literature, I concluded that a uniform definition of professionals is not available. Thus, drawing from the work of Freidson (1981), Roos (1994), and Hall (1969) I defined professional occupations as those
requiring specialization and extensive educational training. They usually have strict entrance requirements, ethical codes, and often require certification status or licensing.

Using this definition as a guide, I determined whether the occupations in the Census professional categories actually represented professional workers. To begin, I selected those in occupations that were considered professions by all of the authors I reviewed including those in the classic professions and the newer professions. There were remaining groups of workers defined in the Census as professional that I evaluated individually because most of these occupations were not mentioned specifically as professions in any of the sources I checked, nor did they clearly fit my definition. This evaluation is explained further after I present the selection steps of my procedure. In the following text, the Census sub-categories are underlined and Census codes for the occupations appear in parentheses. My selection of professionals was as follows:

1. Selected those in classic professions including medicine (84), lawyers and judges (178-179), clergy (176), and university teaching (113-154).
2. Selected those in newer professions:

*Executive, Administrative, and Manager Occupations* includes for example, accounting (23), city management and planning (4-5), managers and administrators whose jobs require specific educational credentials, school principals and superintendents (14), health/hospital administration (15), and funeral direction (18). *Professional Speciality Occupations* (43-83, 166-173) includes for example, engineers, architects, scientists (64-83), social scientists and urban planners (166-173). *Health Diagnosing Occupations* (84-106) includes for example, dentistry (85), veterinary medicine (86), optometry (87), nursing (95), pharmacists (96), therapists (98-105), and physician’s assistants (106). *Teachers, except Post Secondary* (155-159). *Counselors* (163). *Librarians* (164). *Archivists and Curators* (165). *Social, Recreation, and Religious Workers* includes social work (174), and clergy (176).

Next, I reviewed the job requirements of all the Census professional occupations that were listed in the *Occupational Outlook Handbook* (OOH, U.S. Department of Labor Statistics 1986). This text covers 98 percent of professional speciality occupations and 90 percent of all technical and related occupations. It describes what level of education is usually required, what most job holders in the occupation have obtained, and what level of education
is preferred by employers. As expected, the classic and newer professions required at least a bachelor’s degree.

The occupations that I individually evaluated using information from the OOH about the average requirements for each occupation include the following: **Executive, Administrative, and Manager Occupations** all managers and administrators not specifically mentioned above; **Social, Recreation, and Religious Workers** includes recreation workers (175) and religious workers (175, 177); **Writers, Artists, Entertainers, and Athletes** (183-199) includes for example, authors (183), technical writers (184), composers (186), and editors (195); **Technicians, Sales, and Administrative Support** (203-235) and workers in these occupations are generally referred to as paraprofessionals because they work with professionals but they are subordinate. This final category includes for example, clinical laboratory technologists (203), dental hygienists (204), radiologic technicians (206), licensed practical nurses (207), electrical and electronic technicians (213), drafting (217), surveying (218), science technicians (223-225), airplane pilots (226), air traffic controllers (227), computer programmers (229), and legal assistants (234).

After reading the descriptions for the questionable professions (noted above) it became clear that using education as the primary selection criteria would ensure
the most accurate sample of professional workers. For example, the occupations in the Executive, Administrative, and Managerial category included a wide variety of jobs and the OOH stated that educational attainment varies considerably in these occupations. However, advanced education is increasingly important and in 1984 over 40 percent of all managers and administrators had completed four or more years of college.

Most of the Census technical occupations required completion of specialized technical training that qualified the individual for a specific job that usually did not offer advancement opportunities. However, there were a few technical occupations where bachelor degrees were required or preferred. In these technical occupations those that hold advanced college degrees are more likely to be in supervisory positions, or positions that offer advancement. These occupations include clinical laboratory technologists and technicians (203), air traffic controller (227), and computer programmer (229).

The Census professional occupation subsection Writers, Artists, Entertainers, and Athletes includes a variety of occupations and most do not have specific education requirements. Occupations that are exceptions and require a bachelor’s degree or more include technical writers (184), designers (185), graphic and fine artists (194), reporters...
(195), and public relations specialists (197). The occupations under Social, Recreation, and Religious Workers also reported wide variation with employees' education ranging from less than high school to advanced degrees.

