

OCCUPATIONAL SEX SEGREGATION AND ITS EFFECT ON INCOME
DETERMINATION

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The following faculty members have examined the final copy of this thesis for form and content, and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts with a major in Sociology.

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ABSTRACT

This study attempts to identify the factors that account for the unequal distribution of paid labor. Using the Current Population Survey March 2007, variables included in my saturated model (age, education, rural, southern status, immigrant status, work hours per year, union membership, number of workers in company, employment in the good producing industry, level of occupational prestige, sex, occupational sex segregation, marriage status, children under 6, and minority status). Using univariate and bivariate analysis to determine a model for the multivariate use of an ordinal least squares regression to regress the independent factors of individual, structural, and gender level variables on annual earnings. The most important finding was that related to the hypothesis that as occupational sex segregation increased income decreased. It was found that women still suffer a loss of earnings net of other factors of \$4,485.05. That marriage largely benefits men over women net them four times as much increased income. While this analysis showed that men suffer more grave effects by entering occupations where women are over-represented it is important to note that women are more likely to work in occupations that are sexual segregated. This provides a much greater harm to women in general than it does to men. As the literature states, male workers are interested in keeping as many as possible of their coworkers male, and therefore, men's wages are raised by keeping women restricted to subordinate positions where they are less of a threat.

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1. Introduction

The topic of income determination is important in a capitalist society where the primary source of income for people is paid labor. Therefore the study of unequal access and inequality in earnings for paid labor become important and essential. As women have entered the work force why then do they still make less than men, and what factors account for these differences? A review of the literature reveals that a set of dominant theoretical positions exists to explain the effects of occupational sex segregation on income determination. The first being the family of individual level theories home to that of human capital, rational choice, and comparative advantage which make their arguments based on individual choice and attributes. The second is the structural level theories such as segmented labor market, dual economy and crowding theory whom make their argument based on process of organizational hierarchies. The third is the gender level theories and differ from both structural and individual theories in that they see gender not as a variable that can be controlled, they see it as a process of devaluing feminine characteristics. The last composite model provides an interactional systems approach that argues sorting occurs based on gender into lower economic positions. Even within the same positions genders receive differential returns on individual investments as well as one income potential being tied to ones position within the organization and that positions receive differential return on investments (Wright, 1992).

2. Literature review.

2.1 Individualist Models

Rational choice was pioneered by Stephen Parsons. This theory views individuals as possessing desires and beliefs (Parsons, 2005). These desires are defined as needing to be neither rational nor irrational and only indicating preference, say a preference for bananas over apples

(Parsons, 2005). Belief is a set of ideas that the individual holds true that may indeed be wrong. An example is that an individual may desire to be able to fly however the belief that they can fly would be wrong. Thus an individual has ordered preferences or desires and will attempt to satisfy them based on their beliefs of which action are available to them (Parsons, 2005). The action of seeking to satisfy ones preferences is an attempting at maximization of their utility. This theory makes no reference to the worth of actions toward income determination instead the action or decisions are only evaluated based on whether they serve the individual's needs to maximize their utility.

Human capital theory was pioneered by Gary Becker and views that individuals are rational actors that make decisions about their investments in things that will bring about change within their personal capital (Becker, 1962). An important aspect of this theory is that capital is divided into four subcategories, schooling, on the job training, health, and other knowledge (Becker, 1995). Schooling can essentially be viewed as an investment the cost of which is borne by the individual both in terms of actual monetary investment as well as short term loss of earnings (Becker, 1976). On the job training is an actual cost to an employer in the short term and is a potentially profitless practice (Becker, 1995). The job training makes an employee more employable and potentially could result in that employee leaving for a better position, which leads to further expenses and a loss of productivity (Becker, 1976). At the same time allowing the employee to contribute more to the company's production by becoming more effective at their job. Investments in health benefit employers in multiple ways. Healthy individuals do not generate high healthcare costs for employers and healthy individuals will often contribute more to the employer due to less unproductive illness time (Becker, 1995). Other knowledge as described by Becker is a category of knowledge possessed that does not fit within education,

training and health that still contributes to the individual's worth and an example is general knowledge of a given area that could benefit the employer (Becker, 1995). Another example given was the investment of information about employment opportunities, as a better job might be found by spending money on want ads or employment agencies (Polachek, 1979). Thus these choices are made within a context of a cost benefit analysis which can be categorized into two distinct categories those that increase the likelihood of benefit and those that either have no effect or decrease the likelihood of market return (Polachek, 1979).

Comparative advantage theory was pioneered by Robert Torrens and David Ricardo as a theory for trading relationships between nations and was adopted by others, namely Talcott Parsons in 1956, as an individual level theory. This theory argues that the comparative quantity of commodities which labor will produce determines their value, and not the comparative quantity of commodities given to the labor in exchange for the labor (Ricardo, 1974). Value exists in two states that of use and exchange (Torrens, 1965). The value of utility constitutes no wealth without exchange (Torrens, 1965). It is this exchange that it is argued that leads to the advantage of the division of labor that as each live by producing and giving up of the surplus they produce to gain the surplus of their neighbors that wealth is arrived at. However, as an individual theory, comparative advantage seeks to explain the ability of one gender to serve a function at lower cost, relative to other functions, compared to another gender (Parsons, 1956). This theory states that the separate genders have a comparative advantage over each other in separate sectors of life (Parsons, 1956). The claim is that this is a specialization technique used to create more efficient production in that males are more efficient as income producers and women are more efficient in reproductive labor (Brink and Willemsen, 1997).

