

**DO SONS GIVE MORE MONEY TO PARENTS THAN DAUGHTERS GIVE?
GENDER AND INTERGENERATIONAL SUPPORT IN CONTEMPORARY URBAN CHINA**

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Introduction

The traditional Chinese family has long been characterized as patriarchal, patrimonial, patrilineal, and patrilocal (Thornton and Lin 1994). Indeed, in a classic paper on the influence of this family structure on gender inequality, Greenhalgh (1985, p.265) states that “Traditional Confucian China and its cultural offshoots, Japan and Korea, evolved some of the most patriarchal family systems that ever existed.” The core value of the Chinese family system is filial piety, the idea that grown children should respect and care for their elderly parents, especially along the male line (Whyte 2004; Whyte and Xu 2003). That is, in the traditional Chinese family system, elderly persons depend on their adult children for old-age support. However, this support is clearly expected from sons rather than daughters in a traditional family. Thus, we should expect large gender differences, with much more support from sons than from daughters, in the old-age support of parents in Chinese families.

At the risk of over-simplification, let us provide, as background, a broad sketch of the Chinese family system and its implication for gender differences.¹ In this family system, a marriage means that a woman has married into her husband’s extended family, where older and male family members have family power over younger and female members. Sons are permanent members of their natal family and retain life-time contractual relationships with their parents. They are expected to contribute to their parents’ economic well-being throughout their adult lives. In contrast, daughters are only transitory members of their natal families before their marriage, when they move to and begin to contribute to the families of parents-in-law. Though daughters are expected to contribute to their natal families before marriage, married women are no longer expected to contribute financially to their parents’ households. Instead, upon marriage, women’s

¹ We rely on Greenhalgh (1985) for this characterization.

filial obligations are supposed to be “redirected to the support of their husbands’ parents” (Whyte and Xu 2003, p.167).

There is no question that this stylized description of the Chinese family no longer applies to all families in contemporary Chinese societies, as many changes have taken place with regard to the Chinese family structure (e.g., Thornton and Lin 1994; Whyte 2004). In addition, a great deal of variability exists in the applicability of this description across individual families and social contexts. At the same time, however, it is safe to say that traditional family values of filial piety and traditional family practices of patriarchy linger on or even play prominent roles in at least some segments of contemporary Chinese societies. As a result, sons on average may provide more financial support to their elderly parents than daughters. For example, earlier research has shown that married daughters provide much smaller amounts of financial support to their parents than married sons in contemporary Taiwan (Lee, Parish, and Willis 1994; Hermalin, Ofstedal, and Shih 2003) and in rural China (Yang 1996).

While traces of the old patriarchal structure remain, there is also ample evidence that Chinese families have changed substantially since the founding of the People’s Republic of China in 1949, especially in urban areas. Partly as a result of the almost universal employment of women in urban China, gender inequality in socioeconomic status has declined. In education, for example, it has been substantially reduced (Hannum and Xie 1994; Whyte and Parish 1984), although more recent evidence indicates that gender inequality has increased in the more recent era of economic reform (Hannum 2005). Gender disparity in earnings was relatively low by international standards in 1988 urban China (Xie and Hannum 1996), but it has again increased in subsequent years (Hauser and Xie 2005; Shu and Bian 2003).

Even without a Communist revolution that emphasized equality as a political goal, the Chinese family would also have undergone major changes as a result of economic development. As Goode (1970) argues, modernization and industrialization have been accompanied by a shift from the traditional extended family to the nuclear family and the consequent weakening of extended kinship ties and mutual support. As a result, intergenerational support in China would have declined as a result of rapid economic development that has occurred in recent decades.

We have already observed the erosion of many traditional family practices in China. For example, age at first marriage has substantially increased from about 18.7 in 1950 to 23.1 in 1980 (Cheng 1993). The crude birth rate has drastically declined from 36‰ in 1950 to 15.2‰ in 1999 (China Statistical Yearbook 2000), partly resulting from the government's very aggressive family planning measures (Zimmer and Kwong 2003). The average size of Chinese families has dropped from 4.3 in 1953 to 3.36 in 2004 (China Statistical Yearbook 2005), mainly in response to the joint forces of mortality and fertility declines (Lin 2001). Love marriage has gradually replaced arranged marriage (Whyte and Parish 1984; Xu and Whyte 1990), and the divorce rate has increased from 0.9 % in 1985 to 1.9% in 1998 (China Population and Development Research Center 2000).

In addition, one important structural feature of contemporary urban China has also fundamentally changed the economic basis of the traditional Chinese family system: unlike Chinese living in rural China, almost all urban Chinese residents are covered under a pension system that provides old-age support to retirees. This pension system substantially reduces, and indeed in most cases eliminates, the need for elderly persons to rely on their grown children for financial security. Among those elderly persons whose pension is modest, some supplement their pensions with employment income (Raymo and Xie 2000). In fact, a large proportion of adults in urban China receive financial support *from* their elderly parents rather than giving support *to* them.² Thus, for most Chinese urban adults, giving money to parents is considered “optional” rather than mandatory, and there is no set amount, as elderly parents no longer count on their adult children for basic living needs. We borrow the word “option” from Waters’ (1990) notion of “ethnic options.” Like “ethnic options,” the requirement to support elderly parents is no longer an essential feature of Chinese urban society. Rather, contemporary urban Chinese may choose to display or not to display their belief in a

² In our data, for example, 33.4 percent of all adult respondents reported that they had received a positive net amount of financial support from their elderly parents.

long-held traditional practice.³ As in the case of “ethnic options,” because the practice of supporting elderly parents is optional, it reveals one’s preference regarding one’s cultural heritage.

