Cohort Differences in the Gender Division of Household Labor in Urban China

Thesis

Presented in Partial Fulfillment of the Requirements for the Degree Master of Arts in the Graduate School of The Ohio State University

By

Zhe Zhang, B.A.
Graduate Program in Sociology

The Ohio State University

2013

Thesis Committee:

Claudia Buchmann, Advisor

Christopher Knoester

Hui Zheng

Abstract

China has undergone tremendous social changes in gender roles in the past decades. According to census data, China's employment rate for working-age women not only fell from 77.4 percent in 1990 to a new low of 60.8 percent in 2010, it was also 20.3 percentage points lower than that of men in 2010. Similarly, a 2010 survey by the All-China Women's Federation and National Bureau of Statistics shows that the proportion of Chinese men and women believing that "men belong in public, women belong at home" has increased over the past decade. One unaddressed question is whether these changes are reflected in the gender division of household labor in urban China. Using data from the 2006 China Health and Nutrition Survey, I examine differences in wives and husbands' total housework time and time spent on specific household tasks among cohorts from three different reform periods. The analysis compares housework participation among 402 couples in the Cultural-Revolution cohort, 430 couples in the Gradualist-Reform cohort and 107 couples in the Radical-Reform cohort. Husbands in the Cultural-Revolution cohort spend more time on housework than the two reform cohorts. There are no cohort differences among wives and the gender gap in housework time is only significant in the task of food buying and clothes washing, but not in the total housework time. The adoption of a less equal gender ideology might be driving husbands' decreasing housework participation in the reform cohorts.

Acknowledgments

This thesis would not have been possible without the help and encouragement of several individuals, to whom I am truly grateful.

First, I would like to thank Dr. Liana Sayer, who helped me develop this project and encourage me through my most uncertain days. Her willingness to give her time so generously has been very much appreciated.

Second, I want to express my gratitude to Dr. Claudia Buchmann, who instructed me to become a writer with clarity and a scholar of rigor.

Third, I would like to thank my other committee members Dr. Chris Knoester and Dr. Hui Zheng, who provided me with invaluable advice on this project.

Also, I want to thank Yue Qian and Jill Yavorsky, for being the greatest friends I can ever meet in graduate school and in personal life.

All the scholars that I mentioned above helped me generously and inspired me deeply. They compose a welcoming academic community to me and they have offered me much confidence to continue on this academic journey.

Lastly, I want to thank my parents for their support and encouragement through this study and through my life. They always believe that a woman can accomplish whatever a man is capable of, despite some gender biased socialization that they could have internalized when they grew up.

Vita

June 2007……No. 47 High School, Guangzhou, China

May 2011.....B.A., Sociology, Susquehanna University

2011-2012……Huber Fellowship, Sociology, The Ohio State University

Fall 2012 to Spring 2013……Graduate Teaching Associate, Department of Sociology, The Ohio State University

Summer 2013 to present……..Graduate Research Associate, Department of Sociology, The Ohio State University

Fields of Study

Major Field: Sociology

Table of Contents

List of Tables

List of Figures

Introduction

The sweeping economic and social changes in China have substantial impact on gender stratification and inequality, which has attracted much academic attention. Among these studies, most have focused on gender roles in the public arena, like gender differences in educational achievement, employment opportunities, earnings and social mobility (Bian, Logan & Shu, 2000; Shu & Bian, 2003; Bian, 2002; Zhang, Hannum & Wang, 2008; Cao & Hu, 2007; Hannum, Zhang & Wang, 2012; Zhang et al., 2005). In recent years, more scholars have shifted their attention to the influence of the Chinese economic reform on gender inequality in the private spheres, particularly in the household division of labor (Zuo & bian, 2001; Chen, 2007; Yang, 2006). Though these studies have offered insights in the family-work arrangement in specific time periods, they fail to map out the terrain of changes throughout the period when China adopted market-oriented economic reforms.

Before the period of economic reform and during the Cultural Revolution, Chinese government implemented the socialist job placement system. Most young men and women were economically active, especially compared with China's East Asian neighbors (Zhang, Hannum & Wang, 2008). However, this situation changed with China's economic reform, which was marked by the introduction of capitalist market principles. The economic reform has two main stages. From 1978 to the early 1990s, the Chinese government first adopted a gradualist reform to protect urban workers from the

massive open unemployment as was experienced by many central and Eastern European countries. In the mid-1990s, the pace of urban reforms began to accelerate. Privatization and public-sector labor retrenchment led to large-scale layoffs and a sharp increase in urban unemployment. Women, especially married women, were laid off at higher rates and experienced greater difficulty reentering the labor market during this period (Ding, Dong & Li, 2009). As a result, some researchers suggest that the initial push for gender equality in China was followed by a swing back to gender essentialism, resulting in the traditional gender division of labor remaining in place after the economic reform (Honig & Hershatter, 1988).

Throughout most of the world, there remains a traditional gender division of household labor. What is this traditional gender division of labor and how is it reinforced? Previous studies done in the United States find that women, especially married women, undertake the lion's share of housework (South & Spitze, 1994; Bianchi et al., 2000). As more women enter the sphere of paid work, the lack of equivalent movement among men into unpaid work leaves their wives no choice but to pick up another shift of unpaid housework and childcare. As a result, employed women often work two shifts while their husbands usually work one (Hochschild & Machung, 1989). Three major frameworks have been used to study the predictors in gender differences in time spent on housework. Time availability theory explains household division of labor from the perspective that time in employment limits time available for housework, with more time spent on paid work resulting in less time spent on housework (Coverman, 1985). Relative resource theory suggests that the more economic resources a partner brings to the family relative to the other partner, the more likely that they can bargain out

of household responsibilities like housework (Coverman, 1985). On the other hand, Gupta (2007) finds that women's absolute earnings explain the variation in their household labor better than relative earnings, with women's housework hours' declining as their earnings increase. The third framework, the gender perspective, suggests that people's perceptions of gender also influence their division of housework. Those who hold traditional views of gender roles are more likely to expect women to do more housework (Blair & Lichter, 1991).

Chinese women, like their American counterparts, undertook the majority of housework relative to their husbands, who were more career-oriented. This is also a common arrangement among Chinese families during the Cultural Revolution and the economic reform (Croll, 1983; Zhang & Farley, 1995). Some evidence indicates that the housework load is heavier for Chinese women than American women due to differences in the nations' level of economic development and ways of doing housework (Wang, 1992). It will be interesting to test the western-developed theories in the Chinese context. A recent study using a 2000 survey data indicates that Chinese women spend much more time than Chinese men doing housework, but that men who hold egalitarian gender ideologies are more likely to do housework and spend more time on it than the other men (Yang, 2006). Men's education level is positively related to their chances of doing housework as well as to time spent on housework, while men's income is inversely related to their time spent on housework. These findings are similar to the ones reported in the western countries, but it is unclear whether and how the division of household labor and gender roles changed in face of the economic reform in China.

The focus of this study is to examine the division of household labor in face of the rapid social changes in China. Previous studies, though insightful, have not been able to map out the terrain of changes since the launch of the reform because they only examine a specific period of time. One approach to study the social change is to identify the unique experiences of the corresponding (birth) cohorts (Ryder, 1965). The underlying rationale for the cohort approach is that the major social transitions affect people of different age in different ways, and the results of these transitions are persistent. For example, research on political attitudes has shown that experiences during a developmental or impressionable period, usually adolescence or young adulthood, shape one's political attitudes and they stabilize in adulthood (Firebaugh & Chen, 1995). These experiences during a developmental period, or early life socialization, induce significant cohort differences in attitudes and behavior because these unique experiences of each cohort will then have a lasting effect on their political views and actions (Ryder, 1965). Similarly, one's experience of gender ideology during their young adulthood can have an impact on their perceptions about gender roles in adulthood. Consequently, people may internalize perceptions and do what a man/woman is supposed to do accordingly. The current study takes this approach to examine one aspect of experience among different cohorts: the division of household labor among married couples. More specifically, this study asks: how do married women's and married men's total housework time and time in specific household tasks differ among cohorts in the Cultural-Revolution period and the reform period in urban China? Moreover, does the size of the gender gap in time spent on housework and the kinds of household tasks done by wives and husbands differ by cohort?

In this study, I use the 2006 China Health and Nutrition Survey, which includes a sample of 939 married couples living in urban China. I first compare husbands' housework participation over cohorts and then wives' housework over cohorts as well as the gender gap in time spent on housework over cohorts. Then I control for the life-cycle-related variables to see whether these cohort differences, if any, remain or disappear. This study not only helps to map out the social changes in China at the household level, it contributes to the current housework literature and advances our understanding about gender stratification in shifting social contexts.

Theoretical Framework

Gender & Household Labor

Three major theories have guided quantitative research in explaining the gender difference in housework: time availability, relative resources and gender perspective.

Time availability theory predicts the division of household labor is based on the time that each spouse spends in employment, which limits the time each has available for housework. Married men and women need to adjust their schedules and time spent in housework since many tasks are shared responsibilities. Previous research testing this theory usually measures time availability with employment or work hours along with presence of children in the household and work schedule (Coverman, 1985). Note that the presence of children in the household, especially having younger children is not only related to time demands but also demand for housework.