Gender-based comparative advantage can be established and reinforced by the gender role identities enforced within the society, which is defined as the shared expectations of appropriate qualities and behavior (Brink and Willemsen, 1997). Comparative advantage theory assumes then that men and women have different innate biological derived skill types, which translate into functions of job characteristics. The difference in skills between men and women will affect their occupational choice in order to achieve maximum advantage in the occupation. This theory directly relates to the idea that occupational sex segregation is normal and even further, it argues that such a state is beneficial. The role of comparative advantage in occupational self-selection and the subsequent effect on wages are explained as the workers set a reservation level of total benefits that they could get from a given occupation (Sattinger, 2003). If workers could only choose between two occupations, they would choose the occupation that yields the highest reservation level of total benefits, since the reservation level also measures the expected long run flow of benefits. (Sattinger, 2003) Thus the distribution of workers will be the result of choice by the worker toward an occupation in which the worker can be the most economically rewarded, given the biological innately given abilities. Therefore, occupational sorting due to individual differences in comparative advantages can alter the rate of return for all abilities because the distribution of unobserved abilities across occupations is different from that of the entire population (Sattinger, 2003).

In the past women's typical preference for job characteristics has often been labeled as a negative factor in wage determination, because women would need time away for child rearing and thus had less commitment to work. Thus, it is generally expected that in exchange for this preference, they would be expected to see a loss of monetary earnings. However, differences in levels of commitment to work and need for time off between men and women are likely to have

decreased if any difference did ever truly exist. This theory assumes that men and women as an aggregate differ in their skill endowments because of gender role identity and its socialization (Brink and Willemsen, 1997).

From these individual theories that are derived two hypotheses from human capital for this study, that net of other factors as the age of the worker increases income will increase, and that net of other factors with an increase in education there will be an increase in income. With human capital an individual will make their investments in things that will bring about change within their personal worth using this as a rationale to the creation of our first hypotheses since as a individual ages they have greater time to invest in productivity and age become a proxy for skill. As well with human capital an individual's personal worth is defined as schooling, on the job training, health, and other knowledge. Since education is a benefit to personal worth human capital directly supports the rationale for the second hypotheses that as education increase incomes will increase.

2.2. Structural Models

While the individual models view the wage gap as an expression of certain decisions that women make, the structural models see the wage gap as the expression of the structural features of the labor market. Dual Economy Theory asserts the economy is separated into two sectors, the monopolistic sector and the competitive sector (Kalleberg, 1983). From a dual economy viewpoint wages are directly affected by structural features of firms, and as a result employment outcomes differ by sector (Coverdill, 1988). The monopoly sector consists of large corporate and bureaucratic firms, which have ownership and control of crucial raw material supplies, and capital that allows them price setting abilities (Kalleberg, 1983). Because the monopoly sector controls such a large portion of the market and they tend to have a higher capital to labor ratio, it

allows for a wage premium and allows them to have greater profit potential within this sector (Wanner, 1983). Thus employees in this sector will earn higher wages, have better benefits, and greater opportunities for mobility (Reid and Rubin, 2003). The competitive economy contains smaller firms and is characterized by lesser access to markets, lower wages, little or no training and skills, minimal job security, and limited upward mobility (Reid and Rubin, 2003). As the monopolistic firms are likely to be larger in size and have the influence to take advantage of the smaller competitive firms by using the ability to set prices and other features associated with the monopolistic firms that allow them to take profits from the smaller firms (Wanner, 1983). As a result, over time, the capital becomes more concentrated and centralized in the monopoly market, and the competitive market become smaller and more competitive. Dual economists speculate women are more likely to have jobs in the competitive sector as a result of willingness to accept lower wages to obtain irregular work (Kalleberg, 1983). Since women are more involved in family activities, childcare, and housework, they forego the wage advantage of jobs in the monopoly sector, and are more willing to work in competitive jobs to obtain flexible hours (Kalleberg, 1983). On the other hand, the male-job market benefits from reduced competition. According to this explanation, a certain portion of low wages in female jobs is induced directly because male jobs are rationed and female workers are crowded into female jobs.

Segmented Labor Market Theory is closely linked to dual economy theory given that the primary labor market jobs are found in the monopoly sector of the economy (Lawrence, 1988). The differences in income between the primary and secondary sectors are caused by the social relations of production (Magnus and Kumlin, 2005). Thus segmented labor markets are due more to employers' behavior than objective conditions of labor supply (Doeringer and Piore, 1971). Segmented Labor Market Theory theorists have argued earnings are closely related to the

worker's productivity in the primary sector, but not in the secondary sector of the labor market (Doeringer and Piore, 1971). The primary sector is characterized by a wage premium. Such a premium does not exist in the secondary sector. To explain why the wage premium exists between the two sectors it is argued that those workers in the primary sectors do not change jobs as often as those in the secondary sector, and as a result those in the primary sector acquire higher levels of experience and seniority (Magnus and Kumlin, 2005). The result is that higher paying positions are located in the primary labor market within the monopoly sector of the economy (Doeringer and Piore, 1971). The jobs in the secondary market are characterized as high risk, with a small number of employees, labor-intensive production, and require less autonomy from the employees (Magnus and Kumlin, 2005). The secondary sector demands more unskilled labor than that of the primary sector which means the labor is menial, simple, repetitive, and interchangeable (Magnus and Kumlin, 2005). Therefore, the lowest positions are located in the secondary labor market within the competitive sector of the economy. Women are closely tied to the institution of the family and are expected to have more obligations, for these reasons they may not attain the education and skills necessary to overcome institutional barriers in order to get into the primary labor market. Perhaps women are earning less because they are exchanging less hours of work for more flexibility in order to meet other responsibilities.