However, the similarity between “ethnic options” and the option of supporting elderly parents is superficial and should end here. There are two important differences between the two. First, whereas “ethnic options” are virtually costless, the option of supporting elderly parents costs real money and is thus much more highly constrained by available resources. However, it is possible that persons with more resources are in a better position to practice the option. Second, whereas “ethnic options” can be exercised by a single person, giving financial support to (or receiving it from) elderly parents involves multiple parties, at least an elderly parent and an adult child, but often also the spouse and siblings of the child. The actual amounts transferred across the multiple parties result from complicated negotiation processes that are affected by their characteristics and their relationships to each other. For example, the following questions may be asked: Is there a need to support the elderly parents when they have an adequate pension? Can non-financial help (such as personal care, favors, gifts, chores, assistance with medical care) satisfy modern notions of filial piety and thus compensate for lack of financial support?⁴ Will the elderly parents receive financial support from one child and then transfer it to another child as a form of redistribution within an extended family?

A combination of these factors – reduced gender inequality, weakening of the traditional family system accompanied by the rise of the nuclear family, a dramatic reduction in fertility and an increase in longevity, the universal pension coverage for urban residents -- have fundamentally changed the way in which the elderly continue to receive financial support from their adult children. In this paper, we explore a

³ A reader may wonder whether support for elderly parents is publicly displayed. While we do not have systematic data on this, our understanding is that most elderly parents talk openly and frequently to other family members and relatives about the money and gifts they receive from their adult children.

⁴ There is no question that non-financial support already plays a very important role in intergenerational relationships in China (Bian, Logan, and Bian 1998; Whyte and Xu 2003).

particular question on this larger issue: Do sons still give more money to parents than daughters give in contemporary urban China?

Previous Literature

Three studies in the previous literature are closely related to this question. The first is the study by Lee, Parish, and Willis's (1994) on intergenerational support in Taiwan. The study reports that very high proportions of both married sons and married daughters (79% of sons and 70% of daughters) provide financial support to their parents in Taiwan. Despite the similar likelihood of support by gender, however, daughters' support is in smaller amounts than that of sons, leading the authors to conclude that "daughters' support still remains very much supplementary" (p.1037). As we discussed earlier, it is dangerous to extrapolate from the Taiwanese experience in the Chinese context. While there are similarities between the two societies, we can also expect some differences. The primary difference between China and Taiwan is that traditional values of familial piety and financial support of elderly parents have substantially eroded in China, especially in urban China (Hermalin et al. 2003). Thus, while some of the analyses in this study are modeled after Lee, Parish, and Willis's study (1994), the conclusions of their analysis have little direct relevance to the question we wish to answer in this paper.

Sun's (2002) study is based on a 1994 survey in Baoding, China. Baoding is a medium-sized city in northern China. The Baoding survey is attractive in that interviews were conducted with a sample of elderly persons (ages 50 and older) and their adult children. Sun only considers occurrences of financial transfer (along with exchanges of gifts and services). For transfer data received by parents, Sun (2002, p.349) does not find differences by children's gender. Sun's results from the child's perspective are different. In a multivariate model controlling for marital status and residential arrangement, Sun finds a significant gender difference in favor of sons, concluding that "sons were one and a half times as likely as daughters to give financial support" (p.353). However, a number of features in Sun's study make it less than a definitive answer to our question. First, it does not measure the *amount* of support. Second, the statistical analysis is based on the aggregation of highly heterogeneous groups; to study gender differences due to traditional family values, it is necessary to focus on married sons and married daughters. Third, his analysis considers

coresidential status as an additive control, which is not adequate, as coresidence is very closely tied to parental support.

The most relevant study to our question to date is that by Whyte and Xu (2003). These two authors also use the Boading data. With gender disparity as a major focus, the Whyte and Xu study is restricted to married sons and married daughters. It differentiates the raw gender differences in support and the adjusted gender differences after relevant covariates are controlled for.⁵ The overall conclusion of the study is that married daughters provide the same level of financial support as married sons after the control of relevant covariates.

