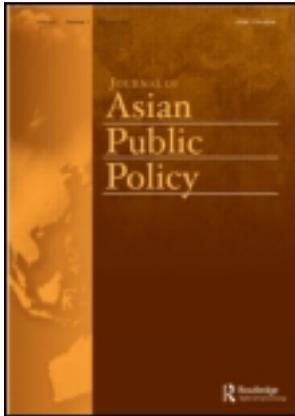


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Old age care concerns and state-society relations in China: public anxiety and state paternalism

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RESEARCH ARTICLE

Old age care concerns and state–society relations in China: public anxiety and state paternalism

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Using data from a multiyear national survey, this study examines people's level of concern about care in old age and its temporal change. Our results indicate a rapidly increasing level of anxiety about old age care for people of various age groups, socio-economic status and regions. Our analysis also reveals that a higher proportion of urban residents are concerned about old age care than rural residents in recent years. The concerns have grown amid rapid economic growth and serious government efforts to broaden social insurance coverage. Our data suggest a growing demand for more government involvement in providing for retirement and old age care and such a demand for state paternalism will likely help reshape state–society relations in the future.

Keywords: China; ageing; old age care; retirement pension; ageing anxiety; state paternalism; state–society relations

Introduction

A revolution in rising expectations is happening in China. For more than three decades, China has enjoyed a remarkable period of hypergrowth, and this growth has helped the Chinese ruling elite enjoy an extraordinary level of public support (Shi 2001, Tang 2005). Against the background of the global economic crisis and continuing Chinese economic buoyancy, it is no surprise that the Chinese public continues to show such support for the country's direction of development (Figure 1). According to a tracking opinion survey conducted by the Horizon Research Consultancy Group, one of China's leading independent survey organizations, the percentage of respondents who said they approved of China's direction of development (as well as the country's economic situation, not shown here) has been at nearly 80% between 2004 and 2010, dipping only slightly in 2010.

Yet, the same survey series show strikingly different results when the respondents were asked to indicate their sense of happiness. As can be seen from Figure 2, the percentage of respondents who said they were happy has steadily declined from just under 80% in 2004 to under 50% in 2010 even while China's overall economic performance has held steady.

We hold it that these contrasting numbers suggest rising expectations. Again and again, Chinese officials have pushed for growth and rushed the completion of projects ahead of time for political reasons; such efforts, such as the drive to build the world's

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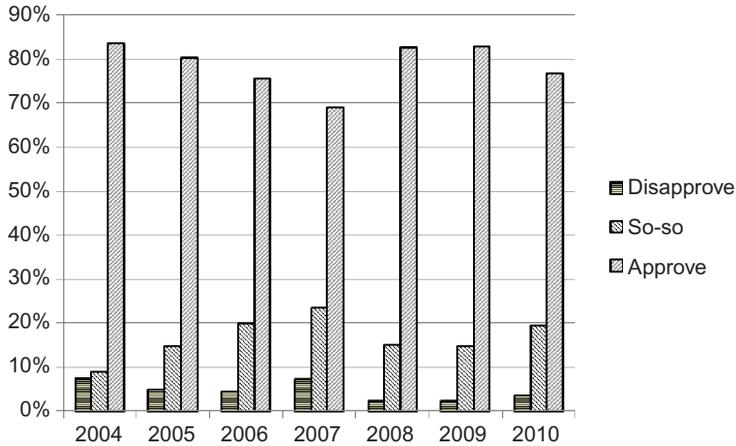


Figure 1. Percent of respondents approving of developmental direction in China.

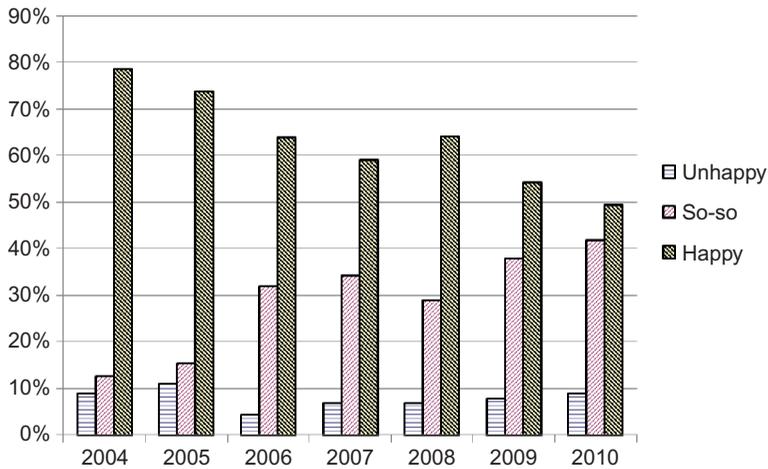


Figure 2. Percent of respondents feeling happy or unhappy in various years.

largest high-speed rail network, often had undesirable side effects and sometimes dire consequences. Indeed, in a time of unparalleled prosperity, growing numbers of Chinese have become disenchanted with the undesirable side effects of China's hypergrowth, including high-income inequality, corruption and environmental degradation. Following a deadly train crash near Wenzhou on 23 July 2011, Tong Dahuan (童大煊), a columnist for the *Oriental Daily*, captured the sentiment of the nation with a tweet:

Oh China, may you please slow down your pace and pause your flying feet; wait for your people, wait for your soul, wait for your morality, wait for your conscience! Don't let the trains derail, don't make the bridges collapse, don't turn the roads into traps, don't allow the houses become ones of danger. Go a bit slower, let every life have freedom and dignity, let no one be left behind by "the era", and make every one reach the final destination safely!¹

More generally, the writer Yan Lianke (阎连科) has conveyed the sense of uncertainty a growing number of Chinese have felt:

[I am] fearful, but don't know why and of what, this is the feeling in my heart and that of many others. The powerful are fearful, so are the powerless; those who have jobs are fearful, so are the jobless; the poor are fearful, so are the rich; the elderly are fearful, so are the children. The whole society and everyone are enveloped in fear, but nobody knows why, this is the true state of the psychology and plight of today's Chinese.²

It turned out the sense of fear and uncertainty that Mr. Yan wrote about was not misplaced. A few months later, Mr. Yan himself became the victim of harassment and possible eviction in Beijing when his house suddenly faced demolition.³