From these theories are derived a hypothesis for this study, that net of other factors positions with high occupational prestige levels will result in increased income. With segmented labor market positions within the primary market of the monopolistic sector would result in the highest income using this as the rationale for the creation of the hypothesis that as occupation prestige increases so will income.

2.3 Gendered Model

While the individual and structural models view gender as a variable that can be controlled for, gender theory views it as a process of devaluation and sorting. (Bergmann, 1986). Gender theories see women as being devalued and systematically sorted into inferior economic positions. Within the gender model, there are several theories a few examples are crowding theory and the gendered job queue theory.

Crowding theory attempts to explain some of the occupational sex segregation on the economic models of supply and demand. In general terms, the supply of labor is the number of workers willing to take a position, and the demand is the number of workers employers are willing to hire (Reskin and Roos, 1990). Incomes from paid labor are then determined by the difference between the supply and demand of paid labor. Crowding theory argues that employers discriminate in a way that excludes individuals from entering a certain type of occupation (Reskin and Roos, 1990). Men are able to enter a vast number of positions in comparison to women, who are limited to fewer positions, and as a result, the oversupply of women workers for fewer jobs causes lower wages. Many male workers are interested in keeping as many as possible of their coworkers male, and therefore, men's wages are raised by keeping women restricted to subordinate positions where they are less of a threat (Bergmann, 1986). The wage rates would change, and the wage gap between men and women would be reduced if the supply of workers to jobs earmarked for men would increase, and the supply of workers to jobs earmarked for women would decrease (Bergmann, 1986). Genders are sorted into jobs deemed appropriate based on gender stereotypes (Bergmann, 1986). Thus a man would be sorted away from a clerical position into a managerial position and a woman would be sorted into a secretarial role. Thus a gender model of sex segregation is a lifelong social control which is

dependent on the differential and preferential treatment of young men as well as sex linked social control at the workplace in the form of male dominated hierarchies (Bergmann, 1986).

Revolving Door Syndrome is a system of occupational sex segregation that argues three classifications exist within the labor market: employers, employees and co-workers (Jacobs 1989). Systems of education exist that instill gender stereotypes within individuals and when they reach adulthood hold these views manifest in beliefs that certain work is masculine and certain work is feminine (Jacobs 1989). When a female decides to enter a non-stereotypical position and the employer decides to hire her, the male co-workers feel threatened and use intimidation and sabotage to lower her productivity (Jacobs 1989). This causes the woman to question the decision to enter a male dominated position and the employer to question the abilities of his new hire (Jacobs 1989). It is these forces that lead to women leaving male dominated positions for that of stereotypical ones. Therefore, of every eleven women who enter a male dominated position ten will leave (Jacobs 1989).

Division of Household Labor theory looks at the differences in time spent on responsibilities for housework among various earning configuration households (Reskin and Roos, 1992). A major component of this division of labor theory rests on quality and quantity of the household activity (Reskin and Roos, 1992). The thrust of the literature shows that women tend to suffer from a negative balance in the household division of labor (Reskin and Roos, 1992). Creating what is often called the “second shift” effect, where women after working a full time out of home and an extra full time job at home (Reskin and Roos, 1992). This means women engage in larger amounts of unpaid labor within society putting them in unequal positions.

The labor market can be characterized as a labor queue and an oppressed group for example, experiences more unemployment because they are less desired than the dominant group on the labor queue (Reskin and Roos 1990). With the idea of a labor queue applied to occupational sex segregation, within this context we would expect men to have higher wages than women because they are higher in the labor queue.

Job queues theory explains a worker's ranking of jobs. An employer is seeking the highest level of candidates from the labor queue as possible and those searching for employment are seeking the highest level in the job queue they can attain (Reskin and Roos 1990). Thus preferred workers therefore often get the best jobs with less attractive jobs going to workers lower in the labor queue with the potential for the lowest workers to be jobless and the worst jobs to be unfilled (Reskin and Roos 1990). Also gender places limitations on which positions will be given to the individual by a process that places married women in higher positions in the labor market than never-married women (Reskin and Roos 1990). This form of discrimination, where women are seen as less qualified or skilled for jobs, than men and stereotypes where employers label highly skilled work as "inappropriate" for women, cause women to be placed lower in the labor queue than men (Reskin and Roos 1990).

Comparable Worth theory asks should a janitor earn more than a police officer, or a teacher more than an office manager? Normally questions like these might be largely resolved in the labor market by the forces of supply and demand. However comparable worth, challenges this pattern of wages by arguing that occupations dominated by female workers are paid less than comparable male-dominated jobs because of systematic discrimination against women (Figart Lapidus, 1998). Comparable worth argues employers would be required to set wages to reflect differences in the "worth" of jobs, with worth largely determined by job evaluation studies, not

by market forces (Figart and Lapidus, 1998). Comparable worth argues that jobs within a firm should be rated, and points should be assigned according to job features such as required knowledge and skills, mental demands, accountability, and working conditions (Figart and Lapidus, 1996). Jobs scoring the same would then be paid the same, regardless of the pay differentials that might prevail in the market (England, 1992).