It is puzzling that two studies based on the same data yield opposite conclusions. The difference in findings is probably attributable to sample restriction and differences in statistical methodology. However, both studies rely on using coresidence status as an additive covariate. In our view, this practice poses a limitation to their studies, because coresidence with parents is both a form of support and a moderator of financial support. It is a form of support because an elderly parent can rely on the family of a coresiding child for immediate personal care, household chores, close emotional support, and material provision in the same household. There is also a reduction of living costs due to scale efficiency. Certain kinds of support, say daily cooking, are not possible if a grown child does not live with his/her parents. Recall that coresidence of multiple generations along the male lineage is the ideal form of the traditional Chinese family. The nature of intergenerational relationships is radically altered when a grown child lives separately from his/her parents. Direct support in terms of personal care, household chores, and sharing of household resources is much diminished as a result of the separation of households. In this case, financial transfer is the most visible and most tangible form of support. Lee, Parish, and Willis (1994, p.1027) argue that high status sons may “buy out” their filial obligations of coresiding with elderly parents by providing more financial support. In this sense, coresidence and financial support are joint outcomes.

⁵ They include coresidence, respondent’s education, rural origin, parental age, number of siblings, number of children, income, parents’ health, and parents’ provision of help.

Research Design

This paper is part of a larger effort aimed at understanding the socioeconomic well-being of the elderly in contemporary urban China. For this project, we conducted the survey “Study of Family Life in Urban China” in three large Chinese cities: Shanghai, Wuhan, and Xi’an in the summer of 1999. We also refer to the study as the “Three-City Survey.” At each research site of the Three-City Survey, the study initially targeted a probability sample of 1,000 households, with a two-stage probability sampling method. At the first stage, 50 neighborhood communities were randomly chosen in proportion to size. Within each selected neighborhood community, 20 households were randomly chosen. A Kish table was used to select an adult respondent (18 years or older) within each selected household.

If the person being interviewed was younger than 60, we first interviewed the person with Questionnaire A, with which we collected all relevant information, including that pertaining to the support of his/her parents. We then interviewed one of his/her parents with Questionnaire A+, which is specifically tailored to the elderly. If the person initially selected was 60 years or older, we interviewed the person with Questionnaire B, which is similar to Questionnaire A+ and specifically tailored to the elderly. We then randomly selected one of his/her children for interview with Questionnaire B+, which is very similar in content to Questionnaire A for adult respondents. The survey design called for matching between an adult respondent and one of his/her elderly parents only if both parties lived in the same city. Although the instruction stipulated a “random” selection when an elderly parent was first interviewed and multiple adult children were possible candidates, we suspect that some interviewers took the short cut of interviewing the coresidential adult child if the elderly person was in a coresidential household. Here, we define coresidential families as those in which an elderly person (60 years or older) lives with his/her adult children.

Although the survey design collected information from both an elderly person and his/her adult child, if available, for this paper we analyze data only from the adult children. Use of the information from the parents’ questionnaire would require us to restrict the study to matched pairs, thus reducing the sample size by 51% percent. We plan to extend our research on elderly support in the future by using information from the matched pairs.

Following earlier studies (Lee, Parish, Willis 1993; Whyte and Xu 2003), we restrict the analyses to married adults with at least one surviving parent. The restriction to married persons is sensible, because the literature suggests that women's support to parents declines substantially only as a result of marriage (Whyte and Xu 2003). Before marriage, women provide contributions to their natal families in more significant ways than their brothers and thus help fund the education of their brothers (Greenhalgh 1985; Parish and Willis 1993). The resulting sample consists of 869 male respondents and 932 female respondents. We focus on gender differences in these respondents' financial support to parents.

Information about the financial support provided to parents was collected on the adult child's questionnaire. Respondents were asked about the financial transfers, both upward (from respondents to parents) and downward (from parents to respondents) in the year 1998.⁶ We followed the practice of Lee, Parish, Willis (1993) and constructed a dependent variable based on the net flow between the respondent and the respondent's parents. It is a composite measure of net positive flow from the respondent to his/her parents. Net downward flows are truncated at zero, as we are only concerned with financial transfers from adult children to elderly parents. This dependent measure can be further decomposed into two multiplicative parts: the likelihood of support (i.e., probability of a positive value of net support) and the amount of net support conditional on support.

In examining gender differences in the support of parents, we also include, besides coresidence status as a key covariate, other available covariates in the survey in our multivariate statistical analyses. There are two motivations for the inclusion of other covariates. First, gender differences in such covariates may obscure our simple comparisons by gender. In the aggregate, family background characteristics should be the same between men and women (at least for the cohorts being studied), and family resources should be the same between married men and married women. However, there are gender differences in person-level attributes. For examples, on average, personal earnings are lower among married women than among married men. To the extent that personal socioeconomic status affects support of parents due to power

⁶ The surveys questions instructed the respondents to include the cash equivalence of "gifts" worth more than 200 RMB yuan.

relations within the family, these gender differences serve to contribute to women's lower level of support than men's (Whyte and Xu 2003).

The second reason for considering other covariates is to replicate the important study by Lee, Parish, and Willis (1994) for Taiwan, which tests three models: the power model, the exchange model, and the altruism model. The power model is based on the premise that the main reason for children's support of elderly parents lies in the elderly parents' power and resources. Rapid economic development and social changes weaken parental power and thus reduce the support. The exchange model emphasizes mutual assistance among family members of different generations. For example, adult children may need their parents' help with household chores and childcare. Furthermore, "prospective exchange" may be important, meaning that parents may invest in children while the children are young in the expectation of more financial returns later (Lee, Parish, and Willis 1994). The altruism model of the family economy assumes that the head of the household is altruistic and cares about the welfare of other family members as well as his or her own. Becker (1974, 1991) argues that altruism dominates family behaviors perhaps to the same extent as selfishness dominates market transactions. The empirical results of Lee, Parish, and Willis's (1994) study lend more support to the altruism model than to the power model.

