

Intergenerational Transfers and Living Arrangements of Older People in Rural China: Consequences for Psychological Well-Being

Merril Silverstein,¹ Zhen Cong,¹ and Shuzhuo Li²

¹Andrus Gerontology Center, University of Southern California, Los Angeles.

²Population Research Institute, Xi'an Jiaotong University, Xi'an, China.

Objectives. The migration of working-age adults from rural to urban China has altered traditional patterns of living arrangements and intergenerational support among elderly persons who remain in rural regions. This investigation examined how household composition and support exchanges with adult children influenced the psychological well-being of older parents in rural China.

Methods. Data derived from a 2001 survey of 1,561 parents aged 60 and older living in rural Anhui Province, China. We used multiple regression in order to estimate the effects of multigenerational living arrangements and intergenerational transfers of financial, instrumental, and emotional support on depression and life satisfaction in older parents.

Results. Older parents living in three-generation households or with grandchildren in skipped-generation households had better psychological well-being than those living in single-generation households. Receiving greater remittances from adult children increased well-being and explained why living with grandchildren was beneficial. Stronger emotional cohesion with children also improved well-being.

Discussion. These results suggest that traditional family arrangements are beneficial in rural Chinese society as they represent the fulfillment of a cultural ideal. We discuss implications in the context of the corporate Chinese family, characterized by mutual aid and interdependence across generations, and its adaption to social change.

RAPID economic development and its accompanying social change in contemporary China has prompted substantial scholarly interest in whether adult children will continue as viable participants in the support systems of older parents (e.g., Lee, Parish, & Willis, 1994; Liang, Gu, & Krause, 1992; Logan & Bian, 2003; Sun, 2002). Although much research on this topic has focused on urban areas—where rising standards of living have been most acute—researchers have paid scant attention to family life of the aged in rural areas, where two thirds of the Chinese population resides, and where the largest concentrations of older adults are found (Joseph & Phillips, 1999). A decline in the prevalence of multigenerational households and the migration of younger workers from rural to urban areas have geographically separated many adult children from their aging parents, altering and arguably undermining traditional patterns of support to rural elders. Scholars have expressed similar concerns about other Asian nations such as the Philippines, Thailand, Indonesia, and Bangladesh, where researchers have observed sharp reductions in coresidence rates between older parents and adult children (Knodel & Ofstedal, 2002; Schroder-Butterfill, 2003). However, it is not certain whether these changes have adversely affected the well-being of elders whose expectations of children were forged in an earlier, more traditional era. The purpose of this investigation was to examine the implications of various household arrangements and intergenerational transfers for the psychological well-being of older parents living in an area of rural China.

The interdependence of generations in poor agricultural regions of China, as in similar regions of the developing world, is the product of both filial beliefs and economic necessity. As

the cradle of Confucianism, China has long held to a tradition of intergenerational coresidence. For centuries, the extended family household has formed the basis for the traditional family support system of the aged in Chinese society and stood as a key manifestation of filial piety—particularly in rural areas, where cultural prescriptions and expression tend to be more traditional (Davis-Friedmann, 1991; H. Zhang, 2004).

Sung (1998) has done some of the most detailed analyses of the concept of filial piety in East Asian cultures. Drawing on qualitative interviews and quantitative surveys, he has identified practical and symbolic aspects of filial piety. Prescriptive rules mandate that material aid and care be delivered to parents with a demeanor that conveys respect and spiritual devotion. Multigenerational coresidence fulfills this cultural ideal of filial piety because it enhances the ability of children to deliver care, while allowing them to demonstrate deference, commitment, and sacrifice to the older generation as the titular head of the family. The precepts of filial piety also encourage adult children to remain in the same local community as their parents. Confucius wrote, “While his parents are alive, the son may not go abroad to a distance. If he goes abroad, he must have a fixed place to which he goes” (in Sung, p. 371).

Although Confucian ideals of filial piety form the cultural imperative to coreside with older parents, the absence of universal public pension and long-term care programs in rural China creates the necessity for doing so. Adult children are likely to be the only sources of economic and social support to older parents in rural areas, as exemplified by the fact that nearly 70% of rural elders receive income transfers from adult children (Lee & Xiao, 1998). Furthermore, where agriculture

is the main economic enterprise, adult children (mostly sons) have traditionally lived with aging parents as a function of their joint participation in the family economy, and the necessity to pool resources and labor across generations (Xu, 1995; Y. Zhang, 2001).

In rural China, public policy, market forces, and internal migration have lowered the prevalence of traditional living arrangements for the aged. Economic reforms put into place in 1978 entitled adult children to family property (Cohen, 1992, 1998), reducing their economic incentive to stay in the parental household, despite stronger cultural preferences to do so (Y. Yan, 2003; H. Zhang, 2004). More recently, China's economic expansion has lured many younger workers out of impoverished rural regions to take factory and service jobs in cities (A. Goldstein, Guo, & Goldstein, 1997). Labor-related migration in the rural working age population has resulted in greater geographic separation between the generations, reducing opportunities for older people to live with their children in a stable home environment. Not coincidentally, the proportion of nontraditional households has increased over this time (Wu, 1991); nontraditional households include empty-nest households, network households (children and older parents living separately but nearby), by turns households (network families in which older parents rotate among sons' residences), and skipped-generation households (grandparents living with grandchildren without the middle generation present; M. C. Goldstein, Ku, & Ikels, 1990; Gui, 1988; Tsui, 1989; Zeng & George, 2001; Y. Zhang, 2001).

The dynamics guiding the living arrangements of older people are quite different between urban and rural China. In urban areas, older people tend to favor living independently of children and are overall less likely than rural elders to live in multigenerational households. But housing shortages and government policies limiting residential choices promote intergenerational coresidence (Davis-Friedmann, 1991; Logan, Bian, & Bian, 1998; Whyte, 2003) and help explain why a greater percentage of urban Chinese elders live with their children than endorse it as a preferred arrangement (China Research Center on Aging, 2003). As a result of rural poverty and the necessity to jointly participate in the family economy, young adults in contemporary rural China are still more likely than their counterparts in urban China to live with their parents. Yet, social, economic, and policy changes have reduced the prevalence of multigenerational households over time *within* rural China and coresidence—at least on a permanent basis—has become increasingly rare as a strategy for economic survival.