Using time availability theory, some show that men's time spent on housework is negatively related to their work time (Coverman, 1985; Kamo, 1988; South and Spitze, 1994). Though women still do most of the housework, some research shows that as women's housework hours decrease, their work hours increase (Blair & Lichter, 1991; Brayfield, 1992; Brines, 1993; Kamo, 1988). However, when taking both the partners' time allocation into consideration, the results are mixed. Some studies report that men increase their housework time when their wives work more (Blair & Lichter, 1991; Brines, 1993). Others claim that husbands do more housework in response to number of

hours their wives work, but not necessarily as a result of their wives' employment status (Goldscheider & Waite, 1991). In sum, there are three types of associations here: that between women's work hours and their own housework hours; that between men's work hours and their own housework hours; and the association between one's time allocation and their spouses' time allocation and vice versa.

Relative resource theory builds on economists' perceptions of the family as an institution of maximal joint utility (Becker, 1991). It describes men and women as cooperating actors pursuing the same goal – the maximization of the wellbeing of the household and its members. During the time when this perspective was developed, the maximization of a household's benefits is the traditional division of labor, with men/husbands in charge of economic activities and women/wives taking care of the housework and children. Later structural and feminist critics argue that this arrangement should not be taken for granted and the couples can have different or even conflicting interests when discussing these household issues (Huber & Spitze, 1983). In the case of housework sharing, Coltrane (2000) specifies that housework, especially the routine housework like food shopping, cooking, washing dishes and laundry, are the most time consuming, but less optional and less able to be postponed than other tasks. Most men and women want to bargain out of these tasks. Relative resources theory suggests that an individual's portable economic resource represent one's marital power, which the couples use for housework negotiation. In other words, relative resources theory proposes an inverse relationship between a partner's share of the couples' total income and the time the partner spends on domestic labor. The greater the economic resources that one brings

to the family, the more likely it is that he or she can reduce time spent on other family responsibilities like housework.

Frequently used indicators of relative resources include educational attainment, earnings and occupational prestige. Previous studies find that the smaller the gap between husbands' and wives' earnings, the fairer the division of labor (Blair & Lichter, 1991; Brayfield, 1992; Kamo, 1988, 1994; Presser, 1994). Women's years of education is also reported to be negatively associated with time spent on housework, which is consistent with relative resource theory (Brines, 1993; Shelton & John, 1993; South &Spitze, 1994). However, results regarding the relationship between men's education level and their housework participation deviate from the theory, since men's education is often positively associated with their housework time (Kamo, 1988; Shelton & John 1993). This may be due to the fact the more education a man has, the more likely that he will hold an egalitarian gender ideology, which is associated with increases in men's housework participation. Findings about the relationship between men's occupational prestige and housework participation are equivocal (Coverman, 1985; McAllister, 1990). Moreover, most studies report no association between women's occupational status and their time spent on housework (Hardesty & Bokemeir, 1989; McAllister, 1990).

Compared with education and occupational prestige, earnings yield more consistent findings when used as an indicator of relative resources. More importantly, it is the women's earnings that usually make a difference. Men's earnings seem to have limited or no association with their housework participation. Considering women's earnings and own housework, Gupta (2007) finds that women's absolute earnings do a

better job in explaining the variation in their household labor than their earnings relative to their husband.

In addition to time availability and relative resource theories, gender plays an important role in determining time allocation and gender can change the relationship between earning and housework time. In general, the gender perspective incorporates gender role theory and the theory of doing gender.

Gender role theory recognizes that one's perception about gender roles has a significant impact on the division of labor in the family. The theory is based on the assumption that socialization in a family of origin is found to account for the formation of different attitudes including what men and women should do (Coverman, 1985; Cunningham, 2001; Goldscheider & Waite 1991). Supporting research indicates that men with more egalitarian gender role attitudes divide housework chores more equally with their wives (Blair & Lichter, 1991; Kamo, 1994; Presser, 1994). Similarly, women with more egalitarian gender-role attitudes do less housework compared with other women (Brayfield, 1992; Presser, 1994).

West and Zimmerman (1987) advance the understanding of gender division of labor; they contend that gender is a "routine, methodical, and recurring accomplishment" (p. 126). In line with their reasoning, gender norms permeate social interaction; individuals perform such gender norms through their daily behaviors including domestic labor, especially when interacting with someone of the opposite gender. Gupta (1999) finds that men reduce time spent on routine housework when they enter into a marriage or a cohabiting relationship and that men increase time spent on these housework tasks when they exit these couple unions. On the contrary, women increase their time spent on

housework when they enter such unions and reduce their housework time when they become single again. Not surprisingly, South and Spitze (1994) find that the gender gap in housework time is bigger in marital households than any other household types, controlling for other factors. These findings support the perspective of "doing gender." Bittman and colleagues (2003) clarify the difference between the gender role ideology and doing gender. They point out that actors do not need to internalize gendered identities or norms that are morally preferable as gender role theory indicates. Instead, they internalize only expectations that others will follow norms along with a need to present themselves as cognitively "making sense" in terms of these norms.

So far I've introduced literature on the hours spent on housework in relation to gender division of labor. Another line of research considers the meaning of specific housework tasks. Blair and Lichter (1991) argue that hours and tasks are conceptually distinct dimensions of household labor. Studying the gender segregation in housework tasks offers insight into how married couples "do gender" as well as men's resistance to increasing their housework participation. Twiggs and colleagues (1999) find a hierarchy of participation in which more sex-typed chores are added to less-segregated ones: they identify gendered thresholds that some husbands cross to become high participators, who are responsible for the housework tasks. For example, doing dishes and grocery shopping are entry-level tasks that separate men who do housework at all from those who do no female-typed housework. Husbands who do meal preparing, a female-typed housework task, are more likely to do other feminine tasks like doing laundry than other husbands.

In sum, I've introduced three dominant housework frameworks – time availability theory, relative/absolute resource theory and gender perspective along with one supplementary perspective of gender segregation in housework tasks. None of the theories alone have succeeded in explaining the variation in housework division elaborately and completely. Previous findings also confirm that these theories are closely intertwined with each other (Kamo, 1988) and should be viewed as complementary approaches rather than completing perspectives (Chen, 2005). Moreover, these approaches focus more on individual and interactional levels of analysis (Coltrane, 2000). In the next section, I introduce the historical background and some institutional factors that shape the gender division of housework in the Chinese context.

Social Changes & Cohort Experiences in Contemporary China

China has been in a state of ongoing change for centuries, but this is particularly true since the establishment of People's Republic of China in 1949. The country was experimenting with a highly centralized socialist economy directed by the Chinese Communist Party and its charismatic leader from 1950s till the early 1980s. Coinciding with these economic shifts, socialist ideologies, including the proclaimed gender equity ideology, were promoted. The controversial socialist movement came to a halt when the central leadership shifted in late 1970s, followed by the economic reform which took effect in 1980. Since then, capitalist market principles have been introduced into the country. The reform period can be further divided into two periods marked by both the pace and magnitude of the reforms. The period of 1980-1995 is classified as the gradualist reform period because the pattern of central distribution remained deeply engrained. In the mid-1990s, privatization and public-sector labor retrenchment led to

large-scale layoffs and a sharp increase in urban unemployment. The period of 1995 to the present is thus recognized as the radical reform period (Ding, Dong & Li, 2009).

In terms of the gender relations and gender roles, Robinson (1985:33) argues that "in Chinese policy there is an implicit assumption that women have two major roles to fulfill: that of mother and of worker." This means that starting from the socialist period and at least up until the beginning of the gradualist reform era, most women were undertaking two major roles—worker and mother. Does this mean that Chinese women were and continue to be constantly burdened with both paid work and household labor? If so, how do married women's and married men's total housework time and time in specific household tasks differ among different cohorts in reform-period and post-reform-period China? Moreover, does the size of the gender gap in time spent on housework and the kinds of household tasks done by married women and married men differ by cohort? In the following paragraphs, I discuss the specific social changes that may have an impact on different cohorts. Then I pay more attention to the specific changes as they relate to time availability theory, relative/absolute resource theory and gender perspective.

Policy and Ideological Changes across Cohorts

Since the founding of the Chinese Communist Party in 1921, the promotion of gender equality has been has been central to the Communist political agenda. After the establishment of the People's Republic of China in 1949, the party promulgated various forms of legislation to confirm the equal status of women. Chinese women were entitled to the right to divorce, to freely choose their mates, to have equal rights of property ownership, and to have access to a wider variety of work opportunities (Davin, 1976). Despite the seemingly encouraging message, many scholars argue the Chinese

government only mentioned the promotion of gender equality when women's subordinate standing contradicted the political campaigns (Honig & Hershatter, 1988). One example is the rise and decline of the "Iron Girls," groups of women who took on the most demanding tasks at work in Dazhai, China's model agricultural brigade, during the Culture Revolution in the 1960s. The Iron Girl model served to convey the Maoist slogan that "whatever men comrades can accomplish, women comrades can too." In tandem with the decline of the Cultural Revolution, the "Iron Girl" model lost its appeal and it even encountered ridicule in the late 1970s (Entwisle & Henderson, 2000).

A dramatic shift in gender ideology took place in the gradualist and radical reform periods. The simple statement of gender equality began to incur criticisms from 1980s onwards because the emphasis on women's equality reminded people of the extreme political repression and brutality evidenced in the radical socialist period (Honig & Hershatter, 1988)[1]. Coupled with the overturn of previous achievements in gender equality, essentialist arguments became more prominent in explaining gender differences (Honig & Hershatter, 1988). Essentialism suggested that men's and women's different social roles were determined by the essential, biological differences that were not affected by gendered culture or the patriarchal domination (Cubbins & Vannoy, 2004). Essentialist thinking also revitalized the Confucian ideal of the "virtuous wife and good mother," which urged women to claim primary responsibility for marriage, family and children more than was evident in Mao's time (1949-1976).