To control for potential confounders and to replicate some of Lee, Parish, and Willis's (1994) results, we constructed the following groups of explanatory variables:

Family Type is a dummy variable, with married child coresiding with parents coded 1 and not co-residing coded 0. The information was directly ascertained on the child's questionnaire.⁷ As in Lee, Parish, and Willis's study (1994), we use this variable both as an indicator of parental support and as a key covariate interacting with gender for models predicting financial support.

Parents' Resources include father's socioeconomic status, parents' survival status, parents' help with household chores, and whether parents have more than one surviving child. Father's socioeconomic status is

⁷ When both parents are alive, the survey did not ask if the respondent lived with one or both parents. Given the rare occurrence of being separated or divorced for Chinese who were born on average in 1929, this data limitation should not cause any serious problem.

measured by International Socioeconomic Index (SEI), which is recoded from detailed current occupation based on 3-digit occupational codes used in the statistical system by the China State Statistical Bureau.

Father's SEI is a proxy measure of parents' financial resources. If the power model is true, we would expect that the higher the father's SEI score, the more financial transfers from children to parents. However, father's SEI also measures parents' need, with the need declining with father's SEI. Parents' survival status is dichotomous, indicating whether both parents are alive. This variable measures parents' need for support, as the need is greater with one parent surviving than with both parents surviving. As in Lee, Parish, and Willis (1994), we use parents' help with household chores such as childcare, cooking, and grocery shopping to test the short-term exchange model. If the exchange model is true, we would expect that children provide more financial support to parents who help them with household chores. Finally, we control for whether the respondent has other siblings to further measure parents' need. If the respondent is the only surviving child, parents' need for support from this particular child should be greater.

Respondent's Resources are measured by the respondent's education, personal income in 1998, and current occupation. Education is measured in years of completed schooling. Personal income is a composite measure encompassing salary, bonus, subsidies, and all other forms of income. Occupation is again in the scale of International Socioeconomic Index (SEI). Education is used to test the long-term exchange hypothesis (loan hypothesis). If this hypothesis is true, we would expect children who have a higher educational level (i.e., receive more investment from parents) to provide more support. We use children's income and SEI to test the weak version of the bargaining hypothesis; that is, children with higher income and SEI give more money to their parents.

Other Controls considered in our study are demographic variables. They include parental average age, adult child's age, and city.

Unlike the power and exchange models, the altruism model does not lend itself to direct testing. Instead, altruism is often inferred from the prevalence of intergenerational support or tested indirectly in combination with the long-term exchange model (Lee, Parish, and Willis 1994). Therefore, the altruism model is tested implicitly in our analysis.

Descriptive Results

We present the means or percentages of our variables by gender in Table 1. The three dependent variables measuring financial support to parents are given in the first three rows, followed by family type, parents' resources, respondent's resources, and other controls. The p-values for testing the null hypothesis of no gender differences for each variable are given in the last column.

Table 1 about Here

The first row shows that, for our sample, there is no statistical difference by gender in the amount of financial support to parents. If there is anything, married daughters seem to provide more support than married sons (423 yuan versus 380 yuan). This is surprising, as the literature on the traditional Chinese family strongly suggests that daughters do not carry the financial responsibility to support parents after marriage. It is married sons who are supposed to be responsible for supporting parents in old age. The second row presents the proportion of children who give positive net transfers to parents by gender. Again, married women seem to have a higher proportion of giving than married men (40.9 versus 37.9 percent), although the difference is not statistically significant. The third row displays the average amount transferred to parents among those respondents with positive transfers. There is no gender difference in this measure.

The crude comparisons given above may mask the fact that children (sons?) provide more non-cash support to parents through coresidential arrangements. As argued by Lee, Parish, and Willis (1994), grown children may use cash support to compensate for not residing with parents, which is the traditional practice. We know that married sons are still far more likely to coreside with parents than married daughters (Logan and Bian 1999). In our data, the contrast is 38.1 percent for men versus 15.2 percent for women.⁸ Thus, it is possible that women's apparent high level of financial support is due to their lower rate of coresidence with parents.

⁸ These percentages may be upwardly biased due to the complicated procedure of being included in the sample through matched pairs. However, the sampling procedure should not impact the observed gender difference in the incidence rate of coresidence.

Among covariates that measure parents' resources, the main gender difference is that married sons are more likely to receive parents' help with household chores than married daughters (27.3% vs. 15.6%). Of course, the main reason for this is that parents' ability to perform household chores is highly constrained by living arrangements. Since married sons are far more likely to coreside with parents than married daughters, the former are also more likely to receive help with household chores than the latter as a result of coresidence.