Because living in a multigenerational household remains an important sign of respect accorded older people and a key social indicator of successful aging in rural areas, contemporary transformations in filial practice raise concern about the impact that such change may have on quality of life of older people—especially if support patterns are disrupted. There is evidence that living with children improves the life satisfaction of older people in China (Xu, 2001). Coresidence with adult children—especially the eldest son and his wife and children—represents the most complete fulfillment of filial piety and may directly protect the well-being of older Chinese parents (X. Chen & Silverstein, 2000). In addition, older parents and adult children exchange more instrumental support when they live together

than when they live apart (Agree, Biddlecom, Chang, & Perez, 2002; S. Yan, Chen, & Yang, 2003). Research has shown that older adults who live with both their adult children and grandchildren are particularly advantaged in areas of rural China where underdeveloped transportation systems make it necessary for elders to be geographically proximate to children in order to receive aid and have social contact with meaningful frequency (F. Chen et al., 2000). Although researchers have not yet documented the benefit of living in a three- versus two-generation household, the added value of the former may derive from enhanced opportunities to interact with, care for, or receive support from coresident grandchildren, as well as from its cultural importance.

Studies in China have generally found that social support—particularly emotional support—from relatives is beneficial for older people's psychological well-being (X. Chen & Silverstein, 2000; He, 2002; Krause & Liang, 1993; Tong, 2000; Xiong, 1999). The evidence is more equivocal regarding the benefits of instrumental support. Whereas studies of older adults in Beijing (X. Chen & Silverstein) and Shanghai (Cui & Li, 1997) suggest that instrumental support may compromise well-being by inducing dependency, evidence from Hong Kong (Chi & Chou, 2001) shows that material and instrumental support were more influential than emotional support in preventing depression in older adults. However, a study in the city of Wuhan found that receiving financial support from informal sources was detrimental to the psychological well-being of older adults, presumably because the reallocation of scarce resources caused strain in these supportive relationships (Krause, Liang, & Gu, 1998). The effects of intergenerational transfers—economic, emotional, and instrumental—may be more pronounced for older people in rural areas, where filial norms are generally stronger and where the family support systems are more institutionalized (Davis-Friedmann, 1991).

Little is known specifically about how living in a skipped-generation household affects the well-being of older people in China. Because skipped-generation households tend to result from the labor migration of working-age children, it is reasonable to assume that grandparents in these households are caretakers of grandchildren left behind in rural villages (Ke & Li, 2001; Yang, 1996). Grandparents in China and other Asian countries are valuable resources to families when parents are not able to fulfill their parenting duties (F. Chen et al., 2000; Hermalin, Roan, & Perez, 1998). Although the Confucian code does not formally articulate the obligations between grandparents and grandchildren, the involvement of grandparents as caregivers to grandchildren has traditionally been important in peasant families when sons and their wives went to work during the day (Parish & Whyte, 1978) and when daughters-in-law were considered to be rearing children in an improper manner (Chao, 1983).

As do grandparents in most nations of the world, grandparents in China play a pivotal role in shoring up the family. However, what is distinctive about Chinese grandparents is that their contributions take place within a cultural system of filial piety. In a society that emphasizes collective family goals over individual goals, the contributions of grandparents to the welfare of their children's families fulfill a cultural mandate and are highly valued (Y. Yan, 2003). Such provisions allow grandparents to command greater respect from younger

generations and to better secure claims to filial piety, which in turn enhances their sense of purpose and self-worth within the family (Mjelde-Mossey, Chi, & Lou, 2005; Strom et al., 1999).

By taking in their grandchildren, grandparents also contribute to the prosperity of the family by enhancing their children's economic capacity to provide remittances to the sending community (Agree et al., 2002; C. Chen, 2000). Although researchers have found that the out-migration of adult children imposes economic burdens on sending households in rural regions of Bangladesh (Kabir, Szebehely, & Tishelman, 2002), Taiwan (Lee et al., 1994), the Philippines (Domingo & Asis, 1995), and China (W. Zhang & Li, 2004), there is evidence that this hardship may be at least partially ameliorated by the return flow of capital from geographically distant relatives. Researchers who study family dynamics in Asian nations have viewed remittances to caregiving grandparents as part of a time-for-money exchange between generations (Frankenberg, Lillard, & Willis, 2002; Lee & Xiao, 1998; Lillard & Willis, 1997; Sun, 2002).

However, not all provisions to family members are beneficial to older adults in China. Although providing instrumental assistance to adult children may instill a sense of purposefulness, providing financial support to children has proven to be detrimental to psychological well-being (C. Chen, 2000; X. Chen & Silverstein, 2000). C. Chen (2000) has argued that because rural Chinese elders have largely transferred their major assets to children, any ongoing monetary assistance imposes a substantial economic and psychic strain.

This analysis explores how intergenerational arrangements with children influence the psychological well-being of older parents in a rural region of China. If household structure is important primarily as an expression of underlying cultural values that elevate the status of older people in the family, then we would expect the three-generation household structure— independent of intergenerational social support and the quality of parent-child relationships—to be positively associated with well-being. However, if interpersonal and transactional features are the defining characteristics of coresidence, then older adults in three-generation households should be indistinguishable from those in other household structures when support and relational factors are controlled. Following the same logic, custodial grandparents in skipped-generation households should also be relatively advantaged to the degree that they function within a dynamic system of intergenerational exchange. With these ideas in mind, we address the following research questions:

- Q₁: How does intergenerational coresidence (with adult children and/or grandchildren) and geographic proximity to children influence the psychological well-being of older parents in rural China?
- Q₂: Does receiving financial, instrumental, and emotional support from adult children influence the psychological well-being of older parents?
- Q₃: Does receiving support from adult children fully explain why coresidence with, and proximity to, children influences the psychological well-being of older parents?
- Q₄: Does providing support to adult children influence the psychological well-being of older parents?

METHODS

Sample

We collected data from a random sample of adults aged 60 and older living in rural townships within Chaohu, a primarily agricultural city of 4.5 million people located on the north bank of the Yangtze River in the central part of Anhui Province. We chose this region specifically for its high level of out-migration of working-age adults to the provincial capital of Hefei and to other cities such as Nanjing, Shanghai, and Beijing. The relatively low per capita amount of arable land in Chaohu is a contributing reason why 12% of its rural labor force currently lives outside the region (Chaohui Statistical Bureau, 2001).

We identified the sample by using a stratified multistage method in order to select potential respondents within 72 randomly selected villages within six rural townships in the Chaohu region. Using administrative records, we identified all residents aged 60 and older in the selected villages. We randomly selected respondents from village rosters, with a proportionate over-sampling of people 75 years old and older. The Population Research Institute of Xi'an Jiaotong University, in conjunction with the University of Southern California (Los Angeles), fielded the survey in April 2001. We used a standard back-translation method in order to ensure the accuracy of the Mandarin translation of the questionnaire. The survey, which we conducted in the respondent's home, included assessments of family relations, intergenerational transfers, physical health status, and psychological well-being.

Of 1,800 individuals identified as eligible respondents, 1,698 completed the survey, yielding a response rate of 95.3%. The completed sample included 61.2% who were 65–74 years old and 38.8% who were 75 years old and older. Because the focus of this investigation was on the parents of adult children, we restricted our working sample to the 1,640 respondents who had at least one living adult child at the time of the survey. After we excluded 79 cases (4.8%) with missing data on relevant study variables, 1,561 respondents remained in our analyses.