From these theories are derived three hypotheses for this study, that net of other factors women will have lower incomes in comparison to men, that net of other factors as occupational sex segregation increases income will decrease, and that net of other factors being married will net more income than never married. Crowding theory argues that because employers discriminate in a way that excludes individuals from entering a certain type of occupation (Reskin and Roos, 1990), men are able to enter a vast number of positions in comparison to women, who are limited to fewer positions, and as a result, the oversupply of women workers for fewer jobs presents lower wages. This provides the rationale that women will earn lower income than men. Using crowding theory as well for the rationale that as occupational sex segregation increases incomes decrease, it is argued that incomes from paid labor are determined by the difference between the supply and demand of paid labor. Job Queues theory argues that a process that places married women in higher positions in the labor market than never-married women is the rationale to create the marriage hypothesis.

2.4 Alternative Level Model

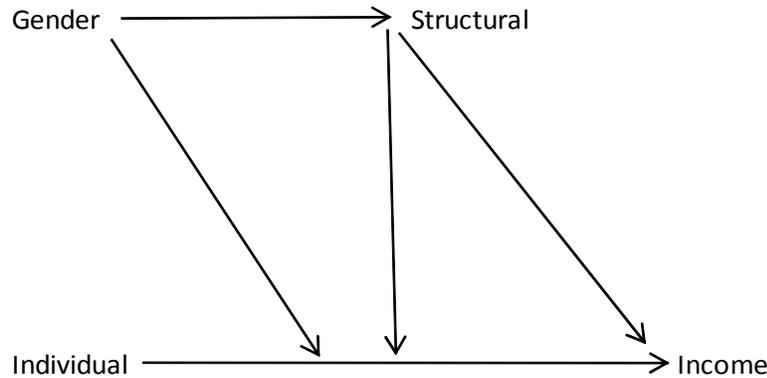


Figure 1

(Wright, 1992).

This study utilizes an alternative model that articulates a composite of the individual, structural and feminist/gender level systems to explain how income is distributed. (Wright, 1992). In this model, the individual segment argues that individuals are rational beings that make investments in productivity enhancing skills and increased productivity lead to increased income. An example of this is increases in education lead to increased productivity and increased productivity leads to increased income. Therefore income is dependent on one's productivity. The structural segment argues income is directly affected by the hierarchy of positions which one occupies within an organization and that each position within organization receives differential rates of return on individual attributes (Wright, 1992). An example would be as occupational prestige increases incomes will increase. Another example would be managers receive greater return on education investments than service workers (Wright, 1992). Therefore income is first and foremost defined by one's position, independent of individual attributes. The gender segment argues that gender is a process of devaluation and sorting (Wright, 1992). Women will be sorted into lower economic positions than men. For example, women are crowded into occupational sex segregated positions that pay lower incomes. Within the same positions they will receive

differential rates of returns on individual investments. For example, women earn less for each year they age when compared to men.

2.5 Hypotheses

Hypothesis 1a: Net of other factors, as the age of the worker increases, income will increase.

Hypothesis 1b: Net of other factors, with an increase in education, there will be an increase in income.

Hypothesis 2a: Net of other factors, positions with higher occupational prestige levels will result in increased income.

Hypothesis 3a: Net of other factors, women will have lower incomes in comparison to men.

Hypothesis 3b: Net of other factors, as occupational sex segregation increases incomes will decrease.

Hypothesis 3c: Net of other factors, being married will net more income than never married.

3. Data Sample

3.1 Data

The purpose of this study is to examine the income difference between those in varying levels of sexually segregated positions. This research relies on data obtained from the 2007 Current Population Survey (CPS). The purpose of the CPS survey is to measure the labor force characteristics of the U.S. population. The survey is conducted by the Bureau of the Census for the Bureau of Labor Statistics. The universe for the CPS is households in the United States and the civilian, noninstitutional population residing in those households. In addition to the restrictions made by the Bureau of Labor Statistics the following additional restrictions were

made. Only individuals between the ages of 18 and 64 were included. People who are identified as self employed and military are excluded because they do not acquire income the same way as employed individuals. Individuals with wages/salaries above \$100,000 and below \$258 a year were also excluded. The inclusion of a weight in the CPS requires that weights be used in the data analysis. Therefore to compensate for this bias the CPS weight is divided by its mean creating a relative weight. The relative weight allows the sample size to reflect the non-weighted data, and the sample will still reflect the frequency percents of the weighted data. All data in the CPS had been imputed and no missing cases existed at the time of the analysis.

3.2 Dependent Variable

The CPS gives wages in dollars on a yearly basis. Measures of wages typically result in a left skewed distribution and the use a log function of yearly wages adjusts for the skewed distribution. However, the dependant variable standardized residuals show a fairly normal distribution removing the need for a log of wages. Therefore, the dependent variable is comprised of the yearly wages contained in the CPS.

3.3 Independent Variables

At the individual level, the variables measured include age, education of the respondent, the region, and the rural or urban area where the respondent resides. Age is an interval level variable measured in years. Age is being used as a proxy measure for experience; therefore income will increase because employers pay more productive workers a higher wage. The education level of the respondent was measured as a five level ordinal variable with categories of less than high school, high school or equivalent, some college but no degree, Bachelors degree, and Masters degree or higher. From this ordinal measure five binary variables were created to note the respondent's education level. An additional (0, 1) binary variable was made to

differentiate earnings from those who have a college degree or higher and those who do not have a college degree or higher, since it is expected that as education increases so will income. An additional (0,1) binary variable was made to differentiate rural respondents from urban ones with 1 as the rural and 0 for the urban since it is expected that urban centers allow for greater income potential. An additional (0,1) binary was made to differentiate a region of the lowest mean income. A one way of analysis of variance using a scheffe option allowed determination that the southern region had the lowest mean income region and 1 was used to denote those in the south and 0 for all others.