Among the three measures of the respondent's resources, the most significant gender difference lies in personal income. Whereas married men have an average of 11,217 RMB yuan in personal income in 1998, the corresponding number for married women is only 6,967, only slightly more than half.⁹ Married men also have more years of education, but the education disparity is not large (11.3 years versus 10.9 years).

From previous literature on intergenerational transfers (Lee, Parish, and Willis 1994; Sun 2002), we know that parents' and children's resources impact the likelihood and the amount of financial transfers from children to their parents. As recognized by Whyte and Xu (2003), gender differences in these covariates could obscure observed gender differences in financial support to parents. Thus, it is necessary to conduct multivariate analyses, to which we now turn.

Multivariate Results

We argued before that coresidence is both a form of support and a moderator of financial support. We now explicate these two meanings of coresidence by implementing the following statistical strategies. First, we use coresidence as a dependent variable and model the determinants of coresidence by gender. Second, in

⁹ Of course, not all of the gender disparity in personal income is due to wage difference. A major reason is the gender difference in labor supply. Many middle-aged women have been forced to retire early or leave their positions as a result of restructuring in many large enterprises formerly owned and operated by the state.

modeling the determinants of financial support, we interact gender and coresidence so as to examine gender differences within a given type of living arrangement.

The results from implementing the first statistical strategy are presented in Table 2. The main entries (in columns 1 and 3) are logit coefficients on the probability of coresiding with parents, with standard errors (SE) reported on the right side. The model is estimated separately for men and women. The estimated effects of some covariates are the same between the sexes. For example, having lost a parent and having no other surviving siblings significantly increases the likelihood of coresidence. Parents' age and SEI have positive effects, whereas the respondent's age has a negative effect. However, the factors representing children's socioeconomic status have very different effects between men and women. Men's high social status, be it measured by income, education, or occupation, is associated with a lower likelihood of coresiding with parents. In the words of Lee, Parish, and Willis (1994, p.1027), "This is consistent both with more affluent sons 'buying' their way out of coresidence, probably sending cash instead and with poor sons wanting to save money by sharing facilities with parents." While Lee, Parish, and Willis's study does not find that women's socioeconomic status affects their likelihood of coresidence, we find a strong positive effect of education among married women: a one-year increase in their education increases the odds of coresidence by 10 percent. Thus, it appears that there is a selection process into coresidence that differs sharply by gender: whereas an unsuccessful son may stay at home with his parents after marriage because of his inability to live independently, a successful daughter may be able to break the traditional form of patrilocal living arrangement and bring her husband to live with *her* parents.

Table 2 about Here

To understand the potential interaction effects of coresidence status and gender on adult children's financial support to parents, let us begin with a descriptive analysis that breaks down the mean of our three dependent variables by gender (first three lines in Table 1) and family type. The resulting averages for such combinations are given in Figures 1 through 3. The p-values in the figures refer to the statistical tests for gender differences for an outcome variable within a family type.

Figures 1-3 about Here

The results are unexpected. Among married persons who do not coreside with parents, there are no statistical differences by gender for any of the three outcomes, although the point estimates are higher for sons than for daughters. For respondents coresiding with parents, we observe that married women give significantly higher levels of support to parents than married men do both for the whole sample (635 yuan versus 336 yuan, Figure 1) and among those who give positive net amounts to parents (1,866 yuan versus 1,219 yuan, Figure 2). There are no gender differences in the proportion of positive net transfer. While the existing literature suggests that married women should provide a lower (at most, equal) level of support than married men, it is surprising that among those coresiding with parents, married women actually surpass married men in providing financial support to parents.

We already drew attention to part of the answer to this puzzle earlier when we discussed the results of the logit model predicting coresidence. The social processes for coresidence are different for married men and married women. The traditional practice is for a married son to stay with his parents, as living with parents is seen as a filial obligation. Rich sons may be able to buy their way out of this expectation by providing cash, while poor sons provide this support to parents and also save money through coresidence. In contrast, daughters are not supposed to live with parents after marriage within the traditional Chinese family system. It takes an extra hurdle – often an economic or emotional hurdle – for a newly married couple to live with the wife’s family. For example, the wife’s family could provide living space for the couple that is not available in the husband’s family. Or the wife may have very strong emotional attachments to her natal family and could defy the traditional practice by affirming primary family ties with her family rather than her husband’s family. For these and other potential mechanisms to work, she likely needs to be resourceful and rely on both her own personal resources and her family’s resources. This is part of the reason why father’s SEI has a much larger effect on married women’s likelihood of coresidence than it does for married men (first row, Table 2).