One of the growing challenges and anxieties facing Chinese families and the country as a whole is how to take care of the old. The State Council plan for the aged (2011–2015) notes that China has entered a period of accelerated population ageing. According to official figures, the number of people at or above 60 years is expected to grow from 178 million in 2011 to 221 million in 2015, an average increase of 8.6 million per year. As a result, the percentage of the population accounted for by seniors at or above the age of 60 will increase from 13.3% in 2011 to 16% in 2015.⁴ Having confronted China's surging population with the world's most extensive system of coercive family planning, the Chinese government now faces the daunting consequence of that policy, namely to provide for the retirement and old age care of a growing proportion of the national population.⁵

There is currently no systematic examination of the patterns and temporal evolution of concerns about financial dependence in old age and old age care in general for Chinese residents. In this study, we seek to fill this lacuna through an analysis of multiyear sample surveys of urban and rural residents in China. In doing so, our analyses will not only help us understand changing public attitudes towards old age care in China but will also provide a useful lens through which we can better understand public attitudes about the role of the state and thus state–society relations.

Context and literature review

As more and more societies age, scholars have paid increasing attention to the study of ageing anxiety, i.e. people's fears or concerns about getting older and having adequate old age care. Using data from a 1994 survey of 1200 US adults, Lynch (2000) found that those with better education, higher income, better health and more knowledge about the ageing process had significantly less ageing anxiety. A major concern for most people is financial dependence, i.e. fears of being unable to support oneself in old age or pay for health-care costs. A more recent study of a survey sample of American baby boomers also finds that people with better education and income and in good health show less anxiety about ageing than those who are poor, less educated and in ill health (Yan *et al.* 2011).

National economic conditions have a direct impact on people's income and wealth and thus the level of public concern about care in old age often fluctuates with national economic conditions. The Great Recession in the United States has caused severe financial distress to many households because of soaring unemployment, negative home equity and investment losses. It has also dealt major blows to pensions and prompted calls for reforms to improve the viability of the social security system. It is thus no surprise that the Great Recession has induced widespread anxiety about retirement. According to a Gallup study, the percentage of non-retired Americans who believe they will have enough money to live comfortably in retirement plummeted from 59% in 2004 to 41% in 2009 (Gallup 2009). For those respondents in the 50–62 age brackets with formal employment, more than half indicated a desire to delay their retirement. Partly because of concern about inadequate

retirement income, over 22% of the US adults believed they would need to work part-time in their retirement (Hurd and Rohwedder 2010).

Traditionally, care of the elderly in China was primarily the responsibility of the extended family in both urban and rural areas with little involvement or support from the government. Following the Communist takeover of power and the subsequent push to promote a centrally planned economy, the individual in urban areas was soon enmeshed into state-controlled work units such as state-owned enterprise (SOE) and collective enterprises that offered employment as well as health-care and retirement benefits (Walder 1986). Rural areas were under the thrall of communes and production brigades that offered far less social welfare than in urban areas.

The introduction of market-oriented reforms in the post-Mao era has brought both growing prosperity and greater uncertainty. Most importantly, the urban state enterprise sector has gone through massive restructuring in response to competition from foreign and non-state firms. Millions of former SOE employees lost their jobs as well as the health-care and retirement benefits that were tied to the jobs (Gold *et al.* 2009). Since the late-1990s, facing rising discontent among laid-off former SOE workers, the Chinese government has sought to offer some measure of social protection, including unemployment benefits and minimum livelihood guarantee (*zuidi shenghuo baozhang*).

Meanwhile, to provide retirement benefits for a large number of retirees from existing and reorganized SOEs and the retirement needs of employees from the flourishing non-state sector, the local governments throughout China, under the guidance of the central government, have adopted a new basic retirement insurance (*jiben yanglao baoxian*) system comprising a 'social pool' with funds paid by employers and government subsidies and the 'individual account' from employee salary deduction and employer matching funds (Frazier 2010). By the end of first decade of this century, the retirement insurance funds in many provinces have been centralized at the provincial level, and cover employees of both the state and private sectors. Meanwhile through a separate civil service pension system, employees of government agencies and affiliated public institutions can enjoy more pension payments than workers in the enterprise sector. From 2009 to 2011, the central government began to vigorously promote a retirement scheme for rural residents and those urban residents not covered under the existing pension or social insurance systems. With individual contributions and government supplements, this social insurance scheme would guarantee those aged 60 or above a monthly payment of no less than 55 Yuan per month (in both rural and urban areas). Premier Wen Jiabao vowed that the system would be extended to cover the entire country by the end of his term in 2012.

Even with the recent developments to extend coverage to previously neglected populations, the weaknesses and deficiencies of the existing arrangements are also glaring. The various urban area-based retirement benefit systems are fragmented along municipal lines and portability remains a forlorn hope. The urban retirement insurance programmes cover most urban workers and retirees, but participation rate is much lower among migrant workers due to their job instability and portability concerns (Jackson *et al.* 2009). Facing the legacy cost of large number of SOE retirees and limited investment channels for appreciation, the social insurance funds in many regions are seriously underfunded and it is not unusual for some local authorities to 'borrow' funds from personal retirement accounts to meet current payout needs (Ye 2011). According to the '2011 Report on the Development of China's Retirement Pension', the retirement insurance systems in 15 provinces are unable to meet current liabilities from current contributions. The shortfall of as much as 67.9 billion Yuan had to be covered by local and central government subsidies (Xia 2011). The situation will only worsen over time in the absence of significant reforms.

China's rapid demographic transition to an ageing society is expected to add further to the strains facing the current system of retirements and elderly care. According to the 2000 China census, those above 65 years of age accounted for 8.9% of the entire population then, but this rate is predicted to rise to over 20% in 2030, matching that of the United States (Jackson *et al.* 2009). The shrinking size of the household means that the traditional family support for the elderly is simply not going to be tenable. Rapid urbanization has compounded such strains. Over 200 million rural residents have migrated to urban areas in search of work and better income, often leaving behind their elderly parents in the countryside fending for themselves (Liu 2010).