[1] Sharing a similar socialist past, Russia is also currently witnessing the rejection of modern views of gender roles and gender equality, for the same reason that feminism and socialism became synonyms (Cubbins & Vannoy, 2004).

As the gender role theory predicts, one's perception about gender roles has a significant impact on the division of labor in the family. Thus, the egalitarian gender ideology conveyed in the pre-reform era and the essentialist gender ideology conveyed in the reform era might have different effects on people's division of household labor during those periods.

Changes Occurring in the Work Place across Cohorts

Given the shifting gender ideology promulgated by the Communist party and spread through the country, substantive changes occurred in the work place. The most remarkable change was the notable number of women entering the labor force. In the early 1990s, 90 percent of urban Chinese women aged 16-54 were employed compared to 67.5 percent of U.S. counterparts (Riley, 1996). Despite China's success in integrating women into the labor force, many scholars argued that this change did not herald the liberation portrayed in Marxist theory because the country had been implementing distinct regulations for men and women in the work place, with intent to uphold the traditional paradigm that "men remain in charge of the external affairs (workplace and beyond) and women remain in charge of the internal affairs (home and housework)" (Honig & Hershatter, 1988).

In the decades following 1949 and before the reform taking effect in the 1980s, urban women were not treated equally as men when they first entered the labor force. They were much more likely to be assigned the least-skilled, lowest-paying jobs, often in neighborhood-run enterprises with few benefits relative to the state-owned sector (Honig & Hershatter, 1988; Shu & Bian, 2003). Women had fewer chances to attain higher education as well as party membership, which were crucial in determining base salaries

and other wages in occupations. Such gender inequality held true in the reform era, too (Shu & Bian, 2003). Disproportionally few women representatives were found in administrative jobs and market potential jobs (Shu & Bian, 2003). Also, the country legitimized a younger retirement age for women compared with men since the republic's establishment in 1949. As a result, female workers typically retired at younger ages – often around 50 – than women in the West, while men retired at 60 (Davis, 1990). In the mid-1950s and early 1960s, women were not only encouraged to be employed for a shorter period, but were also prompted to retreat from the labor force and contribute to the society by doing housework when urban unemployment contradicted the ideal of full female employment (Honig & Hershatter, 1988).

During Mao's time (1949-1979), policies in the work place did not correspond to the slogan of gender equality. In the reform era (1980 to the present), women's disadvantaged status in the work place did not improve. Consistent with the ideology of gender essentialism, corresponding workplace policies reached new heights in establishing a gender division in the labor force. One of the manifestations of this was the declining employment rate of women, especially among the married women. Their employment rate plummeted during the radical reform era due to the public sector labor retrenchment. In urban areas, only 74.9% of wives were employed in 2002 compared to 91.9% in 1995 and 96.8 in 1988[2] (Ding, Dong & Li, 2009).

Men also reaped more benefits in the work place than did women. Men enjoyed increased salaries as they advanced their skills, while women were assigned less prestigious jobs and had fewer on-the-job training opportunities. These gender

[2] Husbands' employment rate also declined, but not so drastically.

differences mirrored managers' prejudice and discrimination against women (Honig & Hershatter 1988). Men also earned higher wages and bonuses than did women, as employers assumed that they had fewer family responsibilities and their schedules were more flexible than women's (Bian & Logan, 1996). As a result, a gender gap in earnings has persisted since the pre-reform era and was sustained in the reform periods and across different cohorts (Bian, Logan & Shu, 2000; Shu & Bian, 2003; Zhou, 2000). In the radical reform era, some studies report that the previously stable gender gap in income increased substantially. Zhang and colleagues (2008) found that the mean female to male income ratio declined from 86.3 percent to 76.2 percent from 1988 to 2004.

Until the late 1980s, educational opportunities were also made less available to women since they needed to score higher than men to enroll in higher educational institutions. Even if women attained the same degree as men, their career prospects were much worse than those available to men as a result of discrimination in hiring women (Honig and Hershatter 1988). Though the returns to education are becoming higher for women than for men in urban China in recent years, Hannum and colleagues (2013) find that this is due to the narrowing wage gap between high-earning women and men and the widening wage gap between low-earning women and men.

Time availability and relative resources theories predict that changes occurring in the work place in different periods can predict changes in people's housework participation. With women's declining labor force participation in the reform period women of the reform cohorts would have fewer chances in the paid work but more flexible time for housework. Increasing monetary returns at work for men and the persistent gender gap in earnings indicate that the husbands might continue to bring more

economic resources to the family while the wives contribute less. According to the relative resource theory, this would give the husbands in the reform period more bargaining power to do less housework while wives have to do more.

Family Responsibilities, Gender relations and Cohort Differences

As mentioned above, escalating inequalities evidenced in the work place resulted from the wide acceptance of essentialist arguments in the reform era. In this context, new arguments for the need for women to focus less on paid employment and more on their family and children flourished. One of the new narratives developed in the reform era was that women did not possess the physical strength of men. However, they were equipped with "special strengths" such as manual dexterity and ability to learn and do housework. Drawing on this reasoning and out of their own economic interests, some factory officials proposed two methods to reduce female employment. One was to offer 60-70 percent of the salary to women, especially nursing mothers and those considered to-be elderly, to encourage them to leave the job. The second method was the promotion of "prolonged maternity leave" to female employees as long as three years at home instead of the ordinary fifty-six days of maternity leave at a rate of their basic salary.

Though these methods offered extra time and economic resource for the nursing mothers and older women, they made it very difficult for these women to re-enter the labor force. Moreover, some factories began to eliminate nurseries that they previously provided to working mothers (Honig and Hershatter 1988). Related to the issue of child care, past research indicated that only 1.4% of all preschoolers were enrolled in kindergartens by 1957, most of which were located in the more developed coastal provinces (Zhai & Gao, 2008). A recent article using 2000 survey data reported that only

16% of all preschoolers attended child care centers (Zhai & Gao, 2010), which was much lower than the enrollment number of child care centers in the U.S. (U.S. Census Bureau, 2008). In the absence of formal childcare facilities, some of the responsibility of childcare falls on the shoulders of the grandparents. Studies indicate that the presence of grandparents in the household or grandparents living nearby also helped reduce women's childcare involvement (Chen, Short & Entwisle, 2000). However, given the limited number of childcare facilities in China coupled with the fact that many families do not reside near their parental families, mothers remained the primary caretakers for young children.

In addition to lacking childcare facilities, China also lacks policies to increase fathers' involvement in care or relieve mother's burden in childcare. Hook (2010) reveals that men do less and women do more housework in nations where work hours and parental leave are long and public childcare is less common. This is the situation that characterizes China. And as mentioned above, earlier policies were implemented for the interest of state economic goals instead of promoting gender equality in the Cultural-Revolution period (1966-1979). This means that Chinese women have fewer resources to turn to and have to shoulder heavier childcare and housework burdens compared to their western counterparts during all times.

Most of the empirical research on the division of household labor in China was conducted during the reform period. Croll (1983) studied 75 households in both urban and rural locations in China in 1980 and found that women did most of the housework; only 3 percent of the husbands claimed to have done some cooking. A study interviewing 50 men and women in two rural villages in late 1980s reported that 30 percent of the

husbands never did anything housework-related (All-China Women's Federation, 1993). Zhang and Farley (1995) conducted a study focusing on 34 women professors in China and found that the contrast between men's and women's housework participation is smaller, yet a similar picture emerged. These women were responsible for 63 percent of the cooking, 62 percent of the laundry, 75 percent of the shopping and 72 percent of the housecleaning. The "second shift" undertaken by these professional women echoed findings generated from a 1988 urban survey. It reported that men and women spent similar amount of time on work outside the home. However, women were expected to finish an average of one hour or more on chores per workday, and up to three and a half hours more on days off. Such unequal division of housework is indicative of a leisure gap among employed couple. Men enjoy almost one and a half more hours of leisure than housework per day, while women spent at least one and a half hours more on chores per day than in leisure activities (Wang, 1992). And since multitasking data are not available in China yet, it is reasonable to assume that the actual gender gap in housework is even larger than what has been reported. In sum, these studies all confirm that the domestic burden has largely fallen on women's shoulders and most working women had to manage the "second shift" (Hochschild & Machung, 1989).

So far, the literature indicates that women were responsible for childcare and housework in both the pre-reform and the reform era. In terms of the couple's gender attitudes, Pimentel (2006) discovered that women in the reform cohorts expect more gender equality at home while their husbands were becoming less egalitarian in gender attitudes relative to men in the older cohort. In contrast, Zuo and Bian (2001) found that the majority of wives and husbands viewed the division of household labor as fair if the

husband was the primary breadwinner and the wife was the primary homemaker in 1998. Despite the diverging findings in women's gender attitudes, both studies report a backlash in men's gender attitudes towards the egalitarian pressures from the state in the reform period. As a result, the division of household labor might be more equal in the pre-reform cohort than the gradualist-reform cohort and radical-reform cohort.

Research Hypotheses

In this study I ask, how do married women's and men's total housework time and time in specific household tasks differ among different cohorts in China? Does the gender gap in housework differ by cohort? Specifically, I compare married women in different cohorts by examining their time spent in all the housework tasks combined and their time allocation to specific household tasks. I do the same for married men across cohorts. Lastly, I aim to make best use of this couple-level data and study the gender gap in housework across cohorts.

According to the literature, even during the period of Cultural Revolution when gender equality was promoted, the emancipation of women was concentrated in the work domain without affecting women's roles in the family. In the reform era, women are more likely to be discriminated in the labor market and they are expected to be "virtuous wives and good mothers." Women in the reform cohorts may spend more time on leisure activities due to the fewer hours they spend in the labor market, but their housework load is always heavy, thus I predict:

H1: There is little or no difference in wives' time spent on housework across different cohorts.