To examine full implications of the gender-coresidence interaction, it is necessary to control for relevant covariates that may both vary by gender and coresidence and affect financial transfers to parents. Following Lee, Parish, and Willis’s (1994) study, we model the two multiplicative components of the total

amount of transfer in our multivariate analyses: the likelihood of a positive transfer, and the (logged) amount of transfer conditional on a positive transfer. We model the two processes separately.¹⁰

We present the results of two logit models predicting the occurrence of a positive transfer in Table 3. Model 1 basically contains the same information as Figure 2 after reparameterization (from differences in proportion to odds-ratios). The only significant coefficient is the negative effect (-0.604) of coresidence, meaning that coresidential children have odds of supporting parents that are only 54% the odds of non-coresidential children. There is no gender difference either in the likelihood of support or in the coresidence effect on support. In Model 2, after we include parents' resources, respondents' resources, and other controls, we observe that the gender coefficient has turned positive and statistically significant (0.337). This suggests that women would be more likely than men to provide support to parents if there were no gender differences in the distribution of the relevant factors presented in Table 1. Note that father's SEI has a significantly negative effect, and having lost a parent has a significant positive effect. Respondents' income, education and SEI have significant and positive effects on the likelihood of transfer. We defer the interpretation of these results after discussing Table 4.

Table 3 about Here

We further model the amount of transfer, among the respondents for whom there is a positive transfer to parents. We use the natural logarithm of the net amount (in 1998 RMB yuan) as the dependent variable and estimate two linear regression models with ordinary least squares (OLS). The results are given in Table 4. As in Table 3, Model 1 in Table 4 basically reproduces the same information as Figure 3 on a different scale. As in Figure 3, we also find a significant interaction between gender and coresidence status, indeed the only positive coefficient in the model. The magnitude of the coefficient (0.474), in combination with other insignificant coefficients, means that married women coresiding with parents give about 60%

¹⁰ We also experimented with Heckman's selection model after specifying errors from the two equations to follow a bivariate normal distribution. However, the estimated correction is not significant, suggesting no evidence of selection under the Heckman specification.

more to parents than the other three groups: men regardless of coresidence status and women not coresiding with parents. This interaction pattern is well illustrated in Figure 3. The question that arises is why such interaction exists.

Table 4 about Here

We provide a partial answer to this question in Model 2 of Table 4. In this model, we include the same covariates that we included in Model 2 of Table 3 for the analysis of the likelihood of transfer. After we include the relevant covariates, two changes are particularly worth noting. First, the gender coefficient (which compares women versus men among non-coresiding respondents) becomes significantly positive (0.109). This change means that, after the appropriate control of relevant factors, women not living with parents actually provide higher amounts than men (by about 11 percent). Second, the gender by coresidence interaction is reduced almost by half and is only marginally significant from zero at the 0.1 p-value. This large decline in interaction supports our earlier proposition that a primary reason why married women coresiding with parents provide more support to parents is that they possess more personal resources.

The other statistically significant results in Model 2 of Table 4 include the positive coefficient of parents helping with household chores (0.363), respondent's logged income (0.016), respondent's education (0.039), and respondent's SEI. Although there are minor differences between results in Table 3 and those in Table 4, a broad pattern emerges when we compare the results. Let us focus on results that have implications for the three hypotheses discussed by Lee, Parish, and Willis's (1994) study.

In balance, our results support the overall conclusion of Lee, Parish and Willis (1994). First, we do not find any support for the power model. Father's SEI, a proxy of parental material resources, has either a negative effect on the likelihood of support (Table 3) or an insignificant effect on the amount of support (Table 4). Second, there is support for the exchange model, as parents' help with household chores has a positive effect on the amount of support (Table 4). Third, we also interpret our results to support the altruism hypothesis for two reasons. The first reason is that, by and large, respondent's own resources (as measured by personal income, education, and occupation) have positive effects on financial support to parents, in both the likelihood (Table 3) and the amount (Table 4). This result shows that children with more

resources spend more resources to help improve parents' wellbeing. The second reason is that we find coresidence to substantially reduce the likelihood of providing financial support to parents. This is true probably because children coresiding with parents already provide support to parents in many other ways, such as personal and domestic services, household chores, and sharing of household items and facilities.

On the central question that concerns this study, gender differences in intergenerational support, our results are full of surprises. Instead of lower levels of support to parents than married men, we find married women to have either the same or higher levels of support. In terms of the likelihood of providing support, married women are as likely as married men to provide without any controls, and are much more likely when relevant factors are controlled for. For the amount of support, married women's higher level of support is apparent among those coresiding with parents before controls. After relevant factors are controlled for, all married women give higher amounts than married men. Most, but not all, of the higher level of support among women coresiding with parents is explained by their higher levels of resources.

Conclusion

Do sons give more money to parents than daughters do in contemporary urban China? While our answer can only be tentative due to the regional limitation of our data from the 1999 Three-City Survey, the answer based on the data is a clear no. We do not find empirical evidence in the data that supports the expectation from the traditional Chinese family model that sons provide more financial support to parents than do daughters. The only evidence that is consistent with this notion is the fact that parents are still much more likely to coreside with married sons than with married daughters.

Analyses of the data pertaining to transfer from married children to parents show that, when there is a significant gender difference, the direction is actually in women providing more than men. This is an unexpected finding. What explains it?