Structural factors included hours worked, union membership, government worker status, type of industry worked, and respondent's occupation. Hours worked was measured as an interval level variable and represents the number of hours worked per week. The government worker type was a nominal variable that was recoded into a binary (0, 1) with government workers as one and private workers as zero. The union variable was a nominal variable that was converted into a binary (0,1) with union membership as one and non-union workers as zero.

Gender level factors included female, occupational sex segregation, married, children under six, and minority status. Female was a binary variable with one being female and zero as male. Occupational sex segregation is created by taking the 4-digit occupation codes which are included for every occupation in the CPS, and determine the percent female in each occupation. If men and women were equally likely to be in the labor force the percent female would be all that was needed, but, women are less likely to be employed than men so an adjustment to this percent by the percent of women in the labor force is required. For example we have an occupation in which 42% is female, and also have 42% of females in the labor force, $42 / 42$ is 1, this would be an occupation that was equally distributed for both men and women. Values over 1

indicate that women are over-represented whereas values under one are occupations where women are under-represented (Wright, 2007). The marriage variable, is a (0, 1) binary with one representing married respondents and zero being those unmarried. The children under six variable is a (0, 1) binary with one representing those respondents with children under six and zero as those without. Minority status is composed of prior nominal race and ethnic variables recoded into a set of nominal variables White, Black, Hispanic, Asian, and other they were then recoded into a binary(0, 1)with one representing those of minority status and zero as non minority status with White and Asian in this category, this division was made by performing a one way of analysis of variance using a scheffe option allowed determination by incomes.

4. Results

Table 1 shows that women do earn lower annual income than men on average (\$27,281 vs. \$35,253) resulting in a pay-gap of 77%. This holds true for median earnings (\$25,000 vs. \$32,000) where the pay-gap drops to 78%. For difference between women and men, among individual level factors women are less likely to have a less than a high school degree (8.1% vs. 13.9%),less likely to have a high school degree (29.5% vs. 34%), more likely to have some college (33.1% vs. 28.8%), more likely to have a BA or BS degree (20.6% vs. 16.7%), more likely to have a graduate degree (8.7% vs. 6.6%), more likely to have an immigrant birth status (39% vs. 18.7%) than men. The remaining individual level factors, age, rural and southern residence, are similar for men and women.

Among structural level factors women are more likely to work part-time (23.4% vs. 9.1%), work less hours weekly (36.9 vs. 41.4), more likely to work in the government sector (19.4% vs. 13%), more likely to work in the union (2% vs. 2.3%), less likely to work in a company with less than 10 employees (22% vs. 24.7%), less likely to work in a company with 10 to 99 employees (13% vs. 15.3%),more likely to work in company with over 100 employees

(65% vs. 60%), less likely to work in a goods producing industry(10% vs. 33%), more likely to have high level of occupational prestige (44.5% vs. 40.8%), more likely to work in white collar high skill positions (41% vs. 26%), more likely to work in white collar low skill positions (35% vs. 17%), less likely to work in blue collar high skill positions (4% vs. 31%), less likely to work in blue collar low skill positions (20% vs. 26%) than men.

Among the gender/discrimination level factors women are more likely to work in an occupationally sex segregated labor market (1.4 vs. 0.6), more likely to have ever been married (18.7.2% vs. 11.7%), less likely to be married (54% vs. 54.7%), less likely to have never been married (27.3% vs. 33.7%), more likely to have children under six (18.8% vs. 18.4%), less likely to be of a minority status (27.7% vs. 30.3%) than men.

For the first regression analysis, Table 2 shows an adjusted R-sq of .604 that provides good support for the selection of variables for the saturated model and explains over 60% of the variance. The model clearly shows net of other factors that women make \$4,485.05 less a year than men, providing support for hypothesis 3a. Among individual level factors, net of other factors as the age of the worker increases income increased \$248.81 as hypothesized providing support for hypothesis 1a. However women received less of an increase (\$192.70 vs. \$287.30) which is \$94.60 less of an increase than for men. Net of other factors as education increased, income increased \$1,379.74 as hypothesized providing support for hypothesis 1b. However women received more of an increase (\$1,425.10 vs. \$1,311.09) for years of education; they earn \$114.01 more a year than men. Among the structural level factors, net of other factor as occupational prestige increased income increased \$406.04 as hypothesized providing support for hypothesis 2a. However women received less of an increase (\$366.31 vs. \$454.94) earning \$88.63 less a year for every increase in occupational prestige than men. Among gender level

factors, net of other factors as occupational sex segregation increased income decreased \$3,175.95 as hypothesized providing support for hypothesis 3b. However for every increase in occupational sex segregation women received less of a decrease (\$2,653.78 vs. \$3,675.35) with \$1,021.57 less of a detrimental income punishment than men. Net of other factors, being married netted more income than never married \$2,349.08 as hypothesized providing support for hypothesis 3c. However women receive less of an increase (\$511 vs. \$4,273.46) earning \$3,762.36 less than men for being married.