This review led me to conclude that selecting college educated professional workers was the best approach. It appears that those with less than college are likely to experience constrained opportunities for advancement in these professional occupations. After selecting respondents who were employed in both waves in professional occupations I selected only those with at least a bachelor's degree. This produced a sample of 585 professionals (328 women and 257 men).

The distribution by occupation and gender for these professionals is shown in Tables A.1 and A.2. In the tables, the professions have been grouped into fifteen main categories and the average earnings for women and men are shown for both waves.

**Respondents Dropped from My Analysis**

After selecting the employed professionals for both waves, I found that 366 respondents (208 men and 158 women) from Wave 1 were not included in my final sample. Of these 366 respondents, 110 were not interviewed in Wave 2 for the reasons noted above. The remaining 256 professionals had
Table A.1: Employed Professional Workers,¹ by Occupational Group, Wave 1

<table>
<thead>
<tr>
<th></th>
<th>MEN Mean Earnings</th>
<th>WOMEN Mean Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Executive, Administrative, and Managerial</td>
<td>34 $39,983</td>
<td>17 $26,445</td>
</tr>
<tr>
<td>2. Engineers, Architects and Surveyors</td>
<td>16 $37,215</td>
<td>5 $27,232</td>
</tr>
<tr>
<td>3. Health Diagnosing (e.g., M.D., Dentists)</td>
<td>2 $66,103</td>
<td>1 $23,000</td>
</tr>
<tr>
<td>4. Health assessing and treating (e.g., R.N.)</td>
<td>1 $28,375</td>
<td>11 $21,590</td>
</tr>
<tr>
<td>5. Therapists</td>
<td>0 0 0</td>
<td>1 $17,794</td>
</tr>
<tr>
<td>6. Teachers, Postsecondary</td>
<td>6 $43,262</td>
<td>6 $26,311</td>
</tr>
<tr>
<td>7. Teachers, except Post Secondary</td>
<td>18 $30,714</td>
<td>36 $22,434</td>
</tr>
<tr>
<td>8. Counselors</td>
<td>0 $45,991</td>
<td>1 $32,933</td>
</tr>
<tr>
<td>9. Librarians, Archivists, and Curators</td>
<td>1 $18,686</td>
<td>3 $25,514</td>
</tr>
<tr>
<td>10. Social Scientists and Urban planners</td>
<td>1 $40,000</td>
<td>11 $13,720</td>
</tr>
<tr>
<td>11. Social, Recreation, and Religious Workers</td>
<td>4 $25,948</td>
<td>5 $19,059</td>
</tr>
<tr>
<td>12. Lawyers and Judges</td>
<td>4 $47,521</td>
<td>3 $29,587</td>
</tr>
<tr>
<td>13. Writers, Artists, Entertainers, and Athletes</td>
<td>4 $23,866</td>
<td>2 $17,936</td>
</tr>
<tr>
<td>14. Health Technologists and Technicians</td>
<td>2 $24,084</td>
<td>3 $15,252</td>
</tr>
<tr>
<td>15. Technologists and Technicians, except Health</td>
<td>6 $30,699</td>
<td>5 $26,600</td>
</tr>
</tbody>
</table>

N 257 328

¹Workers are those employed at least 10 hours per week and 10 weeks per year. These data are weighted.
Table A.2: Employed Professional Workers,\textsuperscript{1} by Occupational Group, Wave 2