On the other hand, shifting gender ideologies might give men more incentive to retreat from housework and the increasingly gendered practices favoring men in the work

place might provide men with more monetary resources and less flexible time allowed for housework participation. So I hypothesize that

H2: Husbands in the Cultural-Revolution cohort would spend more time than husbands in the two reform cohorts on housework; husbands in the Gradualist-Reform cohort would spend more time than husbands in the Radical-Reform cohort on housework.

Correspondingly, I predict:

H3: The gender gap in housework time among married couples grows over the three successive cohorts.

Data and Methods

Sample

To test these research hypotheses, I use data from the 2006 Household Survey collected as part of the China Health and Nutrition Survey (CHNS) to explore cohort differences in division of housework among married couples in contemporary urban China. CHNS is an ongoing longitudinal survey conducted by researchers from Carolina Population Center at the University of North Carolina at Chapel Hill and the National Institute of Nutrition and Food Safety at the Chinese Center for Disease Control and Prevention. A multistage, random cluster process was used to draw samples. The survey contains households in both urban and rural site in seven provinces in China: Guangxi, Guizhou, Henan, Hubei, Jiangsu, Liaoning and Shandong. These provinces were not selected through a probability design but they represent a wide range of socioeconomic and demographic characteristic. Three of the provinces are coastal, three are in central China, and two are mountainous southern provinces. The population in these selected provinces accounts for about a third of the country's residents and they vary substantially in terms of economic development. The 2006 survey includes 4,468 households (household survey), 9,788 adults (adult survey) and 1,954 children or teenagers (child survey, all those who are under 18 are included). I intend to explore cohort differences in the urban site because most of the existing housework research was conducted in urban settings.

For my analyses, I draw on a subset of married couples of working age (20-60) in the urban area from the adult survey. I used this age range because the minimum legal age for marriage has been 20 for Chinese women (22 for Chinese men) since 1980 and 60 has been the legal retirement age for Chinese men (50-55 for Chinese women) since 1978. Among the couples, at least one spouse is currently working while the non-working spouse can be retired, seeking job, doing housework, disabled or going to school. I construct the cohorts according to the pivotal historical moments and the critical time periods in which individuals were raised. Women's birth year is used to divide cohorts because the spousal age gap has been small from 1960 to 2005 (Mu & Xie, forthcoming; Zhang & Gu, 2007) the Cultural-Revolution cohort contains individuals born between 1946 and 1959, who experienced the Cultural Revolution (1966-1979) in their twenties (their age range was 47-60 by 2006). The Gradualist-Reform cohort contains individuals born between 1960 and 1974, who experienced the gradualist reform period (1980 to 1994) in their twenties (their age range was 32-46 by 2006). The last cohort is composed of individuals born between 1975 and 1986, who experience the radical reform period (1995 to 2006), when their age ranged 20-34 by 2006.

I retrieve main variables from the adult survey and separate the data into two files, one containing married men and the other containing married women. By matching his spouse line number with her line number in the same household, I merge these two files, delete those whose age and working status fail to meet the sampling criteria and get 939 couples. After more data cleaning, which will be shown in the next section, the sample consists of 402 couples in the Cultural-Revolution (CR) cohort, 430 couples in the Gradualist-Reform (GR) cohort, and 107 couples in the Radical-Reform (RR) cohort.

Measures

Dependent Variables

My dependent variables include both nominal and continuous measures. In the survey, each household member self-reported details on a range of housework activities listed in the CHNS. These housework tasks included "buy food for your household," "prepare and cook food for your household," "wash and iron clothes" and "clean the house." Respondents were first asked whether they did this specific housework during the past week. They could answer "yes," "no" or "unknown." I delete those who answered "unknown" and therefore I have four nominal variables indicating whether the respondents did the specific housework tasks with no missing values. Ten couples are dropped and thus the final sample size becomes 939 couples.

Next, if the respondents responded "yes" that they did this housework task in the past week, they were asked "how much time (minutes) did you spend per day, on average (on this task)." Respondents could either answer a specific number or say they do not know the exact time or there could be missing values. For each of the four tasks, less than 5% husbands (about 50 individuals) reported to have forgotten the exact time (-99 was originally coded). Wives in the sample encounter a similar situation, except the fact that about 8% of them were more likely to not know how long it took to buy food. Specifically for the activity of buying food, the respondents could also choose the option that they bought food on their way to/from school/work (-88 was originally coded). About 5% of both husbands and wives said they shopped grocery when commuting between home and school/work.

To better utilize the continuous measures, the key is to deal carefully with ambiguity regarding time (-99), buying food on the way to/from work (-88) and missing variables (.), which are all uncertain values. My solution is to use three sets of continuous variables to capture the time spent on specific housework task. For the first set of continuous variables, I replace all these uncertain values with missing. As a result, the sample size for each housework task drops and it varies between 813 (wife's time on food buying) and 916 (husband's time on clothes washing). For the second set of continuous variables, I impute all the uncertain values with zero. For the third set of continuous variables, I substitute the gender-specific means to each housework task for all the uncertain values. Since the sample size for the second and third sets of continuous variables is the full sample size for all the four housework tasks, I add up the time spent on all four housework tasks and construct the gender gap in housework time by subtracting husband's time spent on housework (each specific task and all tasks combined) from wife's housework time. It turns out that these three sets of continuous variables produce similar results. Thus, I only show the analysis generated by the third set of continuous variables.

Table 1 presents the proportions of individuals who did perform the specific housework chore during the past week. For both husbands and wives, the successive cohort(s) has a smaller percentage of people who did any housework task, except one incidence where 87% of women in the gradualist-reform cohort bought food last week compared with 83% of women who did so in the pre-reform cohort. Figure 1 reports husband's and wife's average time spent on each housework task across cohorts. Both husbands and wives in the successive cohort(s) spend less time on most of the household

chores. Moreover, the decline in time spent on preparing food across cohorts is prominent for both men and women.

Results are consistent with prior research and show that housework is primarily women's responsibility in China. In Table 1, disproportionately more women reported to have done every housework task than men in every cohort. Moreover, the smallest proportion in women's housework participation (the chore of preparing food in the radical-reform cohort – 67%) is more than the largest proportion in men's housework participation (the chore of buying food in the pre-reform cohort – 45%). Figure 1 displays husband's/wife's average time spent on each housework task by cohort and indicates that not only more women did housework than men as shown in table 1, women also spent more time in each housework task than men.

Gender division of household labor not only means that women undertake most housework. It also indicates that the housework sharing is gendered for households where husbands also did some housework. Table 1 demonstrates that there are more husbands who bought food than those who prepared food, washed clothes and cleaned house and this finding holds true across all three cohorts. For example, 45% husbands in the Cultural-Revolution cohort bought food last week compared with 40% husbands preparing food, 23% washing clothes and 33% cleaning house in the same cohort. Correspondingly, more wives report they had prepared food, washed clothes and cleaned house than buying food as shown in Table 1. These findings echo previous research (Blair & Lichter, 1991; Twiggs et al., 1999) and show that a segregation of housework tasks may exist among the couples under study and the chore of buying food may be the least feminine household task that most husbands chose to do.

Control Variables.

In the study, I control for life-cycle-related variables. As shown in Table 2, the average difference between husband's and wife's ages in each cohort is quite small, about a difference of 2 years, which is consistent with the findings presented in Zhang & Gu (2007) and Mu & Xie (forthcoming). This lends support to using wife's birth year to define men's birth cohort.

I control for respondents' employment hours per week. In the survey, respondents were first asked whether they were working or not; if yes, they were asked for information on their first job and then second job if they identified more than one. Several specific questions were asked: "(1) Last year, for how many months did you work at this occupation?" "(2) For how many days in a week, on the average, did you work?" "(3) For how many hours in a day, on the average, did you work?" "(4) During the past week, for how many hours did you work?" Since the housework question was framed as whether you did any housework in the past week, I construct weekly employment hours. The first measure is constructed by multiplying (2) and (3) and the second is constructed from (4). If neither of these constructed work hours is missing, I use the first one to capture the usual pattern of work. If one of them is missing, I replace the missing value with the other one. Work hours from the two jobs are combined and sensitivity tests indicate that these two measures of employment hours produce similar results[3]. According to Table 2, wives in the two reform cohorts work longer hours than wives in the Cultural-Revolution cohort. This is largely because Cultural-Revolution wives aged 47-60 years old in 2006, which is around time to retire or reduce labor

[3] The results reported in this paper are all produced by models using the first measure of employment hours.

activities. Husband's employment hours display similar patterns as wife's due to the same reason. In terms of the gender difference, husbands always work more hours than wives in each cohort. The gender gap in employment hours is larger for the Cultural-Revolution cohort because women generally retire earlier than men.

Other life-cycle-related variables include presence of children under 6 years old, where the respondents' parents live and respondents' health status. I draw information of children from the child survey in 2006 CHNS. I construct a dummy variable indicating the presence of children/child under 6 years old in the household[4]. According to Table 2, 66 percent of the couples in the Radical-Reform cohort have children under 6 years old in their households compared to 8 percent in the gradualist reform cohort and 12 percent in the pre-reform cohort. This is because couples in the radical reform cohort were in their child bearing age (20-31) and couples in the pre-reform cohort were old enough to be grandparents and some of them live with their young grandchildren.