For the second regression analysis Table 3 shows an adjusted R-sq of .590 that provides good support for the selection of this model, and explains nearly 60% of the variance. The model clearly shows that net of other factors women make \$4,485.05 less a year than men, providing support for hypothesis 3a. Among individual level factors that net of other factors as the age of the worker increases income increased \$248.81 as hypothesized providing support for hypothesis 1a. However women received less of an increase (\$192.70 vs. \$287.30) which is \$94.60 less of an increase. Net of other factors, as education increased income increased; those with less than high school lost \$3,678.35 compared to those with a high school degree, those with some college made \$3,270.69 more when compared to those with a high school degree, those with a BA or BS made \$8,523.52 more than those with a high school degree, and those with graduate degrees made \$14,379.27 more than those with high school degrees providing support for hypothesis 1b. However women received more of an increase for educational attainment at a BA or BS degree (\$8,585.39 vs. \$8,428.01) than men by \$1,974.21 when compared to the reference groups of high school diploma (\$2,447.03 vs. \$4,264.22) and \$2,728.54 more for a graduate degree (\$14,834.01 vs. \$13,922.66) when compared to the reference groups of high school diploma (\$2,447.03 vs. \$4,264.22). However women receive \$1,817.19 less for a high school degree (\$2,447.03 vs.

\$4,264.22) and \$415 less for some college (\$3,291.46 vs. \$3,004.49) than men when compared to the reference groups of high school diploma (\$2,447.03 vs. \$4,264.22)

Among structural level factors, net of other factors positions of higher occupational prestige result in increased incomes \$5,939.92 as hypothesized providing support for hypothesis 2a. However women received less of an increase (\$4,871.63 vs. \$7,858.51) within the same level of prestige with a loss of \$2,987.98 when compared to men. Among gender level factors, net of other factors as occupational segregation increases income will decrease \$3,175.95 providing support for hypothesis 3b. However for every increase in occupational sex segregation women received less of a decrease (\$2,653.78 vs. \$3,675.35) with \$1,021.57 less of a detrimental income punishment than men. As hypothesized net of other factor being married increased income \$2,349.08 providing support for hypothesis 3c. Net of other factors being, married netted more income than never married \$2,349.08 as hypothesized providing support for hypothesis 3c. However women receive less of an increase (\$511 vs. \$4,273.46) earning \$3,762.36 less than men for being married.

5. Discussion

The most important finding was that related to the hypothesis that as occupational sex segregation increased income decreased. While this analysis showed that men suffer more grave effects by entering occupations where women are over-represented it is important to note that women are more likely to work in occupations that are sexual segregated (Jacobs 1989). This provides a much greater harm to women in general than it does to men. As the literature states, male workers are interested in keeping as many as possible of their coworkers male, and therefore, men's wages are raised by keeping women restricted to subordinate positions where they are less of a threat (Jacobs 1989). The first individual level hypothesis predicted that as age

increases so will income, net of other factors, which was supported by the findings. This was well supported by both the individual and structural theories described within the literature review and was an expected finding. The second individual level hypothesis predicted that as education increases so will income, net of other factors, which was supported by the findings. As the literature cited in repeated models that education was used as a proxy for skill this finding was expected. However, it is noteworthy that men receive an education premium out of high school that women must attain a full four year degree to negate (Table 3). The first structural level hypothesis predicted that higher occupational prestige level will result in increased income, net of other factors, which was supported by the findings. The first gender level hypothesis predicted that women would have lower incomes in comparison then men, net of other factors, which was supported by the findings. This was a theme that was well documented within all types of the literature that women would receive lower wages than men. With the findings that married individuals received such a increase in wages \$2,349.08 it is noteworthy to discuss the vast separation with respect to men and women on the finding. Women earn approximately 11 cents to the dollar that men earn for being married which is a much larger gap then the long touted wage gap and deserves further study.

6. Limitations

The CPS has limited data on household labor that could hide unpaid labor among women and finding such as the large gap in earnings for marriage being able to measure household labor could have provide valuable insight. The lack of household labor statistics prevent further study into better understanding the marriage premium, that men benefit to a great degree from marriage while women do not enjoy the same level of benefit. Without that information it is difficult understand the reason for female overwhelming use of part-time work. While indirectly

measuring discrimination the CPS does not have a variable for a direct measure of discrimination, without such a measure it not possible to understand what portion of our sample has experienced discrimination. While the CPS does have measures dealing with industry it does not measure labor history, completely missing aspects of time in job, and prior work experience. The data is cross-sectional so no way of knowing if the people whom participated in the survey have been married for the last three years or if they got married the day of the survey. The possibilities of difference in those married for a length of time and those newly married could very well be different.

7. Policy Implications

The need for strengthening of our current discrimination policies is evident; women should not have to live in a system that devalues their worth. Current federal guidelines that are supposed to protect against discrimination, they need to be enforced on a more regular basis or they need to be expanded and penalties increased. As shown by these numbers the current government protects are being ignored or at worst intentionally broken. The current system allows for an obvious institutional discrimination on the basis of sex. When such a large portion of the population is being discriminated against in such an open and vital way it is the duty of the people and if need be the government to offer them protection. Companies themselves can help solve much of the issue by implementing a system of comparable worth, in that promotions and hiring occur as a process of merit and gender neutral job performance reviews. As well, companies could implement policies of special training to help increase membership of underrepresented groups into key positions to increase diversity. Key to this is to remove the sexually segregated positions within the company to make real effort to increase those underrepresented groups.