Yet, as the Chinese economy has soared and living standards have increased, expectations about retirement have also risen. According to a 2010 survey by HSBC of over 1000 urban working adults in China, over 80% of the respondents thought they would be better off in retirement than their parents' generation (HSBC 2011). Meeting the growing public expectations about retirement for a rising tide of retirees can seriously dent the government's finances and strain state–society relations. Under the rubric of improving the people's livelihood, the Chinese leadership, as noted above, has committed to providing universal access to a modicum of social insurance, including for rural residents. Yet, such modest payments may not have served to ease public concerns about having adequate provisions for retirement and elderly care and may paradoxically activate fears among a subgroup of the population about the growing costs of retirement and old age care.

Considering the concerted efforts by Chinese central and local governments in establishing more inclusive pension and health-care schemes in recent years and the importance of such schemes in providing not only a decent quality of life for retirees but also in helping to preserve social peace, it is useful to examine the patterns of public concern about old age care and the implications such patterns may hold for public policy and state–society relations.

Survey description and research questions

Administered annually since 2000, the Chinese Residents' Life Quality Index Survey, conducted by the independent survey research organization Horizon Research Consultancy, aims to collect information on people's perception of various aspects of their lives and their opinions on social and economic policy issues. Each year, about 20 locations, including cities, small towns and rural villages, are selected throughout China and, with some exceptions, most locations are included from year to year. Then a sample of households is selected from the survey locations through multistage cluster sampling method, and an adult respondent from 18 to 60 years old is selected randomly from the sample household.

Figure 3 shows the survey locations from 2005 to 2010 on the map of China. Even though the survey locations were not selected randomly, they, nonetheless, come from different parts of the country, including major coastal cities such as Guangzhou and Shanghai, small towns and rural areas.⁶ Because of the different sampling ratios (i.e. proportion of population selected in the sample) of the survey locations, statistical weights are generated to make the sample representative of the population of all survey locations. Further weighting is applied to the urban and rural samples separately to make the sample more representative of the national distribution of the population in rural and urban areas.

Through analysing the Horizon survey data, we expect to address several research questions in this study. First, what is the proportion of Chinese residents who are concerned about their care in old age? Second, how does the level of concern vary systematically among people with different demographic characteristics and socio-economic status? Third, what is the temporal trend in the proportion of concerned residents? Fourth, does

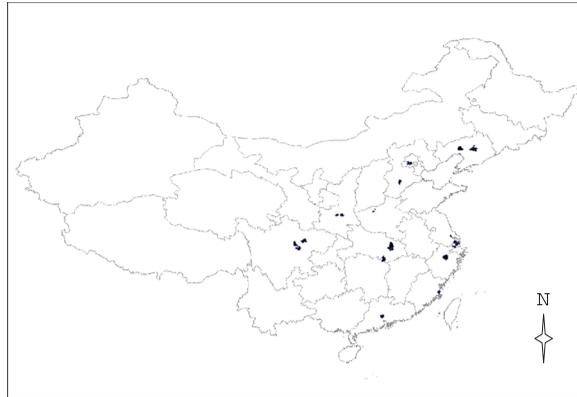


Figure 3. Map of China showing the locations of Horizon surveys from 2005 to 2010.

Notes: The highlighted areas are counties and urban districts where the surveys are conducted. In cities, only their central districts (two or more) are covered in the surveys; in counties, the surveys cover the town where the county government seat is located and several rural villages.

the trend differ among people of different demographic and social characteristics? On the basis of answers to these questions, we hope to probe the larger implications of old age care anxiety for Chinese governance and state–society relations.

Data and methods

From 2005 to 2010, the Horizon survey included two questions that gauged respondents' concerns about care in old age: (a) Are you concerned about the issue of 'who will care for you when you are old'? (b) Are you concerned about the expenses or costs of caring for you in old age?⁷ The respondents could choose from one of four possible responses: (1) very worried, (2) relatively worried, (3) not very worried and (4) not worried at all; they could also volunteer the answer 'so-so,' which became the de facto 'neutral category'.⁸ In this study, we collapse the five responses into three categories, 'worried', 'so-so' and 'not worried', but it is worthwhile to note that few respondents answered that they were 'very worried' or 'not worried at all'. Less than 4% of observations in each year have missing or invalid answers and these are excluded from the analysis. To make the findings representative of the national population, all descriptive and statistical analysis are weighted by the proportional weights provided in the survey data.

We include the following personal and socio-economic characteristics in our analysis: respondent's age, gender, education, urban or rural residency, household income and occupation. A respondent's education can be at one of five levels: primary school or lower, middle school, high school or vocational school, 2-year college, college or above. Household income includes monetary and in-kind incomes of all household members per month. Besides differences in urban/rural residency, we also classify urban residents into those in cities (large metropolitan areas with a population of over 1 million) and those in towns (mostly the urban centre of a county or county-level city, where the county government operates). The classification of occupations is more fraught and Chinese sociologists have in recent years made strenuous efforts to better measure stratification through occupation (Li 2005). Based on our understanding of occupational prestige in China, we group occupations into seven categories: (1) high- and mid-level government administrators, corporate owners and managers and high-level professionals; (2) government

and corporate employees, office clerks and general professionals (普通专业技术人员); (3) manual workers/labourers and sales clerks; (4) self-employed small proprietors or vendors; (5) retirees; (6) farmers and (7) students, unemployed or not working.

Table 1 shows the weighted distribution of the covariates included in the study for each year from 2005 to 2010. Even though the period covered in this study is for 6 years only,

Table 1. Weighted percentages of respondents for different covariates in each year.