Dependent Variables

We assessed psychological well-being by using two scales: one measuring depression and the other measuring life satisfaction. We adapted both scales from the Study of Health and Living Status of the Elderly in Taiwan (for details, see Hermalin, 2002). Depression and life satisfaction, although inversely associated, represent unique domains of psychological well-being; the former assesses depressive symptoms (negative affect, lack of positive affect, feelings of marginalization, and somatic problems) and the latter assesses cognitive judgments regarding the current quality of life.

We measured depression by using nine questions based on the Center for Epidemiologic Studies–Depression scale (Radloff, 1977) and tailored to the target population. Three items indicated feelings of positive affect (feeling happy, enjoying life, feeling pleasure), two items indicated feelings of negative affect (feeling lonely, feeling upset), two items indicated feelings of marginalization (feeling useless, having nothing to do), and two items indicated somatic symptoms (having poor appetite, having trouble sleeping). We coded the

frequency with which the participant had experienced each symptom in the past week as 0 (rarely or none of the time), 1 (some of the time), or 2 (most of the time). After we reversed the coding of positive affect items, we summed the nine variables, which resulted in a depression score ranging from 0 to 18, with a higher score indicating greater depression. Based on Cronbach's alpha, the reliability coefficient for the nine items was .78.

The Life Satisfaction scale, which we adapted from Diener, Emmons, Larsen, and Griffin (1985), consisted of seven items that asked respondents whether they agreed or disagreed with statements indicating contentment and discontentment with their current lives (better life than most, satisfied with life, interesting life, best years of life, life meets expectations, life is tedious, life is tiring). After we reversed the coding of discontentment items, we summed the seven variables, which resulted in a score ranging from 0 (least satisfied) to 7 (most satisfied). The reliability coefficient of the seven items was .79.

For respondents with missing data, we imputed scale scores from valid data if the respondent had given at least five valid responses to the depression inventory and at least four valid responses to the life satisfaction inventory. We made imputations for 5 respondents in the case of depression and for 4 respondents in the case of life satisfaction.

Independent Variables

We grouped predictor variables into three categories: intergenerational living arrangements (coresidence and proximity), intergenerational support (providing and receiving), and sociodemographic characteristics. We operationalized intergenerational arrangements by five family types: (a) lives with adult children and grandchildren (stem family); (b) lives only with adult children (truncated stem family); (c) lives with grandchildren but not with children (skipped-generation family); (d) lives with neither children nor grandchildren, and all children live beyond the village (isolated family); and (e) lives with neither children nor grandchildren, but at least one child lives in the same village (network family). We used four dichotomous variables to represent each of the first four categories, with the network family as the reference group. We strategically chose the network family to be the reference group because it highlights several informative contrasts related to propinquity and distance of children. The first two contrasts demonstrate the effects of coresidence with children, whereas the second two contrasts demonstrate the effects of geographic mobility of children. Because 97% of grandparents who lived in skipped-generation households were living with grandchildren whose parents had migrated beyond the village, it is reasonable to assume that they were caretakers of their grandchildren.

We considered three types of intergenerational support: financial transfers, instrumental support, and emotional cohesion. We measured financial transfers from children based on the total amount that the parent had received from each child during the past 12 months. Response options were the following categories based on Chinese RMB currency (100 RMB = 12 USD): 0 = none; 1 = less than 50 RMB; 2 = 50–99; 3 = 100–199; 4 = 200–499; 5 = 500–999; 6 = 1,000–2,999; 7 =

3,000–4,999; 8 = 5,000–9,999; and 9 = more than 10,000. We took the maximum value across all children to represent financial assistance received. (Summing across all children produced substantially weaker results in our models, confirming our expectation that the amount of assistance received from a main provider, especially in families with migrant children, is more salient than the total transfer amount.) Because financial contributions to children were relatively small, with 78% of elders having provided less than 50 RMB in the past year, we measured financial transfers to children by using a dichotomous variable indicating that the elder had provided at least some financial assistance to a child (reference = no assistance provided).

We measured instrumental support by using two dichotomously scored variables based on support received from, and provided, to children during the past 12 months in two areas: (a) household tasks, such as cleaning the house and washing clothes, and (b) personal care tasks, such as bathing and dressing. We coded the receipt of instrumental support from any child in either of the two areas as 1 (reference = no support received). Similarly, we coded the provision of instrumental support to any child in either of the two areas as 1 (reference = no support provided).

We measured emotional cohesion by using three questions that assessed the quality of each parent–child relationship. We adapted these questions from the Affectual Solidarity inventory (Mangen, Bengtson, & Landry, 1988), which assesses emotional cohesion between generations. The questions were: (a) “Taking everything into consideration, how close do you feel to (this child)?” (b) “How much do you feel that (this child) would be willing to listen when you need to talk about your worries and problems?” and (c) “Overall, how well do you and (this child) get along together?” We coded the items as follows: 0 (not at all close/not at all/not at all well), 1 (somewhat close/somewhat/somewhat well), or 2 (very close/very much/very well). We computed an additive scale, ranging from 0–6, for each child. For each parent we took the highest total score across all children for each parent to indicate this construct. The reliability coefficient for these items was .82.

Because we represented economic and emotional support based on the child who contributed the most economically to the parent and the child with whom the parent had the strongest emotional bond, respectively, the scores for these two variables did not account for within-family variability across children. In order to determine whether having children who contributed less economically or who were less emotionally close affected the psychological well-being of older parents, we calculated for each type of support the family-specific standard deviation as a measure of dispersion among children in each family. Larger standard deviation scores indicated a wider range across siblings.