The information on parents' residence comes from the survey of Ever-Married Women under Age 52 in the adult survey. These women were asked where their parents and parents-in-law live. I find a patrilocal residence pattern (Chen, 2005) in the sample as 17 mothers and 16 fathers are living with their married daughters, while 140 mothers and 104 married fathers are living with their married sons. Three dummy variables are generated: parents are living in the same household with the couple, in the same city, in other areas or they are not alive anymore or the question is not applicable. If one parent was living in the same household and the other one was not, I would code the parent as living in the same household. Table 2 indicates that 56% couples in the radical-reform

[4] Most of the families only have one child due to the one child policy.

cohort were co-residing with their parents compared to 21% couples in the gradualist-reform cohort and 2% in the pre-reform cohort.

People were asked "right now, how would you describe your health compared to that of other people your age?" in the survey. I group the answers "excellent" and "good" together to indicate "good health" and the answers "fair" and "poor" together to indicate "bad health." I recode the answer "unknown" to missing. According to Table 2, more husbands report good health in the radical-reform cohort than husbands in the gradualist-reform cohort. More husbands in the gradualist-reform cohort report good health than those in the pre-reform cohort. This also holds true for wives. Within each cohort, slightly more husbands report good health than wives.

I want to make the best use of my sample, so I apply single imputation to the dependent variables as discussed in the last section. I also use the multivariate normal approach of multiple imputation to account for the missing values in the control variables to maximize the sample size. Though most of the control variables have missing values, all under 5% of the sample size and range from four missing values in parents' living arrangement to 30 missing values in husbands' employment hours. The descriptive statistics of the independent variables and control variables presented above are all adjusted values after multiple imputation.

Analytical Strategy

The analytical focus is to disentangle the age, cohort and period effect. Since I only use 2006 CHNS, there is no need to control for period effect. Thus, the most important step is to disentangle the cohort effect and age effect. I run three sets of models (results not shown). In the first set of models, I regress the dependent variables (nominal

and continuous variables) first on age, then on the square term of age, and lastly on the grand mean centered age to reduce the multicollinearity with cohort. In the second set of models, I regress housework time on cohort dummies. In the third model, I include both age and cohort in the model. In these models, I find that age and cohort are highly correlated and the VIF becomes too big, so I only include cohort in the final multivariate models.

Next, I put in the age-related control variables (presence of children under 6 years old, where the respondents' parents live, work hours and health) along with the main cohort dummies and regress the dependent variables on them.

Results

In my study, I compare husbands in different cohorts by examining their log odds of doing each housework task last week, their time allocation to these specific housework tasks and the time spent in all the housework tasks combined. I do the same for wives across cohorts. Lastly, I make best use of this couple-level data and study the gender gap in time spent on housework across cohorts.

I use logistic regressions and OLS regressions with multiple imputed measures to examine the cohort differences. Table 3 shows the log odds predicting whether the husband/wife bought food, prepared food, washed clothes or cleaned house last week. In model 1 for both husbands and wives, I only keep the cohort variables in the model, using the Cultural-Revolution cohort as the reference group. Life-cycle-related variables including employment hours, household composition and health status are added as controls in model 2 for both husbands and wives. Though there seem to be some differences between the Gradualist-Reform husbands and Cultural-Revolution husbands as indicated in Model 1, after the life-cycle-related variables are added in Model 2, most of these differences disappear. The only exception is that husbands in the Gradualist-Reform cohort are 34 percent less likely than husbands in the Cultural-Revolution cohort to clean house last week (log odds=-0.42, odds ratio=0.66, $p<0.05$).

On the other hand, wives in the Radical-Reform cohort seem different from the Cultural-Reform and Gradualist-Reform wives as shown in Model 1 of Table 3.

However, like the case of the husbands, such differences all disappear when age-related controls are added in Model 2.

In supplementary analysis, I find that controlling for employment hours, young children's presence, parents' residential location and respondents' health status results in the coefficient for cohorts turning insignificant. People tend to work longer hours, have young children and parents in the household and have slightly better health in the successive cohorts as Table 2 indicates. As a result, after holding these age-related variables constant, the raw differences in the likelihood of doing specific housework task among cohorts of husbands and wives disappear.

Table 4 displays the supplementary models on husbands' and wives' likelihood of preparing food because this is the most time consuming housework task. What should be noted is these life cycle controls seem to affect husbands and wives differently. The supplementary findings report that adding the employment hours alone does not explain away husbands' cohort differences while adding the parents' residence alone often turns the cohort differences into no significance. Husband's own employment hours are likely to influence his likelihood of doing specific housework compared with her employment hours. Young children's presence in the household has no effect on husbands' likelihood of doing all four tasks. On the other hand, wives' cohort differences are jointly explained away by the couple's employment hours, parents' residence and young child's presence in the household. Though not shown in Table 4, having a child under six in the household significantly reduces the wife's likelihood of buying food, washing clothes and cleaning house. This result differs from the one found in the U.S., where young children usually increases parents housework load and participation.

Table 5 shows the OLS regression coefficients of husband's/wife's time spent on each housework task. Table 6 displays the full OLS regression models on husband's/wife's food-preparing time. Table 7 reports the full OLS regression models on husband's/wife's totaled housework time as well as the gender gap in housework time. I use these tables to illustrate analysis on the couples' division of labor in terms of housework time.

The patterns reported in Table 5 are generally similar to the ones reported in Table 3: the differences among cohorts of husbands concentrate in the housework-time difference between the Cultural-Revolution cohort and the two reform cohorts, the former always spend more time on all four housework tasks than the latter two. More interestingly, after I control for the life-cycle variables in Model 2, most of the differences still hold: husbands in the Gradualist-Reform cohort spend less time in all four housework tasks than the husbands in the Cultural-Revolution cohort, and husbands in the Radical-Reform cohort spend 4.76 fewer minutes/day ($p<0.05$) on food preparing, which is the most time consuming housework task, than husbands in the Cultural-Revolution cohort. Supplementary analyses show that among the control variables, parents' residence still has the biggest effect on reducing husbands' cohort differences in food-preparing time while other control variables has little effect on husbands' time on specific housework tasks. As Model 2 in Table 5 demonstrates, husbands whose parents were living with them spend 9 minutes/day ($p<0.01$) less on preparing food than husbands whose parents living in other cities or not alive, net of other covariates. Increase in wife's employment hours also increases husband's time on preparing food, but the magnitude of change is less than 1 minute/day ($b=0.123$, $p<0.01$).

As a result, when all the housework time is totaled and age-related variables are controlled, husbands in the Cultural-Revolution spend 16.43 more minutes/day ($p<0.05$) than husbands in the Radical-Reform cohort, and 15.94 more minutes/day ($p<0.01$) than husbands in Gradualist-Reform cohort. Yet, there remains no difference in housework time between the two reform cohorts. These results validate the first half of Hypothesis 2 in that husbands in the Cultural-Revolution cohort spend more time on most housework tasks than husbands in the Gradualist-Reform and Radical Reform cohorts while the odds of doing these specific tasks do not differ among cohorts of men necessarily. Consequently, husbands in the Cultural-Revolution cohort spend more time on housework as a whole than husbands in the Gradualist-Reform and Radical-Reform cohorts.

In the case of wives, the difference in housework time is concentrated in tasks of food buying and food preparing as shown in Model 3 of Table 5. Moreover, these differences all disappear after controlling for age-related variables in Model 4 of Table 5. Among these age-related controls, couple's employment hours and parents' co-residence with the married couples jointly explain away these differences among cohorts of wives, as Model 4 in Table 6 indicates. When the total time spent on housework is summed, the difference again emerges between wives in the Radical-Reform cohort and the other two cohorts. This pattern echoes the findings in Table 3 and these differences also disappear when controlling for the age-related variables. These results offer evidence to Hypothesis 1 that there is no difference in wives' housework participation across cohorts.

Model 5 and Model 6 in Table 5 also present results on the gender gap in housework time. The gender gaps in time spent on food buying and clothes washing are

6.3 minutes/day ($p < 0.05$) larger among couples in the Gradualist-Reform cohort than the Cultural-Revolution cohort, controlling for other age-related variables. However, when the dependent variable becomes the gender gap in time spent on all four housework tasks, the coefficients are not significant any more. This finding rejects hypothesis 3 which predicts differences in the gender gap of housework time across cohorts. This is probably because the change in husband's housework time is too small to make a difference.

Discussion

The economic reform and social changes occurred in China are complicated. How these changes influence people's lives is also unclear. One way to study the impacts of these social changes is to examine the experiences of the corresponding cohorts. This study examines the division of household labor among married couples in the Cultural-Revolution cohort, Gradualist-Reform cohort and Radical-Reform cohort in urban China. Recent studies have focused more on gender stratification in the labor market and no research has investigated the household division of labor via a cohort approach.

The results in this article establish that historical changes are manifested in different cohorts' experiences in household division of labor. According to the descriptive analysis, both husbands and wives in the two reform cohorts do housework less often and spend less time on housework than the Cultural-Revolution cohort. A segregation of housework tasks is indicated in the descriptive analysis: husbands in all the cohorts seem to prefer the task of buying food while wives are basically responsible for all the housework chores. Controlling for time availability and life cycle differences, multivariate analyses report that the cohort differences in time spent on all four housework tasks among husbands sustain, but the cohort differences among wives disappear and the cohort difference of the gender gap in housework time is marginally significant for the task of food buying and clothes washing.