<table>
<thead>
<tr>
<th></th>
<th>MEN</th>
<th></th>
<th>WOMEN</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>Mean Earnings</td>
<td>%</td>
<td>Mean Earnings</td>
</tr>
<tr>
<td>1.</td>
<td>29</td>
<td>$55,383</td>
<td>17</td>
<td>$40,865</td>
</tr>
<tr>
<td>2.</td>
<td>20</td>
<td>$59,606</td>
<td>5</td>
<td>$49,978</td>
</tr>
<tr>
<td>3.</td>
<td>3</td>
<td>$104,453</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4.</td>
<td>1</td>
<td>$43,809</td>
<td>9</td>
<td>$33,000</td>
</tr>
<tr>
<td>5.</td>
<td>1</td>
<td>$14,000</td>
<td>1</td>
<td>$39,065</td>
</tr>
<tr>
<td>6.</td>
<td>9</td>
<td>$60,051</td>
<td>7</td>
<td>$36,713</td>
</tr>
<tr>
<td>7.</td>
<td>16</td>
<td>$40,324</td>
<td>36</td>
<td>$34,408</td>
</tr>
<tr>
<td>8.</td>
<td>1</td>
<td>$36,560</td>
<td>2</td>
<td>$40,448</td>
</tr>
<tr>
<td>9.</td>
<td>1</td>
<td>$50,000</td>
<td>3</td>
<td>$30,656</td>
</tr>
<tr>
<td>10.</td>
<td>1</td>
<td>$41,313</td>
<td>2</td>
<td>$58,854</td>
</tr>
<tr>
<td>11.</td>
<td>4</td>
<td>$36,849</td>
<td>4</td>
<td>$28,634</td>
</tr>
<tr>
<td>12.</td>
<td>4</td>
<td>$91,177</td>
<td>4</td>
<td>$62,488</td>
</tr>
<tr>
<td>13.</td>
<td>4</td>
<td>$51,327</td>
<td>2</td>
<td>$33,553</td>
</tr>
<tr>
<td>14.</td>
<td>1</td>
<td>$34,952</td>
<td>3</td>
<td>$38,067</td>
</tr>
<tr>
<td>15.</td>
<td>5</td>
<td>$47,509</td>
<td>5</td>
<td>$31,693</td>
</tr>
</tbody>
</table>

\textsuperscript{1}Workers are those employed at least 10 hours per week and 10 weeks per year. These data are weighted.
failed to meet the criteria for Wave 2 and thus, they were dropped from the final sample. These respondents reported no weeks employed in Wave 2, or no longer working in a professional occupation, or being self-employed. In the following text, these respondents are referred to as the dropped respondents and contrasted to the respondents that met the criteria in both waves and were retained in the final sample.

It is possible that the dropped respondents may have been different from the included respondents in ways that would have affected my analysis results. To determine if my findings would have differed had these respondents been included in the analysis I reran my OLS analysis using only the dropped respondents. Generally, I found more similarities than differences between the dropped and retained samples.

Comparing The Two Samples

I compared the average characteristics in Wave 1 of the dropped respondents to those of the respondents retained in my sample to assess the ways in which they may have differed. First, I compared the two groups within gender, and then I compared gender differences among the dropped respondents to those found for the retained sample.
In Wave 1, the professional men that were dropped in Wave 2 earned more than other men, worked more hours per week, and they were less likely to have a graduate degree. They did not differ on any of the other characteristics that were used in my analysis.

There were a few more differences among the women in the two samples. Examination of the three household maintenance indices showed that the women in the retained sample spent more time than those women in the dropped sample on the daily grind (15 hours compared to 13 respectively), they also spent an hour more per week on female-type tasks, and there was no difference in time spent doing male-type tasks or elder care. The women in the dropped sample were less likely to be married, have a graduate degree, and also less likely to report having children than those retained in Wave 2.

The distribution by occupation and gender for these dropped professionals is shown in Table A.3. In the table, the professions have been grouped into fifteen main categories and the average earnings for women and men are shown. Comparing the distribution shown for the retained sample in Table A.1 and A.2 to the distribution shown in Table A.3 for the dropped sample, the most striking differences between the two samples is found in two occupation groups. For the dropped sample, the percentage
Table A.3: Dropped Employed Professional Workers\(^1\) by Occupational Group