Sociodemographic control variables included age, income, health status, gender, education, occupation, and marital status. We represented age as age in years at the time the survey was carried out. We represented income as the log of the RMB value (+1) of the total income that the respondent and spouse had received from work or pension during the past year. We measured health status as the extent of functional problems, measured as the sum of 15 items reflecting difficulty in

Table 1. Description of Analytic Variables ($N = 1,561$)

Variable	<i>M</i>	<i>SD</i>	Coding Scheme
Dependent variable			
Depression	6.51	4.01	0 (least depressed) – 18 (most depressed)
Life satisfaction	4.24	2.18	0 (least satisfied) – 7 (most satisfied)
Independent variable			
Sociodemographic			
Age	70.55	7.26	58–92 in years
Gender	.52	.50	0 (male), 1 (female)
Marital status	.42	.49	0 (married), 1 (not married)
Education	.22	.41	0 (no education), 1 (some education)
Occupation	.90	.29	0 (other), 1 (farming, fishing, animal husbandry)
Functional health difficulties	5.49	7.01	0 (none) – 30 (most)
Number of children	4.01	1.59	1–10
Income (log + 1)	3.56	3.56	0–9.55
Living arrangement			
Lives with children and grandchildren	.23	.42	0 (no), 1 (yes)
Lives with children only	.10	.31	0 (no), 1 (yes)
Lives with grandchildren only	.18	.38	0 (no), 1 (yes)
Closest child lives in village	.36	.48	0 (no), 1 (yes)
All children live beyond village	.13	.34	0 (no), 1 (yes)
Intergenerational support			
Maximum value of money received from children	3.83	1.55	0 (none) – 9 (more than 10,000 RMB)
Standard deviation of money received from children	1.12	0.83	0–4.36
Provided money to children	.42	.49	0 (no), 1 (yes)
Received instrumental support from children	.53	.50	0 (no), 1 (yes)
Provided instrumental support to children	.32	.47	0 (no), 1 (yes)
Maximum emotional closeness with children	5.07	1.27	0 (not close) – 6 (very close)
Standard deviation of emotional closeness with children	0.84	0.83	0–4.23

Note: *SD* = standard deviation.

performing personal activities of daily living (dressing or undressing, walking around the room, getting out of bed, standing up from a chair); instrumental activities of daily living (preparing meals, shopping, doing housework, taking the bus or train, managing money); and activities requiring physical strength, mobility, and flexibility (lifting a 10-kg bag of rice; climbing one flight of stairs; walking 100 m; and stooping, crouching, or kneeling). Respondents indicated the level of difficulty performing each task: 0 (no difficulty), 1 (some difficulty), or 2 (cannot do it without help). Reliability of this scale was .93. The summed scale ranged from 0 (no difficulty performing any task) to 30 (unable to perform any tasks).

We coded the remaining variables as dummy variables: gender (1 = female), marital status (1 = not currently married), education (1 = some formal education), and past or current occupation (1 = agricultural work).

RESULTS

We show in Table 1 the mean value of each dependent variable. Depression averaged 6.5 ($SD = 4.0$), and life satisfaction averaged 4.2 ($SD = 2.2$). There were no benchmarks to determine the magnitude of these figures relative to diagnostic criteria. However, the average depression score was more than one third (36%) of the possible maximum score, and the average life satisfaction score was 60% of its maximum, suggesting that, in spite of some skewness, these scales demonstrated sufficient variation to discriminate the constructs of interest.

Sociodemographic characteristics of the sample (shown in Table 1) reveal that the average age of older parents in the sample was 70.6 years. Slightly more than half the sample (52%) was female, 42% was not currently married, 22% had some formal education, and a large majority (91%) was currently or previously engaged in some form of agricultural work. The average functional impairment score was 5.5 out of a possible 30. The average respondent had four living children.

Examining intergenerational living arrangements, we found that about 23% of older parents lived with both adult children and grandchildren, 10% lived with adult children but not with grandchildren, and 18% lived with grandchildren without adult children present in the household. The modal category, which accounted for more than one third of respondents (36%), consisted of those who lived with neither their adult children nor their grandchildren but who had at least one child in the same village. Taken together with the 13% of non-coresident parents whose nearest child lived beyond the village, almost half the sample (49%) did not live in a multigenerational household consisting of children and/or grandchildren. The lower than expected proportion of multigenerational households in the sample and the relatively high prevalence of skipped-generation households were consistent with high rates of out-migration known to exist in this particular region of China.

Intergenerational transfers varied considerably depending on the type and direction of the transfer. Economic assistance from children was almost universal, with 98% of parents having received financial transfers from at least one child in the

Table 2. Intergenerational Support by Intergenerational Living Arrangement (*N* = 1,561)

Intergenerational Arrangement	Financial Support Received (<i>M</i>)	Standard Deviation of Financial Support Received (<i>M</i>)	Financial Support (% Receiving)	Instrumental Support (% Receiving)	Instrumental Support (% Providing)	Emotional Closeness (<i>M</i>)	Standard Deviation of Emotional Closeness (<i>M</i>)
Lives with children and grandchildren	3.74	1.10	38.74	76.10	50.00	5.12	0.74
Lives with children only	4.02	1.30	24.69	73.46	53.09	5.21	0.82
Lives with grandchildren only	4.34	1.36	63.50	40.15	18.98	5.17	0.88
Closest child lives in village	3.61	1.02	38.20	47.39	28.11	4.99	0.91
All children live beyond village	3.76	0.98	46.60	31.07	14.08	4.93	0.81
Total	3.83	1.12	42.47	53.36	32.35	5.07	0.84

preceding 12 months. In terms of the magnitude of these transfers, the most generous child in each family contributed, on average, 3.8 (*SD* = 1.6) on the 9-point ordinal scale (corresponding to approximately 180 RMB). Heterogeneity in financial transfers was captured by within-family standard deviations that averaged 1.1 units across the families. Surprisingly, 42% of this relatively poor group of older parents provided financial transfers to their children. However, amounts provided tended to be small relative to amounts received, and providers tended to be concentrated among those whose children lived at a distance—particularly among those living with grandchildren, of whom 63% provided such transfers. In terms of transfers of instrumental assistance, 53% percent of older parents received some household help or personal care from their children, and almost one third (32%) provided similar types assistance to their children. That almost half the sample received no instrumental support from children runs counter to what would be expected based on traditional cultural norms in rural China, but it is consistent with earlier findings of lower than expected rates of coresidence with children. Emotional cohesion was high with regard to the child with whom the parent had the strongest relationship, averaging 5.1 (*SD* = 1.3) on a 6-point scale. However, parents were not necessarily close to all their children, as evidenced by a within-family standard deviation of 0.84. Discrepancy scores between the most and the least emotionally close child in each family averaged 1.7 points.

We next examined intergenerational exchanges of support across the five types of living arrangements (Table 2). Parents who lived in skipped-generation households received the largest amount of financial support, but they were also most likely to provide financial support to their children. That grandparents in skipped-generation households were engaged in reciprocal exchanges may be related to set-up costs of children and return flows of remittances. These figures varied far less among the other types of households. As expected, receiving and providing instrumental assistance were greatest for parents in households that contained adult children and dropped progressively with increasing distance from children. The strength of emotional closeness did not vary appreciably among the household types, but it was weakest for older parents who lived in the two households without other generations present; weaker emotional ties could conceivably be the cause or consequence of such living arrangements.

Multivariate Analyses

We used ordinary least squares regression in order to predict depression and life satisfaction with a set of hierarchical

equations. We added sequentially three blocks of variables to the equations, representing, in order of entry, sociodemographic characteristics, living arrangements, and intergenerational transfers. This ordering provided a means to observe how variables added in later blocks explained variables entered earlier; our particular interest was the extent to which intergenerational transfers mediated the effects of living arrangements.