Among the husbands, the Cultural-Revolution cohort spent more time on all the housework tasks than the two reform cohorts, controlling for the age-related variables. This indicates that the ideology of gender equality conveyed in the Cultural-Revolution era might have made men in that cohort more gender egalitarian in housework division in practice. This may lend support to the gender ideology theory. However, the gender gap in the total housework time among the Cultural-Revolution cohort is not smaller than the ones among the two reform cohorts. The increase in husband's housework participation is probably too small to change the nature and magnitude of the gender division of household labor. This suggests that gender is still the primary determinant in housework participation. Time availability theory also receives tremendous support from the findings. Both husbands and wives' housework hours are significantly associated with their own and their spouses' employment hours. Though relative resource theory is not directly tested in this study, literature shows that the husband-wife gap in earnings actually increases over time in the process of economic transition (Li et al., 2006). This could explain part of the stalling improvement in equal division of household labor in successive cohorts.

In general, wives perform the majority of housework under most circumstances. That is probably why wife's housework participation is less responsive to the predictors than men's and there are no cohort differences in housework time among wives. Husbands, on the other hand, do less housework in the first place. Consequently, though husbands in the Cultural-Revolution cohort spent more time in most housework tasks than husbands in the two reform cohorts, it does not mean that wives in the Cultural-Revolution are much relieved from the household chores than wives in the two reform

cohorts. Parents' co-residence greatly reduces couple's housework time by sharing the most time-consuming task of food preparing. Interestingly, parents' help does not reduce the gender gap in couple's housework time. In another study using most of the rural sample in China (Chen, 2005), parents in the household do reduce the wife-husband housework time difference. Does it mean an urban setting reinforces the household life along the gender lines more than a rural setting? Is it because the urban setting is more marketized by the economic reform? Another interesting finding is that having young children (under 6 years old) in the household is not positively related to either husband's or wife's housework participation, which is different from many previous findings. Who picks up the extra housework brought by the presence of young child/children then?

Despite the insightful findings in the gender division of household labor in urban China, this study has a methodological limitation that merits further research. A cross-sectional study cannot fully disentangle the age effect and the cohort effect. Were the Cultural-Revolution husbands doing more housework because they were socialized with gender egalitarianism in their young adulthood? American research reports that men spend more time on housework over their life course (Sayer, Cohen & Casper, 2004). In this case, did the Chinese husbands in the Cultural-Revolution cohort do more housework because they were older than husbands in the two reform cohorts when the survey was conducted? Though I have controlled for the age-related variables in the multivariate models, there can be other omitted variables that are confounded with age. Thus, future research on the Chinese household division of labor should aim to develop strategies that unravel the cohort and age differences.

Comparing the results above with the American findings raises even more questions. Analysis on the U.S. census reports that American men in successive cohorts are spending substantially more time on housework and American women do less housework across successive cohorts, which means men's and women's housework time in the U.S. are becoming more equal (Sayer, Cohen & Casper, 2004). In China, however, such gender specialization has been reinforced in the reform periods. Some studies even claim that such an arrangement is better for the economic development (Li et al., 2006). Why is there such a stark contrast? Will economic development in China continue to keep the traditional division of labor in place? Two theories may have the answers to these questions. Modernization theory argues that economic development is bound to reduce the significance of ascribed characteristics, such as gender (Treiman, 1970). The Women-in-development perspective (Boserup, 1989), on the other hand, posits that early stages of development widen the gender gap favoring men and women's disadvantaged status will not be improved until a certain threshold has been reached, as expected under the modernization theory. If these assumptions are true, when will this threshold be reached in China? Or is it achievable without the exacerbating gender differences? More studies on Chinese division of household labor need to be done to answer these questions. Further research should call attention to the social consequences of such gender specialization in addition to considering the class differences, ethnic difference and regional differences in this specialization.

References

All-China Women's Federation. 1993. *The Impact of Economic Development on Rural Women in China.* Tokyo: The United Nations University.

Artis, Julie E., and Eliza K. Pavalko. 2003. "Explaining the Decline in Women's Household Labor: Individual Change and Cohort Differences." *Journal of Marriage and Family* 65:746-61.

Becker, Gary S. 1991. *A Treatise on the Family.* Cambridge, Mass.: Harvard University Press.

Bian, Yanjie. 2002. "Chinese Social Stratification and Social Mobility." *Annual Review of Sociology* 28: 91-116.

Bian, Yanjie, and John R. Logan. 1996. "Market Transition and the Persistence of Power: The Changing Stratification System in Urban China." *American Sociological Review* 61:739-58.

Bian, Yanjie, John R. Logan and Xiaoling Shu. 2000. "Wage and Job Inequalities in the Working Careers of Men and Women in Tianjin." Pp. 111-33. *Redrawing Boudnaries: Gender, Households, and Work in China*, edited by Barbara Entwisle and Gail Henderson. Berkeley, CA: University of California Press.

Bianchi, Suzanne M., Melissa A. Milkie, Liana C. Sayer and John P. Robinson. 2000. "Is Anyone Doing the Housework? Trends in the Gender Division of Household Labor." *Social Forces* 79: 191-228.

Bittman, Michael, Paula England, Nancy Folbre, Liana C. Sayer and George Matheson. 2003. "When does Gender Trump Money? Bargaining and Time in Household Work." *American Journal of Sociology* 109: 186-214.

Blair, Sampson L., and Daniel T. Lichter. 1991. "Measuring the Division of Household Labor: Gender Segregation of Housework among American Couples." *Journal of Family Issues Journal of Family Issues* 12:91-113.

Boserup, Ester. 1989 [1970]. *Woman 's Role in Economic Development*. London: Earthscan.

Brayfield, April A. 1992. “Employment Resources and Housework in Canada.” *Journal of Marriage and the Family* 54:19-30.

Brines, Julie. 1993. “The Exchange Value of Housework.” *Rationality and Society Rationality and Society* 5:302-40.

Cao, Yang, and Chiung-Yin Hu. 2007. “ Gender and Job Mobility in Postsocialist China: A Longitudinal Study of Job Changes in Six Coastal Cities.” *Social Forces* 85:1535-60.

Chen, Feinian. 2005. “Employment Transitions and the Household Division of Labor in China.” *Social Forces* 84: 832-851.

Chen, Feinian, Susan E. Short and Barbara Entwisle. 2000. “The Impact of Grandparental Proximity on Maternal Childcare in China.” *Population Research and Policy Review* 19:571-90.

Coltrane, Scott. 2000. “Research on Household Labor: Modeling and Measuring the Social Embeddedness of Routine Family Work.” *Journal of Marriage and the Family* 62: 1208-1233.

Coverman, Shelley. 1985. "Explaining Husbands' Participation in Domestic Labor." *The Sociological Quarterly* 26:81-97.

Croll, Elisabeth. 1994. *From Heaven to Earth: Images and Experiences of Development in China.* London: New York: Routledge.

Cubbins, Lisa A., and Dana Vannoy. 2004. “Division of Household Labor as a Source of Contention for Married and Cohabiting Couples in Metropolitan Moscow.” *Journal of Family Issues* 25:182-215.

Cunningham, Mick. 2001. “Parental Influences on the Gendered Division of Housework.” *American Sociological Review* 66:184-203.

Davin, Delia. 1976. *Woman-Work: Women and the Party in Revolutionary China.* Oxford [Eng.]: Clarendon Press.

Ding, Sai, Xiao-yuan Dong and Shi Li. 2009. “Women's Employment and Family Income Inequality during China's Economic Transition.” *Feminist Economics* 15:163-90.

England, Paula, and George Farkas. 1986. *Households, Employment, and Gender: A Social, Economic, and Demographic View.* New York: Aldine Pub. Co.

Entwisle, Barbara and Gail Henderson. 2000. *Redrawing Boundaries: Gender, Households, and Work in China*. Berkeley, CA: University of California Press.

Firebaugh, Glenn, and Kevin Chen. 1995. "Vote Turnout of Nineteenth Amendment Women: The Enduring Effect of Disenfranchisement." *The American Journal of Sociology* 100:972-96.

Goldscheider, Frances K. 2000. "Men, Children and the Future of the Family in the Third Millennium." *Futures* 32:525-38.

Goldscheider, Frances K., and Linda J. Waite. 1991. *New Families, no Families? : The Transformation of the American Home.* Berkeley: University of California Press.

Gupta, Sanjiv. 1999. "The Effects of Transitions in Marital Status Transitions on Men's Performance of Housework." *Journal of Marriage and the Family* 61: 700-711.

Gupta, Sanjiv. 2007. "Autonomy, Dependence, or Display? The Relationship between Married Women's Earnings and Housework." *Journal of Marriage and Family* 69:399-417.

Hannum, Emily, Yuping Zhang and Meiyan Wang. 2012. "Why are Returns to Education Higher for Women than for Men in Urban China?" *China Quarterly* FirstView: 1-25.

Hardesty, Constance, and Janet Bokemeier. 1989. "Finding Time and Making do: Distribution of Household Labor in Nonmetropolitan Marriages." *Journal of Marriage and the Family* 51:253-67.

Hochschild, Arlie R., and Anne Machung. 1989. *The Second Shift: Working Parents and the Revolution at Home.* New York, N.Y.: Viking.

Honig, Emily, and Gail Hershatter. 1988. *Personal Voices: Chinese Women in the 1980's.* Stanford, California: Stanford University Press.

Hook, Jennifer L. 2010. "Gender Inequality in the Welfare State: Sex Segregation in Housework, 1965–20031." *The American Journal of Sociology* 115:1480-523.

Huber, Joan, and Glenna D. Spitze. 1983. *Sex Stratification: Children, Housework, and Jobs.* New York: Academic Press.

Kamo, Yoshinori. 1988. "Determinants of Household Division of Labor: Resources, Power, and Ideology." *Journal of Family Issues* 9:177-200.