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APPENDICES

Table 1A
Values for Full-time Full-year Workers by Sex

Variables:	Full Sample	Men	¹	²	Women (Paygap)
Annual Earnings(mean):	\$31,250	\$35,253	***	^	\$27,281 77%
Annual Earnings(median):	\$28,002	\$32,000			\$25,000 78%
(std dev)	19865.9	20758.6			18084.7
Individual-level factors:					
% Less Than High School Degree (0,1)	11.0%	13.9%	***		8.1%
	0.3	0.3			0.3
% High School Degree (0,1)	31.8%	34.0%	***		29.5%
	0.5	0.5			0.5
% Some College (0,1)	31.0%	28.8%	***		33.1%
	0.5	0.5			0.5
% BA or BS Degree (0,1)	18.7%	16.7%	***		20.6%
	0.4	0.4			0.4
% Graduate Degree (0,1)	7.7%	6.6%	***		8.7%
	0.3	0.2			0.3
Age (years)	38.4	37.7			39.0
	12.5	12.4			12.5
%Rural (0,1)	15.4%	15.3%			15.4%
	0.4	0.4			0.4
% South (0,1)	36.0%	35.7%			36.2%
	0.5	0.5			0.5
% Immigrant Birth Status (0,1)	16.1%	18.7%	***	^	39.0%
	0.4	0.1			0.3
Structural-level Factors:					
% Part-time (0,1)	16.2%	9.1%	***	^	23.4%
	0.4	0.3			0.4
Hours per week	39.1	41.4	***	^	36.9
	9.9	9.3			10.1
% Government (0,1)	16.2%	13.0%	***		19.4%
	0.4	0.3			0.4
% Union Member (0,1)	2.1%	2.3%	*		2.0%
	0.1	0.2			0.1
% Company<10 Employees (0,1)	23.3%	24.7%	***		22.0%
	0.4	0.4			0.4
% Company 10 to 99 Employees (0,1)	14.2%	15.3%	****		13.0%
	0.3	0.4			0.3
% Company >100 (0,1)	62.5%	60.0%	***		65.0%
	0.5	0.5			0.5
%Goods-Producing Industry (0,1)	21.0%	33.0%	***	^	10.0%
	0.4	0.5			0.3
Occupational Prestige	42.7	40.8	***	^	44.5
	13.1	12.9			13.1
% White Collar High Skill (0,1)	33.0%	26.0%	***	^	41.0%
	0.5	0.4			0.5
% White Collar Low Skill (0,1)	26.0%	17.0%	***	^	35.0%
	0.4	0.4			0.5
% Blue Collar High Skill (0,1)	18.0%	31.0%	***	^	4.0%
	0.4	0.5			0.2
% Blue Collar Low Skill (0,1)	23.0%	26.0%	***		20.0%
	0.4	0.4			0.4

Table Continued onto Next Page
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Table 1B
Values for Full-time Full-year Workers by Sex
 (Table Continued from Previous Page)

Variables:	Full Sample	Men	¹	²	Women
Gender:	0.4	0.4			0.4
Occupational Sex-Segregation	1.0	0.6	***	^	1.4
	0.7	0.5			0.5
% Ever Married (0,1)	15.2%	11.7%	***		18.7%
	0.4	0.3			0.4
% Married (0,1)	54.3%	54.7%	***		54.0%
	0.5	0.5			0.5
% Never Married (0,1)	30.5%	33.7%	***		27.3%
	0.5	0.5			0.4
% With children under 6 (0,1)	18.6%	18.4%	*		18.8%
	0.4	0.4			0.4
% Minority (0,1)	29.0%	30.3%	***		27.7%
	0.5	0.5			0.4
Sample n (weighted):	77,620	38,647			38,973
	100%	49.80%			50.20%

¹ ***p<0.001; **p<0.01; *p<0.05

² effect size greater +>.20

TABLE 2
OLS Regression Analysis for the Income Determination Model
(Dependent variable = annual earnings)

Variables:	Full sample		Men		Women	
	unstd.	¹ std.	unstd.	¹ std. ²	unstd.	¹ std.
Independent Variables:						
<i>Individual-level factors:</i>						
Age (years)	\$248.81 ***	0.156	\$287.30 ***	0.171 <>	\$192.70 ***	0.133
Age squared	-\$9.25 ***	-0.069	-\$11.66 ***	-0.082 <>	-\$7.21 ***	-0.060
Education in years	\$1,379.74 ***	0.194	\$1,311.09 ***	0.185 <>	\$1,425.10 ***	0.206
Rural (0,1)	-\$4,034.04 ***	-0.073	-\$4,242.08 ***	-0.074	-\$3,769.26 ***	-0.075
South region (0,1)	-\$1,968.88 ***	-0.048	-\$2,301.32 ***	-0.053 <>	-\$1,681.92 ***	-0.045
Immigrant birth status (0,1)	-\$1,241.87 ***	-0.023	-\$1,575.14 ***	-0.030 <>	-\$516.96 **	-0.010
<i>Structural-level factors:</i>						
Work hours per year	\$13.39 ***	0.444	\$13.25 ***	0.403	\$13.26 ***	0.484
Union member (0,1)	\$3,245.08 ***	0.024	\$3,499.87 ***	0.025	\$3,015.83 ***	0.023
Number of workers	\$4.18 ***	0.094	\$4.98 ***	0.107 <>	\$3.34 ***	0.082
Goods-producing (0,1)	\$2,337.13 ***	0.048	\$2,494.90 ***	0.056 <>	\$1,732.86 ***	0.029
Occupational prestige	\$406.04 ***	0.269	\$454.94 ***	0.282 <>	\$366.31 ***	0.266
<i>Gender:</i>						
Female (0,1)	-\$4,485.05 ***	-0.113				
Occ.Sex-Seg.Index	-\$3,175.95 ***	-0.106	-\$3,675.35 ***	-0.094 <>	-\$2,653.78 ***	-0.077
Married (0,1)	\$2,349.08 ***	0.059	\$4,273.46 ***	0.102 <>	\$511.10 ***	0.014
with child under age 6 (0,1)	\$1,275.35 ***	0.025	\$919.25 ***	0.017	\$679.45 ***	0.015
Minority (exc asian) (0,1)	-\$1,779.40 ***	-0.041	-\$2,431.20 ***	-0.054 <>	-\$1,161.82 ***	-0.029
(Constant):	-34260.654		-36866.148		-35020.449	
Adjusted R-sq.	0.604 ***		0.600 ***		0.587 ***	
n=	77,620		38,647		38,973	