Covariates	Categories	Year of survey						Total (%)
		2005	2006	2007	2008	2009	2010	
Gender	Male	48%	49%	48%	49%	49%	49%	49
	Female	52%	51%	52%	51%	51%	51%	51
Age (years)	18–30	26%	24%	21%	22%	25%	28%	25
	31–40	28%	27%	29%	28%	26%	26%	27
	41–50	25%	28%	31%	28%	28%	27%	28
	51–60	21%	20%	19%	22%	21%	19%	20
Education	Primary school or less	23%	21%	22%	21%	18%	15%	20
	Middle school	43%	43%	39%	44%	43%	40%	42
	High school/ vocational school	23%	26%	27%	25%	28%	31%	27
	2-Year college, dazhuan	7%	7%	8%	7%	8%	10%	8
	College graduate or above	4%	4%	3%	3%	3%	4%	4
Region	City	24%	24%	24%	24%	24%	25%	24
	Small town	13%	13%	13%	19%	20%	21%	17
	Rural village	63%	63%	63%	57%	55%	54%	59
Urban/rural	Urban	37%	37%	37%	43%	45%	46%	41
	Rural	63%	63%	63%	57%	55%	54%	59
Occupation	High-level administrator, manager and professional	3%	4%	4%	6%	5%	5%	4
	Ordinary government and corporate employee, clerk and professional	12%	13%	8%	9%	8%	10%	10
	Manual worker, sales personnel and peasant labourer	8%	13%	16%	18%	23%	23%	17
	Self-employed small proprietor and vendor	16%	12%	13%	16%	21%	24%	17
	Retiree	5%	4%	4%	3%	3%	3%	3
	Farmer	38%	43%	46%	44%	34%	26%	38
	Not working, jobless and student	19%	11%	10%	5%	7%	8%	10
	Family Income	Less than 1000 Yuan	48%	37%	30%	29%	30%	23%
	1001–3000 Yuan	33%	44%	48%	46%	40%	38%	41
	3001–5000 Yuan	8%	12%	15%	16%	18%	20%	15
	Over 5000 Yuan	11%	7%	7%	8%	12%	19%	11
Total		100%	100%	100%	100%	100%	100%	100

Notes: Except for gender, Chi-square tests indicate significant differences ($p < .05$) in the distribution of the covariates for the different years.

the numbers indicate significant temporal variations that reflect the breakneck speed of China's development. In step with the rise in per capita income in China, we note that the weighted proportion of respondents with less than 1000 Yuan of monthly household income has decreased dramatically, whereas the proportions in higher income categories have increased. The level of education has also increased and the weighted proportion of respondents with a primary school education or less has significantly decreased, whereas the proportion with a high school education has increased. Rapid urbanization driven by rural-to-urban migration continues to reshape the rural-urban demographic landscape; between 2005 and 2010, the proportion of residents living in cities has increased from 37% to 46%, whereas the proportion living in rural areas has dropped from 63% to 54%.

Findings on concerns about cost of old age care

We now examine the data on respondents' concerns about care in old age. Figure 4 clearly indicates that the weighted proportion of respondents who are worried about old age care arrangements (i.e. who will care for me?) has nearly doubled from 24% in 2005 to 46% in 2010 ($\chi^2 = 441$, $df = 1$, $p < .0001$), and the proportion concerned about the cost of old age care has risen from 27% in 2005 to 43% in 2010 ($\chi^2 = 236$, $df = 1$, $p < .0001$). Considering that per capita incomes have generally increased during this period, the rising concern about old age care is especially noteworthy. Interestingly, the proportions of respondents worried about caregiver availability in old age and the cost of old age care closely track each other for the period covered by the survey and are highly correlated.⁹ Given such similarity, we focus our attention on concerns about the cost of old age care first.

As we prepare to further dissect the survey data, we expect that, with their superior pension coverage and other forms of social insurance, urban residents in general and government employees, in particular, should be less concerned about financial dependence

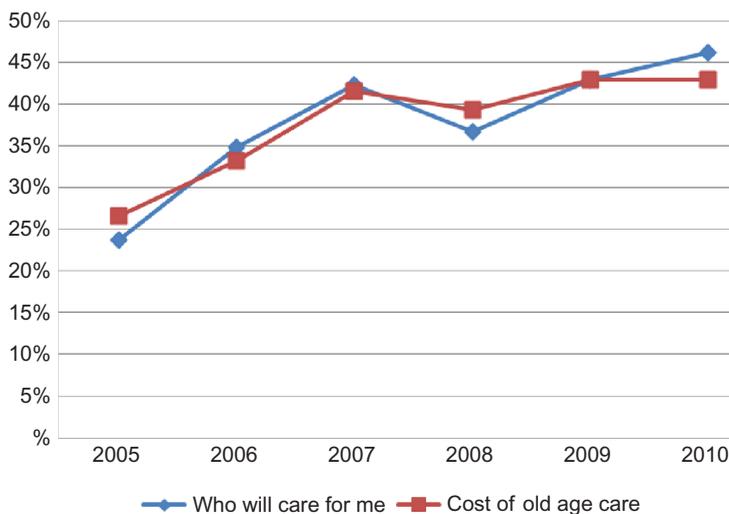


Figure 4. Weighted percent of respondents worried about old age care and its cost in China.

Notes: The percentage for 2007 is higher than 2006 and 2008 partly because respondents are not allowed to answer 'so-so' as in other years. Therefore, some respondents who may answer 'so-so' are forced to answer 'worried', thus increasing its percentage.

in old age. By the same logic, those with higher socio-economic status, including higher household income and more schooling, should be less worried about care in old age. We also expect that young people would be less worried about old age care because for them the shadow of the future is more distant.

As an initial step in our analysis, Table 2 presents, for the years of 2005, 2008 and 2010, the weighted proportions of respondents in different categories of covariates who are worried about the cost of old age care. First, we note the substantial increase in the level of concern about the cost of old age care for respondents in all categories of each covariate, including people with high family income and education. Second, with a few exceptions, Chi-square tests confirm a significant association between the covariates and respondents' concerns about old age care in each of the 3 years.

Table 2. Weighted percentages of respondents worried about old age care by personal characteristics.

