

Preferred Sons are "Rotten": Giving to One's Parents in the Lab in China

Maria Porter

Michigan State University

Dandan Zhang

Peking University

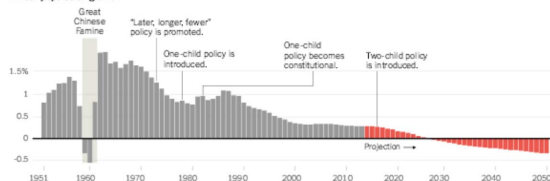
Xiaobo Zhang

Peking University

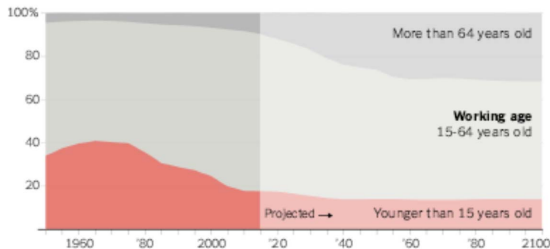
Thanks also to Christina Biedny and Jinlin Wei for research assistance

NYT: China's Looming Crisis

Annual population growth



Source: U.S. Census International Data Base



Source: United Nations Population Division, 2017

Source: New York Times, January 17, 2019

Only Child in China Today

"When I was an only kid, I had so much attention from my grandparents. I was so spoilt. But now I have to give back and it is tearing me apart," confided a friend who is nursing a parent with dementia.

— Mei Fong, The Guardian, September 2, 2018

Prior Studies: Evidence of "Little Emperors"

- Findings from experimental games with 421 participants from Beijing (where OCP was strictly enforced).
- Dictator game, trust game, risk game, competition game. (Cameron et al. 2013, Science)
- Gender balanced and birth year balanced.
- One Child Policy in China has produced "less trusting, less trustworthy, more risk averse, less competitive, more pessimistic, and less conscientious individuals."
- Other studies have found no evidence of "Little Emperors"
 - "Virtue and competence" (Poston and Falbo 1990, Int Family Planning Perspectives)
 - Values survey (Shen and Bao-Jane 1999, J of Psychology)
 - Life plans (Deutch 2006, J of Family Issues)

Prior Studies: Evidence of "Little Emperors"

- Findings from experimental games with 421 participants from Beijing (where OCP was strictly enforced).
- Dictator game, trust game, risk game, competition game. (Cameron et al. 2013, Science)
- Gender balanced and birth year balanced.
- One Child Policy in China has produced "less trusting, less trustworthy, more risk averse, less competitive, more pessimistic, and less conscientious individuals."
- Other studies have found no evidence of "Little Emperors"
 - "Virtue and competence" (Poston and Falbo 1990, Int Family Planning Perspectives)
 - Values survey (Shen and Bao-Jane 1999, J of Psychology)
 - Life plans (Deutch 2006, J of Family Issues)

Prior Studies: Evidence of "Little Emperors"

- Findings from experimental games with 421 participants from Beijing (where OCP was strictly enforced).
- Dictator game, trust game, risk game, competition game. (Cameron et al. 2013, Science)
- Gender balanced and birth year balanced.
- One Child Policy in China has produced "less trusting, less trustworthy, more risk averse, less competitive, more pessimistic, and less conscientious individuals."
- Other studies have found no evidence of "Little Emperors"
 - "Virtue and competence" (Poston and Falbo 1990, Int Family Planning Perspectives)
 - Values survey (Shen and Bao-Jane 1999, J of Psychology)
 - Life plans (Deutch 2006, J of Family Issues)

Reasons for Son Preference

- Long-term care is the primary reason for son preference (Kadoya and Khan 2017)
- Son preference is due to a rigid patrilineal system (all land inheritance through sons only).
- Women marry outside their villages, men remain in their villages.
- Women's status increases with age, but it is dependent on their sons. (Das Gupta et al. 2003, J Dev Stud)
- Son preference inheres in patrilineal social networks, family systems, socio-cultural practices. Education, agri-mechanization, rural industrialization and increased work opportunities for women all mitigate son preference. (Murphy et al. 2011, Pop and Dev Rev)