¹ *** p < 0.001; ** p < 0.01; * p < 0.05; ns non-significant

² significant difference between men and women at the .05 level or higher

TABLE 2
OLS Regression Analysis for the Income Determination Model
(Dependent variable = annual earnings)

Variables:	Full sample			Men			Women		
	unstd.	¹	std.	unstd.	¹	std. ²	unstd.	¹	std.
Independent Variables:									
<i>Individual-level factors:</i>									
Age (years)	\$248.81 ***		0.156	\$287.30 ***		0.171 <>	\$192.70 ***		0.133
Age squared	-\$9.25 ***		-0.069	-\$11.66 ***		-0.082 <>	-\$7.21 ***		-0.060
Rural (0,1)	-\$4,034.04 ***		-0.073	-\$4,242.08 ***		-0.074	-\$3,769.26 ***		-0.075
South region (0,1)	-\$1,968.88 ***		-0.048	-\$2,301.32 ***		-0.053 <>	-\$1,681.92 ***		-0.045
Immigrant birth status (0,1)	-\$1,241.87 ***		-0.023	-\$1,575.14 ***		-0.030 <>	-\$516.96 ***		-0.010
Less than high school (0,1)	-\$3,678.35 ***		-0.058	-\$4,264.22 ***		-0.071 <>	-\$2,447.03 ***		-0.037
high-school diploma (0,1)			ref.grp.			ref.grp.			ref.grp.
Some College (0,1)	\$3,270.69 ***		0.076	\$3,004.49 ***		0.066	\$3,291.46 ***		0.086
BA or BS (0,1)	\$8,523.52 ***		0.167	\$8,428.01 ***		0.151	\$8,585.39 ***		0.192
Graduate degree or higher (0,1)	\$14,379.27 ***		0.193	\$13,922.66 ***		0.167 <>	\$14,834.01 ***		0.231
<i>Structural-level factors:</i>									
Work hours per year	\$13.39 ***		0.444	\$13.25 ***		0.403	\$13.26 ***		0.484
Union member (0,1)	\$3,245.08 ***		0.024	\$3,499.87 ***		0.025	\$3,015.83 ***		0.023
Small business (0,1)	-\$4,097.78 ***		-0.087	-\$5,286.73 ***		-0.110 <>	-\$2,971.08 ***		-0.068
Medium business (0,1)	-\$2,938.10 ***		-0.052	-\$3,218.72 ***		-0.056 <>	-\$2,657.89 ***		-0.049
Large business (0,1)			ref.grp.			ref.grp.			ref.grp.
Goods-producing (0,1)	\$2,337.13 ***		0.048	\$2,494.90 ***		0.056 <>	\$1,732.86 ***		0.029
White collar low skill (0,1)	-\$5,939.92 ***		-0.131	-\$7,859.51 ***		-0.143 <>	-\$4,871.63 ***		-0.128
White collar high skill (0,1)			ref.grp.			ref.grp.			ref.grp.
Blue collar high skill (0,1)	-\$6,215.99 ***		-0.119	-\$7,967.92 ***		-0.178 <>	-\$6,579.67 ***		-0.070
Blue collar low skill (0,1)	-\$10,227.09 ***		-0.217	-\$12,470.53 ***		-0.263 <>	-\$8,816.68 ***		-0.196
<i>Gender:</i>									
Female (0,1)	-\$4,485.05 ***		-0.113						
Occ.Sex-Seg.Index	-\$3,175.95 ***		-0.106	-\$3,675.35 ***		-0.094 <>	-\$2,653.78 ***		-0.077
Married (0,1)	\$2,349.08 ***		0.059	\$4,273.46 ***		0.102 <>	\$511.10 ***		0.014
with child under age 6 (0,1)	\$1,275.35 ***		0.025	\$919.25 ***		0.017	\$679.45 ***		0.015
Minority (exc asian) (0,1)	-\$1,779.40 ***		-0.041	-\$2,431.20 ***		-0.054 <>	-\$1,161.82 ***		-0.029
(Constant):	6267.244			8277.401			2244.749		
Adjusted R-sq.	0.590 ***			0.588 ***			0.573 ***		
n=	77,620			38,647			38,973		

¹ *** p < 0.001; ** p < 0.01; * p < 0.05; ns non-significant

² significant difference between men and women at the .05 level or higher