Covariates	Categories	2005	2008	2010	<i>p</i> -Value*
Gender	Male	25%	39%	40%	.010/.711/<.001
	Female	28%	40%	45%	
Age (years)	18–30	16%	32%	33%	<.001/<.001/<.001
	31–40	31%	39%	47%	
	41–50	29%	44%	49%	
	51–60	31%	40%	43%	
Education	Primary school or less	35%	45%	47%	<.001/<.001/<.001
	Middle school	26%	41%	46%	
	High school/vocational school	25%	36%	40%	
	2-Year college (dazhuan)	21%	29%	35%	
Region	College graduate or above	10%	22%	36%	<.001/<.001/<.001
	City	28%	38%	50%	
	Small town	19%	33%	42%	
Urban/rural	Rural village	28%	42%	40%	.069/<.001/<.001
	Urban	25%	36%	46%	
Occupation	Rural	28%	42%	40%	<.001/<.001/<.052
	High-level administrator, manager and professional	13%	31%	35%	
	Ordinary government and corporate employee, clerk and professional	21%	29%	43%	
	Manual worker, sales personnel and peasant labourer	21%	38%	45%	
	Self-employed small proprietor and vendor	18%	35%	45%	
	Retiree	27%	30%	37%	
	Farmer	33%	45%	44%	
	Not working, jobless and student	28%	41%	38%	
Family income	Less than 1000 Yuan	34%	44%	31%	<.001/<.001/<.001
	1001–3000 Yuan	24%	42%	52%	
	3001–5000 Yuan	13%	29%	44%	
	Over 5000 Yuan	16%	27%	37%	
Total		27%	36%	43%	

Notes: The *p*-values are from Pearson Chi-square tests (two-sided) of association of each covariate with whether worried or not about old age care for each year. The three *p*-values are for 2005, 2008 and 2010, respectively.

In both 2005 and 2010, a higher proportion of women than of men expressed concern. The association of age with concerns about old age care is significant but not linear. Among the age groups, less than one-third of respondents younger than 30 years showed concern about old age care; those in their forties are the most worried, with nearly half claiming to be worried in 2010.

In general, the socio-economic indicators are correlated with expressed concerns about old age care as expected, with more of those with the least education and more of those with lower income showing worries about old age care in comparison with those with higher education and higher income. Yet, it appears that government policies have reshaped public attitudes. For 2005 and 2008, a much higher proportion of those with the lowest household income expressed concern, but with greater government efforts to promote basic social insurance such as the minimum livelihood guarantee, the percentage of respondents in the lowest personal income bracket showing concern has declined between 2008 and 2010. In contrast, a growing proportion of those in higher income brackets have become worried.

In terms of professions, it is not surprising that relatively fewer of those serving in senior civil servant positions and company management, with their superior government pensions and retirement benefits, indicated they were concerned about old age care. In contrast, 43%–45% of all other working groups showed concern in the 2010 survey.

Interestingly, contrary to our expectations, the association of urban and rural residence with concerns about old age care is not so obvious. In 2005 and 2008, residents in small towns are the least worried about old age care, whereas a similar proportion of residents in big cities and rural areas are worried about old age care. However, reflecting the rising cost of living in big cities, a larger proportion of residents in big cities expressed concern about the cost of old age care than rural dwellers in 2010 (Figure 5). In fact, while only 28% of urban and rural residents expressed concerns in 2005, half of the urbanites were worried in 2010 compared with 40% for rural residents.

Following the preliminary analysis as above, we now present in Table 3 the results of binary logistic regression models on respondents' concern about the cost of care in old

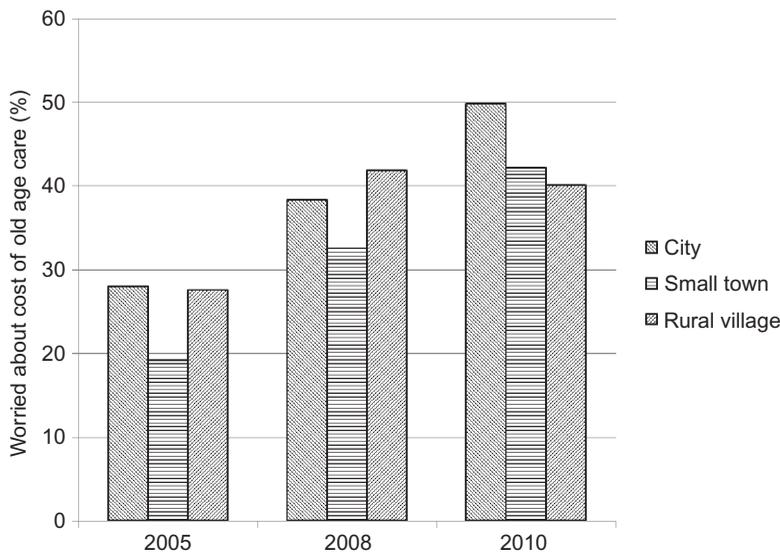


Figure 5. Weighted percent of respondents worried about cost of care in old age by residence.

Table 3. Binary logistic regression: concern about care in old age in China for the years 2005, 2008 and 2010.

Variables	2005			2008			2010		
	<i>B</i>	SE	Sig.	<i>B</i>	SE	Sig.	<i>B</i>	SE	Sig.
Gender: male vs. female	-0.091	0.077	.238	0.038	0.070	.583	-0.140	0.066	.034
Age									
Over 50 years			.000			.001			.000
Lowest through 30	-0.581	0.129	.000	-0.133	0.114	.246	-0.300	0.108	.006
31–40 years	0.175	0.108	.104	0.071	0.101	.481	0.251	0.102	.014
41–50 years	0.072	0.110	.512	0.252	0.099	.011	0.293	0.100	.003
Education									
College			.000			.002			.000
Primary school or less	1.134	0.290	.000	0.814	0.261	.002	0.553	0.201	.006
Middle school	0.812	0.279	.004	0.669	0.247	.007	0.417	0.179	.020
High/vocational school	0.807	0.277	.004	0.454	0.245	.064	0.012	0.175	.944
2-Year college (dazhuan)	0.822	0.303	.007	0.268	0.270	.322	-0.146	0.194	.453
Household income:									
Over 5000 Yuan			.000			.000			.000
Less than 1000 Yuan	1.388	0.169	.000	0.725	0.163	.000	-0.018	0.126	.884
1001–3000 Yuan	0.646	0.154	.000	0.605	0.149	.000	0.834	0.106	.000
3001–5000 Yuan	-0.189	0.214	.377	0.025	0.160	.875	0.368	0.107	.001
Residence									
Rural			.000			.000			.000
City	0.957	0.125	.000	0.435	0.111	.000	0.804	0.105	.000
Town	0.325	0.142	.023	-0.079	0.102	.436	0.112	0.090	.216
Constant	-2.969	0.334	.000	-1.724	0.293	.000	-1.147	0.219	.000
<i>N</i>	3929			3650			4090		
-2 Log likelihood	4234			4769			5285		
Cox & Snell <i>R</i> ²	.067			.031			.068		

Notes: The model shows the log odds of being 'worried about old age care' as one category (=1) versus 'not worried' and 'so-so' as the other category (=0).

age for 2005, 2008 and 2010. In this exercise, the dependent variable is a dichotomous variable having either the value of 'worried about old age care' (set at '1') or 'so-so' and 'not worried' (set at '0'). The independent variables include age, education, household income, residence and occupation. Because occupations in China are heavily correlated with urban/rural locations (farmers by definition are rural, whereas retirees, administrators and managers are urban residents), inclusion of both occupation and residence in the models will cause collinearity problems for estimation and interpretation. Therefore, we run two sets of logistic regression models, one including urban/rural residence and the other controlling for occupation.