Table 3 presents three hierarchical regression equations predicting depression. The first equation reveals that parents who were unmarried, in poorer health, and had fewer children tended to have more depressive symptoms than their counterparts. The second equation, which added living arrangement variables, shows that older parents who lived with both adult children and grandchildren and those who lived *only* with their grandchildren had lower levels of depression than those who lived in network arrangements characterized by local residential independence. The reduction in depression was more than twice as large for parents living in three-generation households as it was for those living in skipped-generation households.

The third model added intergenerational transfer variables. We found that depression was inversely associated with the value of financial transfers received from children. Parents who received greater amounts of money from their most economically supportive child tended to be less depressed than those who received lesser amounts. The strength of emotional ties to the child with whom the parent was closest was also inversely related to depression. Receiving instrumental support from children did not influence depression, nor did providing instrumental or monetary assistance to children.

The effects of the standard deviation scores measuring within-family variation in financial transfers received and emotional cohesion were positive and statistically significant. Because we used maximum values (i.e. the most committed child) in order to represent economic receipts and the strength of emotional ties, one could construe these deviation scores as the degree to which other children in the family were relatively less committed. Thus, older parents, although benefiting psychologically from children with whom they had stronger economic and emotional relationships, were disadvantaged by other children with whom they had weaker relationships.

It bears noting that income became significant and that two variables—being unmarried and living in a skipped-generation household—lost significance when we added support variables into the third equation. In performing sensitivity diagnostics, we found that the effect of income emerged only with the addition of financial receipts from children. In the earlier

Table 3. Unstandardized Ordinary Least Squares Regression Estimates Predicting Depression ($N = 1,561$)

Independent Variable	Model 1	Model 2	Model 3
Constant	7.664***	8.485***	13.205***
Sociodemographic			
Age	-.014	-.020	-.029
Female	-.003	-.068	.041
Unmarried	.489*	.592**	.266
Education	-.452	-.465	-.328
Agricultural occupation	-.434	-.369	-.368
Functional health difficulties	.233***	.242***	.221***
Number of children	-.244***	-.254***	-.139*
Income (log + 1)	-.044	-.063	-.106**
Intergenerational living arrangement			
Lives with children and grandchildren		-1.375***	-.992***
Lives with children only		-.431	-.012
Lives with grandchildren only		-.676*	-.276
All children live beyond village		.210	.459
Intergenerational support			
Maximum value of money received from children			-.375**
Standard deviation of money received from children			.223*
Provided money to children			-.200
Received instrumental support from children			.184
Provided instrumental support to children			.007
Maximum emotional cohesion with children			-.812**
Standard deviation of emotional cohesion with children			1.020***
Adjusted R^2	.208	.226	.329

Note: Reference category for intergenerational living arrangement is closest child lives in village.

* $p < .05$; ** $p < .01$; *** $p < .001$.

equation, the harmful effect that lower income would have had on depressive symptoms was compensated for, or suppressed, by the financial support children tended to provide to their lower income parents. The addition of economic support from children also caused the beneficial effect of living in a skipped-generation household to diminish substantially. This suggests that the larger transfers that grandparents in such households received brought about the psychological benefits associated with raising grandchildren. Because virtually all absent parents were geographically distant from the skipped-generation household, these upstream financial transfers were likely remittances from migrant children.

The examination of life satisfaction followed the same hierarchical sequence used to predict depression. Table 4 shows estimates of the regression equations. The first model shows that having better health and more children tended to increase life satisfaction. The second model, which added variables related to living arrangements, demonstrates that respondents living with both children and grandchildren in stem-family households and respondents living with grandchildren only in skipped-generation households had greater life satisfaction than did those in a network-family structure. In this model, age

Table 4. Unstandardized Ordinary Least Squares Regression Estimates Predicting Life Satisfaction ($N = 1,561$)

Independent Variable	Model 1	Model 2	Model 3
Constant	3.278***	2.691***	-.243
Sociodemographic			
Age	.015	.019*	.025**
Female	.020	.050	-.035
Unmarried	-.131	-.180	-.011
Education	.249	.234	.133
Agricultural occupation	-.287	-.308	-.288
Functional health difficulties	-.082***	-.085***	-.074***
Number of children	.159***	.175***	.108**
Income (log + 1)	-.012	-.007	.027
Intergenerational living arrangement			
Lives with children and grandchildren		.655***	.378**
Lives with children only		.257	-.058
Lives with grandchildren only		.400*	.160
All children live beyond village		.203	.084
Intergenerational support			
Maximum value of money received from children			.298***
Standard deviation of money received from children			-.137
Provided money to children			.022
Received instrumental support from children			.037
Provided instrumental support to children			.119
Maximum emotional cohesion with children			.416***
Standard deviation of emotional cohesion with children			-.558***
Adjusted R^2	.079	.090	.215

Note: Reference category for intergenerational living arrangement is closest child lives in village.

* $p < .05$; ** $p < .01$; *** $p < .001$.

emerged as being positively associated with life satisfaction (this effect having been suppressed in the earlier model because older respondents were more likely to coreside with children only, the family form within which parents tended to be the least satisfied).

When we added variables representing intergenerational support into the third model, we found that parents who received greater financial transfers from children and who felt emotionally closer to their children were more satisfied with their lives than those who, respectively, received smaller transfers and felt less close. As suggested by the significant negative coefficient for the standard deviation of emotional cohesion, life satisfaction was more compromised among parents with larger variation in the quality of their relationships with children: Having a relatively weak emotional relationship with one or more children tended to lower satisfaction. As in the analysis of depression, the addition of financial receipts to the model resulted in a strong reduction in the magnitude of the psychological benefit of living in a skipped-generation household.

DISCUSSION

Rapid economic growth, accelerated migration patterns, and changing family preferences in China have altered traditional

living arrangements of rural elders, possibly jeopardizing the ability of older parents to rely on adult children for needed support and compromising their well-being. In this investigation we examined whether residing in multigenerational households and engaging in intergenerational transfers of money, time, and affect influenced the psychological well-being of older parents living in a highly mobile area of rural China.

In general, we found that older adults reap the rewards of extended family integration. Older parents living with both adult children and grandchildren, but not those living with adult children only, experienced favorable psychological outcomes. That these results held after controlling for support exchanges suggests that beyond its functional benefits, living in a three-generation household remains important to older adults in rural China as the fulfillment of a cultural ideal. Thus, older people who are socially embedded within a traditional multigenerational household may have a greater sense of purpose by virtue of occupying a culturally sanctioned role within the family. This sentiment is echoed in Johnson's (2001) contention that family members help their elders avoid declines in mental functioning by providing them "a normative anchorage that reinforces social conventions and expectations about appropriate behavior" (p. 195).