<table>
<thead>
<tr>
<th></th>
<th>WAVE 1 (1987-88)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MEN</td>
<td>WOMEN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(%) Mean Earnings</td>
<td>(%) Mean Earnings</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Executive, Administrative, and Managerial</td>
<td>56</td>
<td>$50,550</td>
</tr>
<tr>
<td></td>
<td>39</td>
<td>$23,035</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Engineers, Architects and Surveyors</td>
<td>15</td>
<td>$40,923</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>$20,682</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Health Diagnosing (e.g., M.D., Dentists)</td>
<td>2</td>
<td>$66,872</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>$58,479</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Health assessing and treating (e.g., R.N.)</td>
<td>1</td>
<td>$33,869</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>$19,041</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Therapists</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>$6,688</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Teachers, Postsecondary</td>
<td>1</td>
<td>$20,931</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>$19,560</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Teachers, except Post Secondary</td>
<td>9</td>
<td>$31,331</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>$17,054</td>
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<tr>
<td>8.</td>
<td>Counselors</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>$20,251</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Librarians, Archivists, and Curators</td>
<td>1</td>
<td>$3,000</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>$17,799</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Social Scientists and Urban planners</td>
<td>1</td>
<td>$33,329</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>$22,479</td>
<td></td>
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<tr>
<td>11.</td>
<td>Social, Recreation, and Religious Workers</td>
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<td>$17,294</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>$23,509</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Lawyers and Judges</td>
<td>3</td>
<td>$44,925</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>$44,825</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Writers, Artists, Entertainers, and Athletes</td>
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<td>$38,929</td>
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<td></td>
<td>4</td>
<td>$22,253</td>
<td></td>
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<td>14.</td>
<td>Health Technologists and Technicians, except Health</td>
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<td>0</td>
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<td></td>
<td>4</td>
<td>$16,688</td>
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<tr>
<td>15.</td>
<td>Technologists and Technicians, except Health</td>
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<td>$26,511</td>
</tr>
<tr>
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<td>3</td>
<td>$21,153</td>
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</table>

\(^1\)Workers are those employed at least 10 hours per week and 10 weeks per year. These data are weighted.
of women and men found in the Executive, Administrative, and Managerial group is much higher than the retained sample. Conversely, in occupation group Teachers, except Post Secondary, the percentages found for the dropped sample are much lower than those found for the retained sample.

Comparing the dropped respondents by gender shows that the earning gap for these respondents was wider than the gap found for the retained sample. The women in the dropped sample earned 50 cents to the men’s dollar (men earned on average $44,218 while the women earned $22,324). As found in the retained sample, there was a significant gender difference on the three measures of household maintenance tasks. Women spent significantly more time doing daily grind and female-type tasks, whereas men spent more time than women doing male-type tasks. There was no gender difference in the likelihood of doing elder care (compared to a gender difference on elder care found for the retained sample).

All of the other descriptive statistics for the dropped respondents reflect exactly what was found for the retained sample. Men were more likely than women to work more hours on the job in occupations that had a lower percent female, to be white, and to have jobs in core industries. There was no gender difference in their ages,
the likelihood of having a graduate degree, of living in
the South, or having children.

Regression Results for Dropped Sample

The OLS regression results using the dropped sample
showed that women earned significantly less than men, and
daily grind tasks reduced earnings. However, unlike the
retained respondents, female-type tasks did not
significantly affect earnings. Otherwise, similar effects
were found for both samples including the lack of
significant effects for male-type tasks and elder care, and
positive significant effects on earnings for the number of
hours worked, having a graduate degree, and age. Among the
dropped respondents the percent female in the occupation
significantly reduced earnings while working in the core or
not did not significantly affect earnings. These two
effects for the control variables percent female in the
occupation and industrial location are different from that
found for the pooled retained sample.

The interaction model using the dropped sample showed
that none of the domestic labor measures differed
significantly by gender. Thus, the extra negative effect of
doing elder care incurred by the women in the retained
sample was not found in the dropped sample. Otherwise, the
results were the same.
This examination showed overall, that there were more similarities than differences between the dropped and retained respondents. Thus, I concluded that it was likely that their omission did not affect my findings.
VITA

Rebecca Sue Carter was born in Davenport, Iowa. Her family moved to Ottumwa, Iowa, where she completed her elementary and secondary education. In May 1994, she graduated with a bachelor of arts degree in sociology from William Penn College in Oskaloosa, Iowa. Rebecca then enrolled in the Department of Sociology at Louisiana State University in Baton Rouge, Louisiana. She received a master of arts degree in sociology in May 1996 at Louisiana State University. She will earn the degree of Doctor of Philosophy in August 2000. Rebecca is married to William C. Carter, also a sociologist.
DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Rebecca Sue Carter

Major Field: Sociology

Title of Dissertation: Domestic Labor and the Earnings of Professionals

Approved:

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Date of Examination: 5/10/00