Table 3 shows the results of the logistic regression model with the residence variable included. All variables, except gender, are significantly associated with the likelihood of concern about the cost of old age care in all 3 years. Gender is statistically significant only in 2010, with females more likely to be worried about old age care than males. The effect for age is consistent in all 3 years: those in the under-30 cohort are less worried about old age care, but those in the 41–50 cohort are more likely than the 50-plus group to be worried about old age care in 2008 and 2010. Consistent with Table 2, the increases in the coefficients for the two middle-age cohorts (31–40 and 41–50) from 2005 to 2010 indicate growing levels of concern about old age care for these two age groups relative to those over 50 years old.

With the college-educated as the base category, we find that those with a middle-school education or lower are more likely to be worried than those with a college degree. However, unlike in 2005, for 2008 and 2010 there is no significant difference in the likelihood of concern about old age care between those with a college degree and those with a high school or 2-year college diploma. Instead, there are similar proportions of people among the three groups who are worried.

It is not surprising that those with lower levels of household income are generally more likely to be worried about the cost of care in old age than those with higher income levels. What is noteworthy, however, is that in 2010 those in the lowest household income group is no more worried than those with 5000-plus Yuan of income per month. The increases in the coefficients for the two middle-income household groups from 2005 to 2010 reveal heightened levels of concern for middle-income households relative to those from wealthy households.

In what appears to be a commentary on the paradox of development and notably the rising costs of urban life, residents of big cities are more likely to show worries about old age care than rural residents. In contrast, the results for 2008 and 2010 (in contrast to 2005) suggest that dwellers of towns can enjoy a good measure of urban life without becoming more worried about old age care than rural residents. When occupation is included in the logistic regression model instead of urban and rural residence, the results show that occupation is significantly associated with concerns about the cost of old age care in year 2005 only but not for 2008 and 2010. Thus, the heightened level of concern by farmers (as shown in Table 2) is mostly captured by their generally lower income and education compared with the other occupations.

Concerns about caregiver availability in old age care

As we noted earlier, the two indicators for concerns about care in old age, caregiver availability and cost of care, are highly correlated. People who are worried about caregiver availability are likely to be worried about the cost of care. Those who are worried about the availability of family caregivers in old age also tend to have financial concerns. If outside caregivers and nursing facilities are easily accessible and affordable, most people would not be concerned about whether family members are around to care for them. As a result, the proportions of people worried about the cost of care and caregiver availability are similar for each year and have increased in sync from 2005 to 2010. We also find that the results of bivariate analysis and logistic regression models are largely similar for the two indicators.

Yet, there is one major difference that we would like to point out. While in 2005, the proportion of people worried about caregiver availability was 3 percentage points lower than the proportion of people worried about the cost of care (24% vs. 27%), the trend was reversed in 2010, when more people became worried about caregiver availability than the cost of care (46% vs. 43%) (Figure 4). This 6 percentage points swing in 5 years shows that caregiver availability has in recent years become more salient than the cost of care in people's concerns about care in old age and this development applies equally to urban/rural residence, different age groups and different levels of education. The growing concern about caregiver availability reflects China's demographic transition from an economy with a virtually unlimited supply of cheap labour to one facing increasing difficulties for the manufacturing and service sectors to recruit enough workers even with increasing pay (Yang 2005). The relatively low pay and status of those who provide care for the elderly compared with those who help with newborns (月嫂) has discouraged potential providers from becoming caregivers for the elderly.

Most likely and most preferred care arrangement in old age

Another angle for us to look at old age care in China is to examine respondents' responses to questions concerning what are the most likely versus most preferred types of care arrangement when they get old. Figures 6 and 7 show, for the 2008–2010 period, the weighted percentages of people choosing each of six types of care arrangement.

As the figures show, the most preferred option for more than half of the respondents is living at home to be cared by adult children or other relatives. The next most popular care type, for about 10% of the respondents, is living at nursing homes established by the civil affairs agencies (government). Another 10% of respondents choose to depend on themselves. Only less than 5% of the respondents prefer commercially operated nursing homes.

We note that the percentage distribution of respondents for the most likely and the most preferred care types are very similar. In fact, a cross-tabulation indicates that a large majority of respondents select the same care arrangement type as both the most likely and most preferred. Yet, there is an important difference. The percentage of respondents who prefer staying at home is less than the percentage who says staying at home is their most likely option. In contrast, more respondents prefer living in nursing homes set up by the civil affairs agencies than think such a care option is likely. This discrepancy points to greater demand for government-provided nursing facilities than is available in spite of the occasional horror stories about such facilities that have come to light in the Chinese media.

As China's demographic transition to an ageing society accelerates and the burdens of caring for the elderly become more prominent, it is likely that the public desire for