Living independently of children was detrimental to the emotional health of older parents, but the harm did not increase with greater distance from children. These results mute enthusiasm for network-family arrangements where children live independently from, but near, their parents. Although this type of family has been shown to function well in urban areas (Logan et al., 1998), it may be considered culturally deviant and reflect the presence of intergenerational conflict in rural areas. We found a key exception with respect to skipped-generation households. Living with grandchildren without the middle generation present was associated with better psychological outcomes for elders (before controlling for intergenerational transfers). In China, this living arrangement is a sign of optimal family functioning, whereas in the United States it is associated with a breakdown in parenting by the middle generation. In rural China, grandparents often take over responsibility for child care when their adult children migrate to urban areas in search of employment.

We also investigated whether the link between living arrangements and psychological well-being was mediated by the capacity of household structure to enable or inhibit the flow of financial, instrumental, and emotional support to and from adult children. We found that the value of remittances received from absent children was the primary reason why living with grandchildren in a skipped-generation household was psychologically beneficial to grandparents. Financial transfers provided to grandparents may serve as compensation for their custodial care of grandchildren as part of a time-for-money exchange that exemplifies the functional integration between generations in the rural Chinese family. Although it is not possible to know whether the amount of remittances went beyond the actual cost of providing care for grandchildren to include a "payment" for services rendered by grandparents, it can be said that their value—found to be higher in skipped-generation households than in other households—was proportionate to the level of well-being in the older generation.

We did not find that older parents who lived in three-generation households were less depressed and more satisfied *as a result* of the enhanced intergenerational support they received or provided. Adherence to the traditional cultural norm of living in a stem family appeared to be its own reward—the fulfillment of an ideal cultural form. Living with children only did not provide similar benefits, possibly because such households may have been driven more by need (of the child or the parent) than by cultural duty. In addition, older parents with stronger emotional connections to their children had better psychological well-being, demonstrating the powerful role played by intergenerational dynamics in a familistic culture.

Neither providing nor receiving instrumental support was related to the psychological well-being of older parents. A plausible reason why receiving instrumental support from children did not affect parental well-being is that benefits may have been counterbalanced by the loss of self-efficacy that receiving such support implies (X. Chen & Silverstein, 2000). In analyses not shown here, the benefits of providing support to children were wholly explained by the better physical health of support providers, suggesting that the robustness that predisposed helping behavior, rather than the behavior itself, underlay why providers were less depressed and more satisfied with their lives than were nonproviders. Thus, the types of support most likely to be impaired by geographic distance from adult children had little bearing on the psychological well-being of parents. However, the value of monetary support received—a form of support that is enhanced by migration—had a positive effect on psychological outcomes, to some degree offsetting the disadvantage of living apart from children.

We also examined within-family heterogeneity in financial and emotional support from adult children, finding that having children who were less supportive in both areas detracted from the psychological well-being of older parents. As suggested by Lai (1995), the emphasis in Chinese culture on maintaining harmony makes families in China particularly vulnerable to stress from interpersonal conflict. This both suggests the possibility that each child in the family exerts a unique effect on the quality of life of his or her parents and emphasizes the importance of considering multiple children—not only the closest or most supportive—when studying intergenerational relationships of older parents.

This investigation has several limitations that merit discussion. First, the analysis relied on cross-sectional data, and, consequently, there is the possibility of endogeneity with respect to well-being and living arrangements. Endogeneity problems occur when an outcome variable influences the predictor variables such that the causal direction ascribed to estimated effects may be incorrectly inferred. In our analysis, this may have occurred if depressed individuals are predisposed to living in particular types of arrangements. On the one hand, adult children with families of their own may perceive depressed parents as potentially unpleasant living partners. On the other hand, adult children may view depressed parents as having needs that would be best served by living with extended family. Because either scenario is theoretically plausible, we acknowledge that both are possible sources of specification bias in our analysis. In an attempt to detect the extent of this potential problem, we estimated a series of

two-stage least squares models and compared the results to those from our ordinary least squares model by using Hausman's (1978) test for endogeneity. This test revealed no significant difference between the two sets of estimates and provided little evidence of endogeneity with respect to the effects of living arrangements. Nevertheless, we cannot fully rule out reciprocal causation, and we await further research on this topic to strengthen confidence in our particular interpretation.

Endogeneity may also take the form of spuriousness, whereby the effects of household arrangements may simply be the product of earlier (but unobserved) processes that have led to coresidence. That is, the reasons that brought the three generations together may also affect older parents' psychological well-being. In analyses not reported here, we found that parents in three-generation households had significantly more health problems, had lower income, and were more likely to be widowed than those not living with children. This pattern suggests that parents who live in these households tend to have vulnerabilities that are associated with greater depression. Our results show, however, that living in a three-generation household more than compensates for these objective disadvantages in terms of their effects on depression.

Living arrangements may also be endogenous with respect to filial norms, as suggested in work by Logan and colleagues (1998). In preliminary analyses we found that a summary index designed to ascertain normative expectations of children (that they should "live with their parents," "provide for parents in need," and "live close to their parents") did, in fact, differentiate household types as expected (with those in three-generation households expressing the strongest norms). However, this index did not predict well-being outcomes, nor did it change the magnitude or significance level of any substantive variable (i.e., household type and support exchanges).

In addition, by not having considered appraisals and preferences in the younger generation, we run the risk of omitting important family factors that may simultaneously influence living arrangements and parental well-being. Although we believe that adult children's appraisals of their intergenerational relationships should have little independent effect on well-being outcomes (net of their parents' appraisals), the possibility of unmeasured spurious factors looms as a threat to the validity of our conclusions. We hope this investigation sets the stage for future longitudinal and multigenerational designs that are better able to account for these potential biases.

We were somewhat surprised that in this traditional, rural region of China, only 23% of parents lived in three-generation families. We speculate about five possible reasons for the low prevalence observed:

1. Among the oldest respondents (aged 75 and older), there was diminished opportunity to live with grandchildren, most of whom were old enough to live independently.
2. Relatively recent agricultural reforms granted land and housing ownership rights to offspring, enabling them to live independently but in the same village as their parents.
3. Growing resources and changing values in the younger generation (not measured in our study) may have weakened preferences for coresidence.

4. Labor migration is often seasonal, and many geographically distant children may return to live with their parents again, reconstituting the three-generation household.
5. The region we chose to study is known for higher than average rates of out-migration among its working-age population, leading to greater separation of family members than might be found in other rural regions of China (and suggesting that extrapolation beyond this region should be done with some caution).