While we do not have firm empirical data to test our idea, we can provide a provocative speculation. We propose that the Chinese family in contemporary urban China has undergone some major changes that make it different from the traditional Chinese family. Resulting from multifaceted social changes in gender ideology, economic development, fertility, mortality, and, most importantly, pension systems, a fundamental

change has taken place in contemporary urban China: intergenerational support to parents is optional and primarily symbolic, and it serves the important roles of (1) binding family members across generations, (2) distributing resources informally within the family, (3) buffering in times of economic shocks, and (4) serving as a concrete mechanism through which one can display the traditional Chinese value of filial piety.

One piece of evidence that is consistent with this line of thinking is that the total amount of support is relatively small compared to wages earned by active workers. The average annual wages in the three cities in 1998 were: 13,847 yuan in Shanghai, 8,468 yuan in Wuhan, and 7,155 yuan in Xi'an (China Data Online 2006). The unconditional average amount of support in our study is 380 for married men and 423 for married women. The conditional average amount of support is a little above 1000 yuan, about one tenth of the average annual wage in these cities.

Recall that we truncated negative transfer from parents to children to zero. This practice is a conservative way to examine net transfers in favor of the child's transfer. If we do not truncate the outcome measure, the average flow in our data is actually downward – meaning that parents on average give more to adult children than the other way around. This is strong evidence suggesting that parents, on the whole, actually do not rely on children for old-age support. If intergenerational transfer matters in the urban Chinese family, it is mainly the elderly parents who transfer money to their adult children.

This does not mean that financial support to parents is not important. To be sure, financial transfer from adult children to parents remains an important practice in contemporary China, urban or rural. However, in urban China at least, the nature of the practice has changed. Such transfers can significantly improve parents' wellbeing in a small number of cases when parent's economic resources are truly limited; they can also provide insurance against sudden needs such as costs for expensive medical treatments. For most families engaged in financial transfers, however, the amount is relatively small and is of primarily symbolic value. Certain elderly parents take pride in knowing, and also in announcing publicly, that their grown children show filial piety by sending them money, although they themselves may not need the extra money. They sometimes save the money to transfer back to the children who gave it to them, to their other children who are less fortunate, or to their grandchildren.

If we are correct in interpreting financial transfer as being primarily of symbolic and social importance, it is then not difficult to understand why women are more likely to give money. It is well known that women have larger social networks than men. They are more engaged in interacting with members of the extended family. Both Sun's (2002) study and the study by Whyte and Xu (2003) show that women provide more non-financial support to parents. If financial transfers are made for non-financial reasons, we can also expect women to be more engaged in financial transfers to parents.

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Table 1: Means and Percentages of Variables

	Men	Women	p value
Amount of Transfer (unconditional)	380	423	.382
Percent of Positive Transfer	37.9	40.9	.190
Amount of Transfer (conditional on transfer)	1,033	1,045	.908
Family Type			
Type 1: Not coresiding (%)	61.9	84.8	.000
Type 2: Coresiding (%)	38.1	15.2	
Parents' Resources			
Father's SEI	43.0	43.2	.862
Parents' survival status			
Both alive (%)	57.8	59.1	.561
Only father/mother alive (%)	42.2	40.9	
Parents' help with household chores			
No (%)	72.7	84.4	.000
Yes (%)	27.3	15.6	
Respondent has siblings			
Yes (%)	96.7	95.0	.074
No (%)	3.3	5.0	
Respondent's Resources			
Income in 1998 (yuan)	11,217	6,967	.000
Education	11.3	10.9	.015
SEI	43.2	43.1	.966
Other controls			
Respondent's age	40.3	39.2	.001
Parents' average age	69.7	68.3	.000
City			
Shanghai (%)	33.4	30.5	.187
Wuhan (%)	33.5	37.3	.088
Xi'an (%)	33.1	32.2	.667
N of observations	869	932	

Notes: p value refers to the test for gender difference.

Data source: "Study of Family Life in Urban China" conducted in Wuhan, Shanghai, and Xi'an, 1999.

Table 2: Determinants of Coresidence (logit models)

	Men		Women	
	b	SE	b	SE
Parents' Resources				
Father's SEI	.008*	.005	.015***	.006
Parents' survival status				
Both alive (omitted)				
Only father/mother alive	.318*	.173	.497**	.212
Respondent having siblings				
Yes(omitted)				
No	1.098**	.436	1.247***	.332
Respondent's Resources				
Income in 1998 (logged)	-.026***	.010	-.004	.016
Education	-.043	.036	.100**	.045
SEI	-.014**	.006	.002	.008
Other controls				
Parents' average age	.314***	.081	.180*	.099
Respondent's age	-.681***	.081	-.225**	.098
City specific intercepts				
Shanghai	1.395***	.443	-3.525***	.549
Wuhan	.863*	.457	-3.834***	.572
Xi'an	.931**	.452	-4.091***	.595
Model Chi-squared	124.28		49.52	
Degree of freedom	13		13	

Notes: * p<0.1, ** p<0.05, *** p<0.01; N=869 for men, and N=932 for women. Also included in the models are dummy variables representing missing for father's SEI, respondent's SEI, and parents' age.