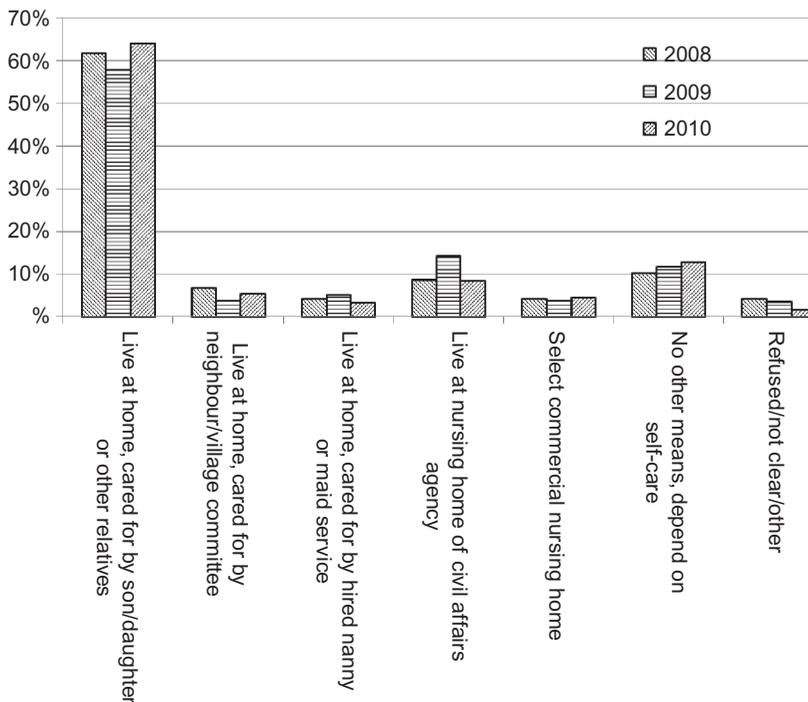


Figure 6. Weighted proportions of respondents in the most likely types of care arrangement in 2008, 2009 and 2010.

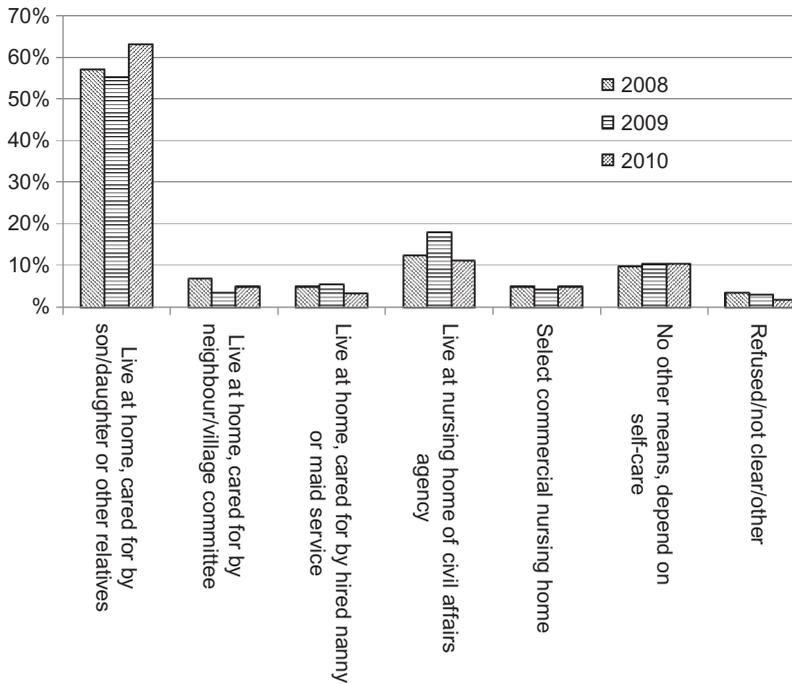


Figure 7. Weighted proportions of respondents in their most preferred types of care arrangement in 2008, 2009 and 2010.

government-supported facilities will see further increases. Meanwhile, China's leaders also appear to recognize both the growing needs of the elderly and the public desire for government-supported facilities. According to a Ministry of Civil Affairs official, under a State Council initiative for the 12th five-year plan period (2011–2015), the number of beds for elderly care is to increase by 3 million to reach 30 beds per 1000 elderly people, doubling the current capacity.¹⁰ Local authorities such as Beijing and Jiangsu have begun to subsidize the training of elder-care providers and to provide government aid for building facilities on a per-bed basis.¹¹

Summary and discussion

Our study has revealed that in the past few years, an increasing number of Chinese people have become worried about their care arrangement in old age and the cost of care. From 2005 to 2010, the proportion of residents who are worried about the cost of old age care has increased from 27% to 43%. Moreover, the increase is across the board and for people of all age groups and at different education and income levels. Those in their thirties and forties are more likely to be worried about care in old age than either younger or older people. Socio-economic status also makes a difference and residents with lower education and incomes tend to be more concerned. Yet, contrary to our expectations, residents of big cities are found to be more concerned about old age care than rural residents in 2010.

Considering the fact that people's household and personal incomes have generally increased amid China's extraordinary economic boom, their heightened level of concern about old age care is remarkable. Although there may be multiple reasons for the increasing concern about the cost of old age care, one important and proximate cause is their

perceived or relative deterioration of personal economic conditions and life quality in a period of national economic boom. In other words, there is a yawning gap between expectations for the country and for oneself. The Party has used the media to extol the nation's achievements, but by so doing it also raises the people's expectations. Yet, the average person knows well his or her own economic conditions.

In spite of the general increase of nominal personal income, the proportion of respondents who characterized their personal economic conditions as 'good' has decreased from 35% in 2004 to 29% in 2010. The proportions of people who think their living standard will improve in the next year have dropped from 80% in 2005 to 43% in 2010. Indeed, nearly half of the respondents (47%) in 2010 claim to be in severe financial/economic strain, particularly due to inflation and the resulting increase in living costs, and a majority of the respondents are pessimistic about the prospect of their living standard getting better. Since the perceived change in economic conditions and living standards is correlated with people's concern with old age care, it is no surprise that concerns about old age care should increase with the decline in self-perceived personal economic conditions. As noted in the beginning of this article, it appears that these growing worries have contributed to a significant decline in the proportion of respondents who feel 'happy'.

The growing concern about the cost of old age care is further exacerbated by the inadequacies in the current retirement benefit systems. With its rapid demographic transformation, traditional ways of elderly care through the extended family will simply not be viable in China. At the same time, economic reforms have fundamentally undermined the previous state work-unit-centred welfare system. In response to pressure from dismissed SOE workers, the Chinese government has revamped the retirement system where the work unit (i.e. public employers) provides pensions and medical insurance in favour of a national social insurance system by pooling insurance funds from all employers and employees. Despite its uneven implementation, many cities and provinces have made the transition to a regionally centralized social insurance system where all retirees, including those laid off by reorganized or bankrupt firms, can draw a pension from the pooled insurance fund. With rapid economic growth in the past decade, the Chinese government is able to expand the coverage of the social insurance system to the non-state sector and increase the pension payment to retirees.