Based on our findings, we are confronted with the possibility that the ostensible cultural ideal of living in a three-generation arrangement—typically held most strongly by the oldest generation—is not in step with current social realities in rural China. This may represent a kind of cultural lag that forms the basis for our main hypothesis that coresidence with children and grandchildren, although still preferred among older rural Chinese, has become more difficult to attain due to social and economic changes currently underway in China. Qualitative research on this topic may provide a richer description of the complex filial dynamics operating within multigenerational households and offer a deeper understanding of positive and negative aspects of the coresidence experience. The interpretation of our results will certainly be enhanced by in-depth interviews to ascertain the actual preferences and perceptions of older people in different living arrangements.

The unique social context of rural China is underscored by the appeal that traditional coresidence still holds for older adults. Yet structural changes in Chinese society have created conditions under which a large share of older people live apart from children, many at a great distance. Misalignment between filial beliefs and practices is not uncommon in developing Asian nations caught between the forces of traditionalism and modernism. Older people, at least initially, may be the most disadvantaged by the squeeze between cultural continuity and structural change, as their values and expectations—forged in an earlier era—are out of step with the demands of contemporary society.

Paradoxically, the same forces promoting structural lag have promoted the prevalence of skipped-generation households and provided older adults with the critical role of "kin keeper." As such, grandparents in this quasi-traditional household arrangement are key family actors, both enabling and responding to social change in rural China. Both parents living in skipped-generation households and those living at a distance from all of their children tended to be among the youngest, healthiest, and wealthiest in our sample. These more advantaged parents and grandparents were providers of instrumental and financial support to their children and grandchildren. Thus, older parents represent a mixture of populations: the first group with traditional filial values, characterized by their interdependence with children and grandchildren in a common household; another group with elevated need, characterized by their full dependence on children in a shared living arrangement; and a third group that is more autonomous and relatively resource rich, characterized by their provision of labor and economic resources for the benefit of their geographically distant children.

Scholars who study China, such as Whyte (2003), suggest that with changing filial norms and rising standards of living, coresidence is no longer the only way to practice filial piety. Even though the stem family remains an idealized living

arrangement in rural China, as it does in other rural areas of the developing world, the interdependence between generations has taken on new functional forms that will challenge, and arguably strengthen, the adaptive capacity of older people to cope with rapid change in the society at large.

ACKNOWLEDGMENTS

This research was supported by Grant R03TW01060-01 from the Fogarty International Center of the National Institutes of Health. We would like to thank Albert Hermalin, Jersey Liang, Judith Treas, Feng Wang, and Wenjuan Zhang for their valuable assistance in the planning phase of this project.

Address correspondence to Merrill Silverstein, Andrus Gerontology Center, University of Southern California, 3715 McClintock Ave., Los Angeles, CA 90089-0191. E-Mail: merrils@usc.edu

REFERENCES

Agree, E. M., Biddlecom, A. E., Chang, M. C., & Perez, A. E. (2002). Transfers from older parents to their children in Taiwan and the Philippines. *Journal of Cross-Cultural Gerontology, 17*, 269–294.

Chao, P. (1983). *Chinese kinship*. Boston: Kegan Paul International.

Chaohui Statistical Bureau. (2001). *Chaohui statistical annals*. Chaohui, China: Author.

Chen, C. (2000). Jingji duli caisai nongcun laonianren wannian xingfu shouyao tiaojian [Economic independence is the primary condition for older people's well-being: Analysis and suggestions based on exchange theory]. *Population Research, 24*, 53–58.

Chen, F., Short, S. E., & Entwistle, B. (2000). Impact of grandparental proximity on maternal childcare in China. *Population Research and Policy Review, 19*, 571–590.

Chen, X., & Silverstein, M. (2000). Intergenerational social support and the psychological well-being of older parents in China. *Research on Aging, 22*, 43–65.

Chi, I., & Chou, K. L. (2001). Social support and depression among elderly Chinese people in Hong Kong. *International Journal of Aging and Human Development, 52*, 231–252.

China Research Center on Aging. (2003). *Data analysis of the sampling of survey of the aged population in China*. Beijing, China: Standard Press of China.

Cohen, M. L. (1992). Family management and family division in contemporary rural China. *China Quarterly, 130*, 357–377.

Cohen, M. L. (1998). North China rural families: Changes during the communist era. *Etudes Chinoises, 17*(1/2), 59–154.

Cui, L., & Li, H. (1997). Chenshi laonianren shehui zhichi wangluo yu shenghuo manyidu de yanjiu [Urban elders' social support network and life satisfaction]. *Psychological Science, 20*, 123–126.

Davis-Friedmann, D. (1991). *Long lives: Chinese elderly and the communist revolution* (2nd ed.). Cambridge, MA: Harvard University Press.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*, 71–75.

Domingo, L. J., & Asis, M. M. B. (1995). Living arrangements and the flow of support between generations in the Philippines. *Journal of Cross-Cultural Gerontology, 10*, 21–51.

Frankenberg, E., Lillard, L., & Willis, R. J. (2002). Patterns of intergenerational transfers in Southeast Asia. *Journal of Marriage and Family, 64*, 627–641.

Goldstein, A., Guo, Z., & Goldstein, S. (1997). The relation of migration to changing household headship patterns in China, 1982–1987. *Population Studies, 51*, 75–84.

Goldstein, M. C., Ku, Y., & Ikels, C. (1990). Household composition of the elderly in two rural villages in the People's Republic of China. *Journal of Cross-Cultural Gerontology, 5*, 119–130.

Gui, S. X. (1988). Report from mainland China: Status and needs of rural elderly in the suburbs of Shanghai. *Journal of Cross-Cultural Gerontology, 3*, 149–167.

Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica, 46*, 1251–1271.

He, Z. (2002). Shehui jingji diwei shehui zhichiwang yu nongcun laonian

shenxin zhuangkuang [Socioeconomic status and social support network of the rural elderly and their physical and mental health]. *Social Science in China, 3*, 135–148.

Hermalin, A. (2002). *Well-being of the elderly in Asia: A four-country comparative study*. Ann Arbor, MI: University of Michigan Press.

Hermalin, A., Roan, C., & Perez, A. (1998). *The emerging role of grandparents in Asia*. Ann Arbor, MI: Population Studies Center, University of Michigan.

Johnson, C. L. (2001). Family functioning and intellectual functioning in later life. In E. L. Grigorenko & R. J. Sternberg (Eds.), *Family environment and intellectual functioning: A life-span perspective* (pp. 195–221). Mahwah, NJ: Erlbaum.

Joseph, A. E., & Phillips, D. R. (1999). Ageing in rural China: Impacts of increasing diversity in family and community resources. *Journal of Cross-Cultural Gerontology, 14*, 153–168.

Kabir, Z. N., Szebehely, M., & Tishelman, C. (2002). Support in old age in the changing society of Bangladesh. *Ageing and Society, 22*, 615–636.