Table 3: Determinants of Giving to Parents (logit models)

	Model 1		Model 2	
	b	SE	b	SE
Sex				
Male (omitted)				
Female	-.045	.113	.337***	.125
Family Type				
Type 1:Not coresiding (omitted)				
Type 2: Coresiding	-.604***	.149	-.498***	.176
Sex*Type	.285	.241	-.018	.259
Parents' Resources				
Father's SEI			-.011***	.003
Parents' survival status				
Both alive (omitted)				
Only father/mother alive			.658***	.117
Parents' help with household chores				
No (omitted)			.200	.161
Yes				
Respondent having siblings				
Yes(omitted)				
No			-.209	.268
Respondent's Resources				
Income in 1998 (logged)			.056***	.009
Education			.054**	.023
SEI			.012***	.004
Other controls				
Parents' average age			.032	.055
Respondent's age			.106*	.055
City specific intercepts				
Shanghai			-2.339***	.317
Wuhan			-2.502***	.324
Xi'an			-1.828***	.321
Model Chi-squared	21.49		212.52	
Degree of freedom	3		17	

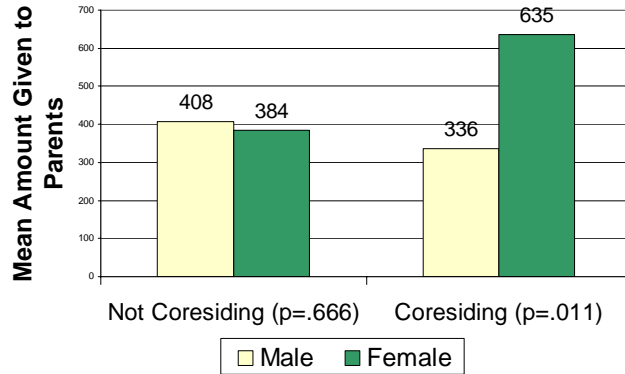
Notes: * p<0.1, ** p<0.05, *** p<0.01; N=1,801. Also included in the models are dummy variables representing missing for father's SEI, respondent's SEI, and parents' age.

Table 4: Determinants of Amount Given to Parents (OLS of logged values)

	Model 1		Model 2	
	b	SE	b	SE
Sex				
Male (omitted)				
Female	-.021	.080	.109***	.078
Family Type				
Type 1:Not coresiding (omitted)				
Type 2: Coresiding	.100	.115	.001	.119
Sex*Type	.474**	.173	.294*	.173
Parents' Resources				
Father's SEI			.003	.002
Parents' survival status				
Both alive (omitted)				
Only father/mother alive			-.011	.074
Parents' help with household chores				
No (omitted)				
Yes			.363***	.108
Respondent having siblings				
Yes(omitted)				
No			-.108	.187
Respondent's Resources				
Income in 1998 (logged)			.016***	.003
Education			.039***	.014
SEI			.009***	.003
Other controls				
Parents' average age			.008	.037
Respondent's age			.007	.035
City specific intercepts				
Shanghai			5.143***	.202
Wuhan			5.086***	.211
Xi'an			5.132***	.205
R-squared	.02		.17	

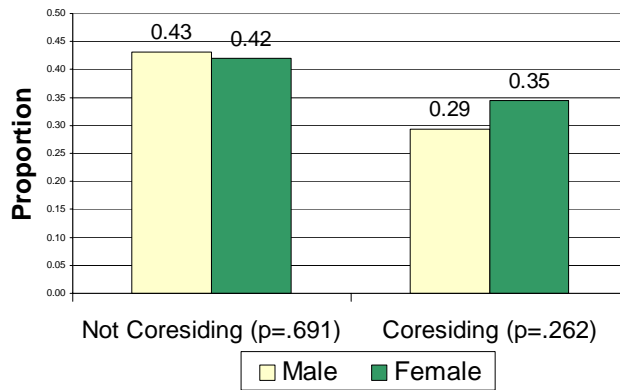
Notes: * p<0.1, ** p<0.05,***p<0.01; N=689. Also included in the models are dummy variables representing missing for father's SEI, respondent's SEI, and parents' age.

Figure 1: Mean Amount Given to Parents by Gender and Family Type



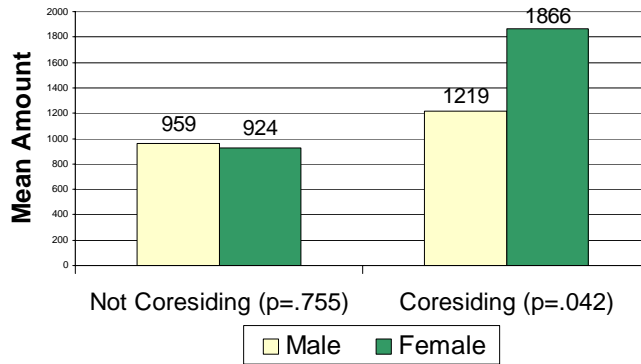
p-value refers to the test for gender difference

Figure 2: Proportion of Giving by Gender and Family Type



p refers to the test for gender difference

Figure 3: Mean Amount Conditional on Giving by Gender and Family Type



p refers to the test for gender difference