According to the 2010 Horizon survey data, 37% of Chinese residents regard the pensions from government or work unit as the most dependable source of income for care in old age, higher than the percentage of residents (35%) who would depend on their children or other relatives for care in old age. In big cities, over half of the residents (54%) regard government or work unit pensions as the most dependable source of retirement income compared with 30% and 32%, respectively, for town and rural residents (Figure 8). The higher proportions for city residents reflect the paternalistic nature of the state-society relationship in urban areas under which the state is expected to provide the needed social insurance and pension for its citizens. On the other hand, township and rural residents have received very limited social insurance benefits from the governments, thus their lower dependence on state or employer's pensions for retirement income. According to a 2011 report by HSBC, compared with most advanced or developing countries, a higher proportion of Chinese urban residents claim that they will rely on government pension as a major source of retirement income (HSBC 2011).

Yet at the same time, people's satisfaction level with the social insurance benefits (mostly medical insurance and pension) they receive from the government or their employers has dropped precipitously in 2010. Figure 9 indicates that the proportion of people satisfied with their social insurance benefits has risen from 43% in 2005 to 47% in 2009,



Figure 8. Most reliable source of retirement income identified by percent of respondents in cities, towns and villages in 2010 (weighted percentage).

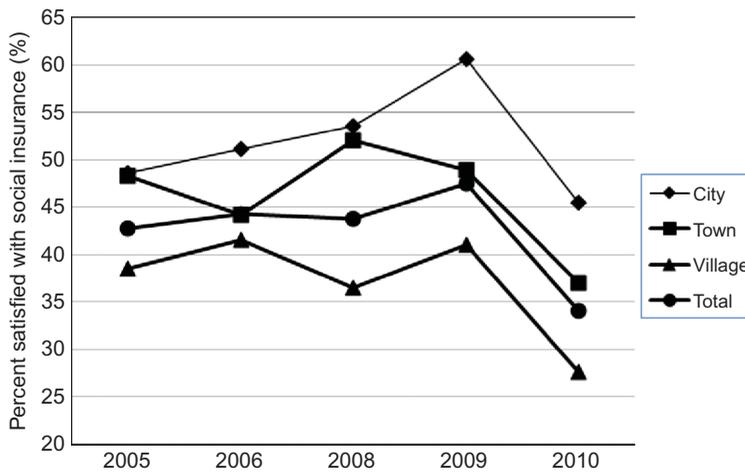


Figure 9. Weighted percentages of residents in three types of regions who are satisfied with their social insurance benefits from government or employer.

Notes: The percentages for 2007 are not shown because the question on social insurance satisfaction has only two categories instead of three for the other years.

but dropped to 34% in 2010. For residents of big cities, the proportions satisfied with social insurance provisions have dropped from 61% in 2009 to 46% in 2010. For rural residents, the corresponding proportions are much lower, at 41% in 2009 and 28% in 2010. The growing dependence on social insurance system and declining satisfaction with the social insurance system suggest growing pressure for the Chinese government to play a paternalistic role in helping provide for social insurance and elderly care. However, the rapidly increasing ranks of the elderly and the rising cost of caring for them have already started to put a strain on the financial resources of local governments (Xia 2011). This means

that the Chinese government will need to find new revenue sources for meeting pension liabilities and the costs of more generalized social insurance, including probably the option of increasing the retirement age. Failure to address the growing needs for welfare may fuel further public discontent (Ye 2011).

As mentioned earlier, the fragmentation of the retirement insurance system among different provinces and cities and the resulting portability impasse have effectively excluded many migrant workers from the system. This has caused further social inequity besides the separate and more generous civil service retirement pension scheme (Yuan 2011). Understandably, migrant workers who work mostly in the private sector are disenchanted with the government and have high levels of concern about old age care (Table 2).

Conclusions

A good measure of the moral character of any society is how it takes care of that society's weakest, from the young to the old, as well as the disabled (Rawls 1971). To the extent that China's official policies to coercively limit population growth have aggravated population ageing and undermined the foundations of family-based care for the elderly, it seems natural that Chinese society would demand greater efforts by the Chinese government, with its command of vast economic resources, to do more to help provide for the rapid expansion of China's elderly ranks. China's government policies to expand coverage of the social security system and to boost investments in care for the elderly are steps in the right direction, but such steps appear to have fallen short of public expectations so far. Yet at the same time, the growing government liabilities to provide social insurance and other welfare benefits may serve as some form of constraints on the Chinese Leviathan. Thus, as the Chinese society ages rapidly, the provision of decent care for the elderly will pose a significant challenge to China's state-society relationship and will likely help reshape China's evolving social contract.

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Notes

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2. Yan Lianke, <http://weibo.com/2056049087>, 18 August 2011 [Accessed 20 December 2011].
3. Andrew Jacobs, 'Harassment and Evictions Bedevil Even China's Well-Off,' *New York Times*, 27 October 2011, available at <http://www.nytimes.com/2011/10/28/world/asia/harassment-and-house-evictions-bedevil-even-chinas-well-off.html> [Accessed 20 December 2011].
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5. See Huang and Yang (2003) for a detailed analysis of the evolution of the birth control policy and its implementation in China. We recognize that the population planning policy is only one

- of many factors that have caused China's demographic transition, as described by Hussain (2002) and Greenhalgh and Winckler (2005).
6. We note that no regions where the ethnic minorities are concentrated are included, although these minority regions only account for a small proportion of the national population.
 7. The original Chinese questions are '老了之后, 由谁来照料自己的生活 (不涉及到经济问题)?' and '您对于自己的养老费用 (或今后的养老费用) 感到忧虑吗?'
 8. In 2007, the 'so-so' was excluded as a possible response category.
 9. The Pearson correlations between the two variables (with three responses) for concerns about old age care are 0.74, 0.81 and 0.72, respectively, for 2006, 2008 and 2010.
 10. Wei Mingyan, 'The Civil Affairs Ministry: 3 million beds to be added for elderly care in 5 years, doubling the current number' (Minzhengbu: wunian ni zen yanglao chuangwei 300 wan zhang, bi muqian fanyifan), *New Capital Newspaper* (xinjingbao), 9 December 2011, available at <http://news.sohu.com/20111209/n328402099.shtml> [Accessed 20 December 2011].
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