Li, Hongbin, Ting-sin Lai, Junsen Zhang and Yaohui Zhao. 2006. "Relative Earnings of Husbands and Wives in Urban China." *China Economic Review* 17:412-31.

McAllister, Ian. 1990. "Gender and the Household Division of Labor: Employment and Earnings Variations in Australia." *Work & Occupations* 17: 79-99.

Mu, Zheng, and Yu Xie. "Marital Age Homogamy in China: A Reversal of Trend in the Reform Era?" *Social Science Research*. Forthcoming.

Pimentel, Ellen. 2006. "Gender Ideology, Household Behavior, and Backlash in Urban China." *Journal of Family Issues* 27:341-65.

Presser, Harriet B. 1994. "Employment Schedules among Dual-Earner Spouses and the Division of Household Labor by Gender." *American Sociological Review* 59:348-64.

Riley Nancy E. 1996. "China's 'Missing Girls': Prospects and Policy." *Population Today* 24:4-5.

Robinson, Jean C. 1985. "Of Women and Washing Machines: Employment, Housework, and the Reproduction of Motherhood in Socialist China." *The China Quarterly* 101: 32-57.

Ryder Norman B. 1965. "The Cohort as a Concept in the Study of Social Change." *American Sociological Review* 30:843-61.

Sayer, Liana.C., England Paula, Micheal Bittman and Suzanne M. Bianchi. 2009. "How Long is the Second (Plus First) Shift? Gender Differences in Paid, Unpaid, and Total Work Time in Australia and the United States." *Journal of Comparative Family Studies* 40:523-45.

Sayer, Liana C., Philip N. Cohen and Lynne M. Casper. 2004. "Women, Men, and Work." Part of the Series, *The American People: Census 2000*, edited by Reynolds Farley and John Haaga. New York: Russell Sage Foundation and Population Reference Bureau.

Shelton, Beth A., and Daphne John. 1993. "Does Marital Status make a Difference?" *Journal of Family Issues* 14:401-20

Shu, Xiaoling, and Yanjie Bian. 2003. "Market Transition and Gender Gap in Earnings in Urban China." *Social Forces* 81:1107-45.

South, Scott J., and Glenna Spitze. 1994. "Housework in Marital and Nonmarital Households." *American Sociological Review* 59:327-47.

Stacey, Judith. 1983. *Patriarchy and Socialist Revolution in China.* Berkeley: University of California Press.

Treiman, Donald J. 1970. "Industrialization and Social Stratification." Pp. 207-34 in *Social Stratification:Research and Theory for the 1970s*, edited by E.O. Laumann. Indianapolis, IN: Bobbs-Merrill.

Twiggs, Joan E., Julia McQuillan and Myra Marx Ferree. 1999. "Meaning and Measurement: Reconceptualizing measures of the Division of Household Labor." *Journal of Marriage and the Family* 61:712-24.

U.S. Census Bureau. 2008. Statistical abstract of the United States: 2009 (128th ed.). Washington, DC: U.S. Census Bureau.

Wang,Yalin. 1992. A study of time allocation of city and town residents. *Social Sciences in China* 13: 62-82.

West, Candace, and Don Zimmerman. 2009. "Accounting for Doing Gender.' *Gender & Society* 23:112-22.

Yang, Juhua. 2006. "Identifying Gender Division of Private Space from the Division of Domestic Work." *Collection of Women's Studies* 75:16-22.

Zhai Fuhua., and Qin Gao. 2008. "Center-Based Early Childhood Education and Care in China: Policies, Trends, and Implications." *Asian Social Work and Policy Review* 2:127-148.

Zhai Fuhua., and Qin Gao. 2010. "Center-Based Care in the Context of One-Child Policy in China: Do Child Gender and Siblings Matter?" *Population Research and Policy Review* 29:745-74.

Zhang, Guangyu and Baochang Gu. 2007. "Recent Changes in Marriage Patterns." Pp. 125-139 in *Transition and Challenge: China's Population at the Beginning of the 21st Century* edited by Zhongwei Zhao and Fei Guo. Oxford; New York: Oxford University Press.

Zhang, Yuping, Emily Hannum and Meiyan Wang. 2008. "Gender-Based Employment Differences in Urban China: Considering the Contributions of Marriage and Parenthood." *Social Forces* 86: 1529-60.

Zhang, Cui-Xia, and John E. Farley. 1995. "Gender and the Distribution of Household Work: A Comparison of Self-Reports by Female College Faculty in the United States and China." *Journal of Comparative Family Studies* 26: 195-205.

Zhang, Junsen, Yaohui Zhao, Albert Park and Xiaoqing Song. 2005. "Economic Returns to Schooling in Urban China, 1988 to 2001." *Journal of Comparative Economics* 33:730-52.

Zuo, Jiping, and Yanjie Bian. 2001. "Gendered Resources, Division of Housework, and Perceived Fairness--A Case in Urban China." *Journal of Marriage & Family* 63: 1122-33.

Zhou, Xueguang. 2000. “Economic Transformation and Income Inequality in Urban China: Evidence from a Panel Data.” *American Journal of Sociology* 105: 1135-1174.

Appendix: Tables and Figures

Table1: Whether the Respondent Did This Household Task Last Week.

	Cultural-Revolution Cohort (1966-1979) Obs: 402		Gradualist-Reform Cohort (1980-1994) Obs: 430		Radical-Reform Cohort (1995-2006) Obs: 107	
	Mean	SD	Mean	SD	Mean	SD
Husband						
Buy food	0.45	0.50	0.39	0.49	0.36	0.48
Prepare food	0.40	0.49	0.32	0.47	0.22	0.42
Wash clothes	0.23	0.42	0.17	0.37	0.15	0.36
Clean house	0.33	0.47	0.24	0.43	0.23	0.43
Wife						
Buy food	0.83	0.37	0.87	0.34	0.74	0.44
Prepare food	0.90	0.30	0.87	0.34	0.67	0.47
Wash clothes	0.93	0.26	0.92	0.27	0.82	0.38
Clean house	0.93	0.26	0.92	0.28	0.84	0.37

Figure 1. Husband's/ Wife's Time on Specific Household Tasks by Cohort

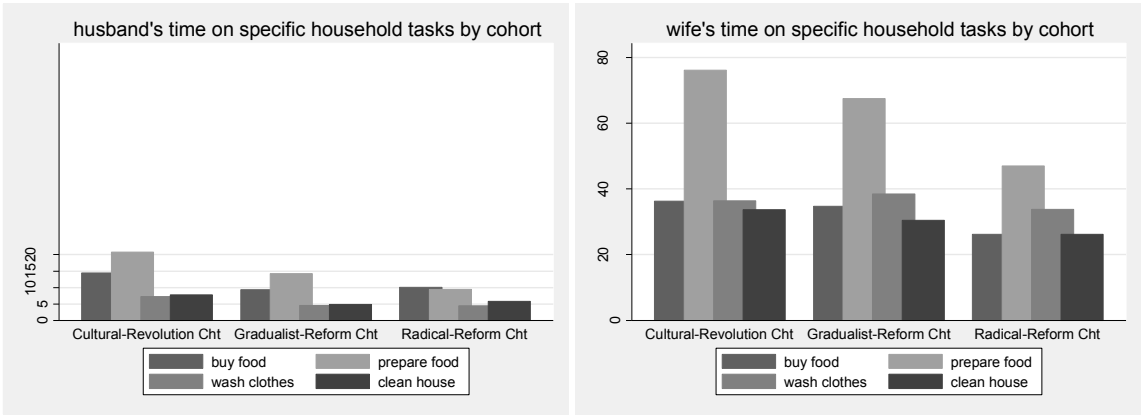

Table 2. Means and Standard Deviations of the Control Variables used in Analysis

	Cultural-Revolution Cohort (1966-1979) Obs: 402		Gradualist-Reform Cohort (1980-1994) Obs: 430		Radical-Reform Cohort (1995-2006) Obs: 107	
	Mean	SD	Mean	SD	Mean	SD
Age						
Husband	54.60	5.14	41.60	5.09	30.43	3.40
Wife	52.70	3.71	39.43	4.09	27.84	2.44
Husband's work hours per week	28.18	25.78	39.16	25.55	37.46	28.14
Wife's work hours per week	16.37	23.55	30.30	25.96	33.75	24.9
Presence of children under 6	0.12		0.09		0.66	
Where parents live						
In the same household	0.02		0.21		0.56	
In the same city	0.16		0.48		0.25	
In other areas/not alive	0.82		0.31		0.20	
Husband's Health						
Good health	0.59		0.67		0.74	
Bad Health	0.41		0.33		0.26	
Wife's Health						
Good health	0.50		0.60		0.74	
Bad Health	0.50		0.40		0.26	

Table 3. Log Odds from Logistic Regression Models Predicting Whether Husband/Wife Did this Housework Task Last Week.