Ke, L., & Li, H. (2001). *Dushi li de cunmin: Zhongguo da chengshi de liudong renku* [Villagers in the city: Migrants in Chinese metropolitan areas]. Beijing, China: Central Translation Press.

Knodel, J., & Ofstedal, M. B. (2002). Patterns and determinants of living arrangements. In A. I. Hermalin (Ed.), *Well-being of the elderly in Asia: A four-country comparative study* (pp. 143–184). Ann Arbor, MI: University of Michigan Press.

Krause, N., & Liang, J. (1993). Stress, social support and psychological distress among the Chinese elderly. *Journal of Gerontology: Psychological Sciences, 48*, P282–P291.

Krause, N., Liang, J., & Gu, S. (1998). Financial strain, received support, anticipated support, and depressive symptoms in the People's Republic of China. *Psychology and Aging, 13*, 58–68.

Lai, G. (1995). Work and family roles and psychological well-being in urban China. *Journal of Health and Social Behavior, 36*, 11–37.

Lee, Y. J., Parish, W. L., & Willis, R. J. (1994). Sons, daughters, and intergenerational support in Taiwan. *American Journal of Sociology, 99*, 1010–1040.

Lee, Y. J., & Xiao, Z. (1998). Children's support for elderly parents in urban and rural China: Results from a national survey. *Journal of Cross-Cultural Gerontology, 13*, 39–62.

Liang, J., Gu, S., & Krause, N. (1992). Social support among the aged in Wuhan, China. *Asia-Pacific Population Journal, 7*(3), 33–62.

Lillard, L. A., & Willis, R. J. (1997). Motives for intergenerational transfers: Evidence from Malaysia. *Demography, 34*, 115–134.

Logan, J. R., & Bian, F. (2003). Parents' needs, family structure, and regular intergenerational financial exchange in Chinese cities. *Sociological Forum, 18*(1), 85–101.

Logan, J. R., Bian, F., & Bian, Y. (1998). Tradition and change in the urban Chinese family: The case of living arrangements. *Social Forces, 76*, 851–882.

Mangen, D., Bengtson, V. L., & Landry, P. H., Jr. (Eds.). (1988). *The measurement of intergenerational relations*. Beverly Hills, CA: Sage.

Mjelde-Mossey, L. A., Chi, I., & Lou, V. W. Q. (2005). Assessing tradition in Chinese elders living in a changing social environment: Implications for social work practice. *Journal of Human Behavior in the Social Environment, 11*(3/4), 41–57.

Parish, W. L., & Whyte, M. K. (1978). *Village and family in contemporary China*. Chicago: University of Chicago Press.

Radloff, L. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385–401.

Schroder-Butterfill, E. (2003). *Pillars of the family: Support provided by the elderly in Indonesia* (Oxford Institute of Ageing Working Paper No. 303). Retrieved December 31, 2004, from <http://www.ageing.ox.ac.uk/publications/oia%20wp%20303i%20text.pdf>

Strom, R., Strom, S., Wang, C., Shen, C., Griswold, D., Chan, H., et al. (1999). Grandparents in the United States and the Republic of China: A comparison of generations and cultures. *International Journal of Aging and Human Development, 49*, 279–317.

Sun, R. (2002). Old age support in contemporary urban China from both parents' and children's perspectives. *Research on Aging, 24*, 337–359.

- Sung, K. T. (1998). Exploration of actions of filial piety. *Journal of Aging Studies, 12*, 369–386.
- Tong, Y. (2000). Qinqwinggan dui gaonianren shenghui manyidu de yingxiang [Influence of relative affect on elder life satisfaction degree]. *Population Journal, 122*, 31–35.
- Tsui, M. (1989). Changes in Chinese urban family structure. *Journal of Marriage and Family, 51*, 737–747.
- Whyte, M. K. (2003). The persistence of family obligation in Baoding. In M. K. Whyte (Ed.), *China's revolutions and intergenerational relations* (pp. 85–120). Ann Arbor, MI: University of Michigan Center for Chinese Studies.
- Wu, C. P. (1991). *The aging of population in China*. Malta: Union Print.
- Xiong, Y. (1999). Woguo chengshi jujia laonianren wannian shenghuo manyi chengdu yanjiu: Dui yixiang diaocha jieguo di fenxi [Study on Chinese urban elderly's life satisfaction]. *Population and Economics, 115*, 49–53.
- Xu, Q. (1995). Woguo laonian renkou de zhengshi yu feizhengshi shehui zhichi [China's older people: Formal and informal social support]. *Population Research, 19*, 23–27.
- Xu, Q. (2001). Gaoling laoren de xinli zhuangkuang fenxi [Analysis of the psychology of the oldest-old]. *Population Journal, 5*, 45–52.
- Yan, S., Chen, J., & Yang, S. (2003). Living arrangements and old-age support. In M. K. Whyte (Ed.), *China's revolutions and intergenerational relations* (pp. 143–166). Ann Arbor, MI: University of Michigan Center for Chinese Studies.
- Yan, Y. (2003). *Private life under socialism: Love, intimacy, and family change in a Chinese village 1949–1999*. Stanford: Stanford University Press.
- Yang, Y. (1996). Gaige kaifang yilai zhongguo renko "feizhengshi qianyi" de zhuangkuang [The "informal migration" in China after economic reform: Analysis based on census]. *Social Science in China, 6*, 59–73.
- Zeng, Y., & George, L. (2001). *Extremely rapid ageing and the living arrangements of the elderly: The case of China*. Retrieved May 30, 2004, from http://www.un.org/esa/population/publications/bulletin42_43/zeng_yi.pdf.
- Zhang, H. (2004). Living alone and the rural elderly: Strategy and agency in post-Mao rural China. In C. Ikels (Ed.), *Filial piety: Practice and discourse in contemporary East Asia* (pp. 63–87). Stanford: Stanford University Press.
- Zhang, W., & Li, S. (2004). Laodongli wailiu dui nongcun jiating yanglao de yinxiang fenxi [An analysis of the effects of labor emigration on supporting aged family members in rural China]. *China Soft Science, 8*, 34–39.
- Zhang, Y. (2001). Laonianren shehui zhichiwang de chengxiang bijiao yanjiu: Xiamenshi ge'an yanjiu [The comparative study of older people's social support networks in rural and urban areas]. *Sociology Study, 4*, 11–21.

Received June 8, 2005

Accepted January 26, 2006

Decision Editor: Charles F. Longino, Jr., PhD

ATTENTION SUBSCRIBERS

Subscribers of *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* may find that they are missing pages from the May and/or July issues of the journal. The May issue (61B/3) may be missing pages P175-S124, and have pages S141-S156 bound twice. The July issue (61B/4) may be missing pages P249-P250, and have S173-S186 bound twice. If either of your issues is affected, please contact Cletus Rataichek (crataichek@geron.org) at the GSA office for replacement copies.