	Model 1		Model 2		Model 1		Model 2	
	Husband's Log Odds for Buying Food				Wife's Log Odds for Buying Food			
Cohort [a]								
Radical-Reform (RR)	-39.90		-0.35		-0.57	**	0.34	
Gradualist-Reform (GR)	-0.25		-0.29		-0.25		0.37	
Difference (between RR and GR)	-1.61		-0.06		-0.82	**	-0.02	
Controls [b.]	No		Yes		No		Yes	
	Husband's Log Odds for Preparing Food				Wife's Log Odds for Preparing Food			
Cohort [a]								
Radical-Reform (RR)	-0.82	**	-0.51		-1.48	***	-0.59	
Gradualist-Reform (GR)	-0.35	*	-0.34		-0.32		-0.01	
Difference (between RR and GR)	-0.47		-0.17		-1.16	***	-0.58	
Controls [b.]	No		Yes		No		Yes	
	Husband's Log Odds for Washing Clothes				Wife's Log Odds for Washing Clothes			
Cohort [a]								
Radical-Reform (RR)	-0.51		-0.42		-0.98	**	-0.48	
Gradualist-Reform (GR)	-0.39	*	-0.40		-0.06		-0.12	
Difference (between RR and GR)	-0.11		-0.02		-0.92	**	-0.35	
Controls [b.]	No		Yes		No		Yes	
	Husband's Log Odds for Cleaning House				Wife's Log Odds for Cleaning House			
Cohort [a]								
Radical-Reform (RR)	-0.46		-0.21		-0.85	**	-0.24	
Gradualist-Reform (GR)	-0.43	**	-0.42	*	-0.12		-0.10	
Difference (between RR and GR)	-0.03		0.21		-0.73	*	-0.14	
Controls [b.]	No		Yes		No		Yes	

Note: [a.] Reference cohort is the Cultural-Revolution cohort. [b.] Controls include all the age-related variables.
* $p<0.05$.
** $p<0.01$.
*** $p<0.001$.

Table 4. Logistic Regression Models on Whether Husband/Wife Prepared Food Last Week

VARIABLES	Husband's Log Odds		Wife's Log odds	
Independent variables	(1)	(2)	(3)	(4)
Cohort				
Radical-reform (1995-2006)	-0.817**	-0.512	-1.481***	-0.589
	(0.253)	(0.315)	(0.265)	(0.365)
Gradualist-reform (1980-1994)	-0.347*	-0.342	-0.324	-0.0112
	(0.145)	(0.175)	(0.219)	(0.266)
Cultural-Revolution (1966-1979)[a]				
Time availability/life cycle control				
Husband's employment hours		-0.00536		0.0118**
		(0.00309)		(0.00429)
Wife's employment hours		0.0125***		-0.0185***
		(0.00322)		(0.00431)
Presence of children under 6		-0.0988		-0.297
		(0.225)		(0.274)
Parents' residence				
Parents in the same household		-0.918***		-0.965***
		(0.265)		(0.286)
Parents in the same city		0.0652		0.168
		(0.174)		(0.274)
Parents in other cities/not alive [a]				
Husband in Good Health		-0.155		-0.139
		(0.157)		(0.227)
Husband in Bad Health [a]				
Wife in Good Health		0.0457		0.0159
		(0.153)		(0.219)
Wife in Bad Health [a]				
Constant	-0.424***	-0.395*	2.203***	2.374***
	(0.102)	(0.166)	(0.167)	(0.255)
Observations	939	939	939	939

Note: [a.] Omitted categories.
Standard errors in parentheses
* p<0.05.
** p<0.01.
*** p<0.001.

Table 5. OLS Regression Coefficients of Husband's/ Wife's Time (Minutes/Day) Spent on Each Housework Task/All Tasks and Gender Gap in HW Time

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Husband's time on Buying Food				Wife's time on Buying Food				Gender Gap in Time on Buying Food			
Cohort [a.]												
Radical-Reform	-4.37	*	-3.55		-10.10	**	2.21		-5.73		-4.95	
Gradualist-Reform	-5.04	***	-4.68	**	-1.56		3.82		3.48		6.30	*
Diff (between RR and GR) [b]	3.55		1.13		-8.54	**	3.82		-9.22	*	1.34	
Controls [c.]	No		Yes		No		Yes		No		Yes	
	Husband's time on Preparing Food				Wife's time on Preparing Food				Gender Gap in Time on Preparing Food			
Cohort [a.]												
Radical-Reform	-11.33	**	-4.76	*	-29.13	***	-12.49		-17.79	*	-5.95	
Gradualist-Reform	-6.56	**	-5.16	*	-8.62	*	-3.28		-2.06		-1.87	
Diff (between RR and GR) [b]	-4.76		-3.26		-20.5	**	-9.21		-15.73	*	-4.07	
Controls [c.]	No		Yes		No		Yes		No		Yes	
	Husband's time on Washing Clothes				Wife's time on Washing Clothes				Gender Gap in Time on Washing Clothes			
Cohort [a.]												
Radical-Reform	-2.90		-2.51		-2.61		-2.79		0.28		-6.59	
Gradualist-Reform	-2.71	*	-2.71	*	2.13		3.59		4.84	*	6.30	*
Diff (between RR and GR) [b]	-0.19		0.19		-4.75		3.59		-4.56		-0.28	
Controls [c.]	No		Yes		No		Yes		No		Yes	
	Husband's time on Cleaning House				Wife's time on Cleaning House				Gender Gap in Time on Cleaning House			
Cohort [a.]												
Radical-Reform	0.92		-1.94		-7.53	*	-1.28		-5.58		-1.55	
Gradualist-Reform	-2.87	**	-3.39	**	-3.30		-1.18		-0.43		-2.20	
Diff (between RR and GR) [b]	0.92		1.44		-4.22		-0.10		-5.14		0.65	
Controls [c.]	No		Yes		No		Yes		No		Yes	
	Husband's time on All Tasks				Wife's time on All Tasks				Gender Gap In Time on All Tasks			
Cohort [a.]												
Radical-Reform	-20.55	**	-16.43	*	-49.38	***	-18.79		-28.83	*	-19.05	
Gradualist-Reform	-17.18	***	-15.94	**	-11.34		0.75		5.83		-16.69	
Diff (between RR and GR) [b]	-3.36		-0.49		-38.04	***	-19.54		-34.67	**	-2.36	
Controls [c.]	No		Yes		No		Yes		No		Yes	

Note: [a.] Reference cohort is the Cultural-Revolution cohort. [b.] Controls include all the age-related variables. [b.]RR is short for he Radical-Reform cohort and GR is short for the Gradualist-Reform cohort.

* p<0.05.

** p<0.01.

*** p<0.001.

Table 6. OLS regressions on Husband's/Wife's Time (Minutes/Day) Spent on Food Preparing

VARIABLES	Husband's Time		Wife's Time	
Independent variable	(1)	(2)	(3)	(4)
Cohort				
Radical-reform (1995-2006)	-11.33***	-8.421*	-29.13***	-12.49
	(3.319)	(4.154)	(6.028)	(7.473)
Gradualist-reform (1980-1994)	-6.559**	-5.158*	-8.620*	-3.279
	(2.117)	(2.508)	(3.844)	(4.512)
Cultural-Revolution (1966-1979)[a]				
Time availability/life cycle control				
Husband's employment hours		-0.0763		0.165*
		(0.0410)		(0.0742)
Wife's employment hours		0.123**		-0.374***
		(0.0435)		(0.0784)
Presence of children under 6		0.0484		-6.844
		(3.032)		(5.457)
Parents' residence				
Parents in the same household		-9.070**		-14.36*
		(3.304)		(5.951)
Parents in the same city		-2.460		2.054
		(2.518)		(4.532)
Parents in other cities/not alive[a]				
Husband in Good Health		-0.117		-1.023
		(2.217)		(3.969)
Husband in Bad Health[a]				
Wife in Good Health		2.887		-0.572
		(2.144)		(3.857)
Wife in Bad Health[a]				
Constant	20.76***	20.10***	76.11***	79.22***
	(1.522)	(2.373)	(2.764)	(4.279)
Observations	939	939	939	939

Note: [a.] Omitted categories.
Standard errors in parentheses
* p<0.05.
** p<0.01.
*** p<0.001.

Table 7. OLS regressions on Husband's/Wife's Housework Time (Minutes/Day), and Gender Gap in HW Time

VARIABLES	Husband's HW Time		Wife's HW Time		Gender Gap in HW	
	1	2	3	4	5	6
Independent variables						
Cohort						
Radical-reform (1995-2006)	-20.55**	-16.43*	-49.38***	-18.79	-28.83*	-2.362
	(6.339)	(7.911)	(10.60)	(12.97)	(13.03)	(15.93)
Gradualist-reform (1980-1994)	17.18***	-15.94***	-11.35	0.751	5.837	16.69
	(4.043)	(4.776)	(6.761)	(7.829)	(8.308)	(9.617)
Cultural-Revolution (1966-1979)[a]						
Time availability/life cycle control						
Husband's employment hours		-0.223**		0.280*		0.502**
		(0.0780)		(0.131)		(0.160)
Wife's employment hours		0.325***		-0.964***		-1.289***
		(0.0829)		(0.136)		(0.167)
Presence of children under 6		0.454		-10.45		-10.90
		(5.771)		(9.472)		(11.63)
Parents' residence						
Parents in the same household		-15.92*		-22.28*		-6.358
		(6.299)		(10.34)		(12.68)
Parents in the same city		-1.507		4.506		6.014
		(4.798)		(7.874)		(9.665)
Parents in other cities/not alive[a]						
Husband in Good Health		0.981		5.524		4.543
		(4.198)		(6.899)		(8.475)
Husband in Bad Health[a]						
Wife in Good Health		2.023		2.060		0.0371
		(4.077)		(6.697)		(8.222)
Wife in Bad Health[a]						
Constant	50.23***	50.14***	182.4***	186.9***	132.2***	136.8***
	(2.906)	(4.514)	(4.861)	(7.435)	(5.973)	(9.133)
Observations	939	939	939	939	939	939

Note: [a] Omitted categories.
Standard errors in parentheses
* p<0.05.
** p<0.01.
*** p<0.001.