Reasons for Son Preference

- Long-term care is the primary reason for son preference (Kadoya and Khan 2017)
- Son preference is due to a rigid patrilineal system (all land inheritance through sons only).
- Women marry outside their villages, men remain in their villages.
- Women's status increases with age, but it is dependent on their sons. (Das Gupta et al. 2003, J Dev Stud)
- Son preference inheres in patrilineal social networks, family systems, socio-cultural practices. Education, agri-mechanization, rural industrialization and increased work opportunities for women all mitigate son preference. (Murphy et al. 2011, Pop and Dev Rev)

Reasons for Son Preference

- Long-term care is the primary reason for son preference (Kadoya and Khan 2017)
- Son preference is due to a rigid patrilineal system (all land inheritance through sons only).
- Women marry outside their villages, men remain in their villages.
- Women's status increases with age, but it is dependent on their sons. (Das Gupta et al. 2003, J Dev Stud)
- Son preference inheres in patrilineal social networks, family systems, socio-cultural practices. Education, agri-mechanization, rural industrialization and increased work opportunities for women all mitigate son preference. (Murphy et al. 2011, Pop and Dev Rev)

Reasons for Son Preference

- Long-term care is the primary reason for son preference (Kadoya and Khan 2017)
- Son preference is due to a rigid patrilineal system (all land inheritance through sons only).
- Women marry outside their villages, men remain in their villages.
- Women's status increases with age, but it is dependent on their sons. (Das Gupta et al. 2003, J Dev Stud)
- Son preference inheres in patrilineal social networks, family systems, socio-cultural practices. Education, agri-mechanization, rural industrialization and increased work opportunities for women all mitigate son preference. (Murphy et al. 2011, Pop and Dev Rev)

Reasons for Son Preference

- Long-term care is the primary reason for son preference (Kadoya and Khan 2017)
- Son preference is due to a rigid patrilineal system (all land inheritance through sons only).
- Women marry outside their villages, men remain in their villages.
- Women's status increases with age, but it is dependent on their sons. (Das Gupta et al. 2003, J Dev Stud)
- Son preference inheres in patrilineal social networks, family systems, socio-cultural practices. Education, agri-mechanization, rural industrialization and increased work opportunities for women all mitigate son preference. (Murphy et al. 2011, Pop and Dev Rev)

Preview of Results

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.

Preview of Results

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.

Preview of Results

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.

Preview of Results

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.

Preview of Results

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.

Identifying Gender Neutral Ethnic Groups

Zhang and Mu (2011) identify 4 gender neutral ethnic groups without son preference, based on the sex ratio of second births in the 2000 census being less than 106:



Uyghur



Tibetan

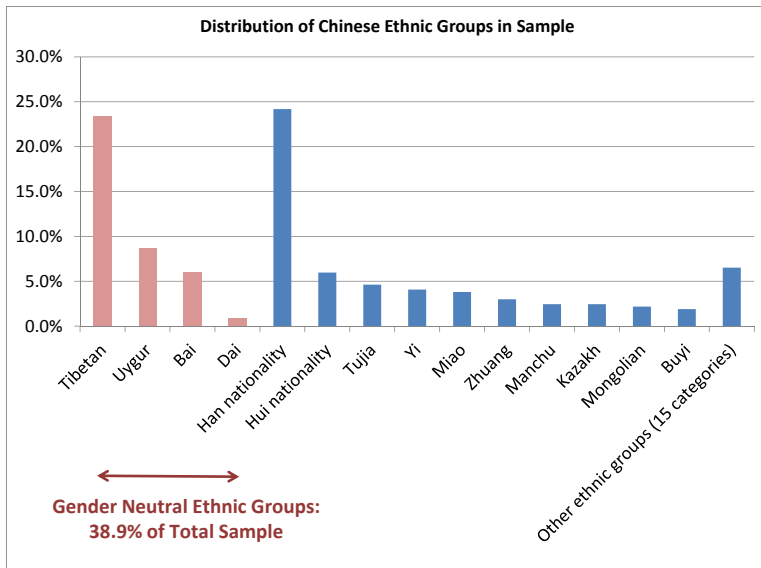


Bai



Dai (Tai)

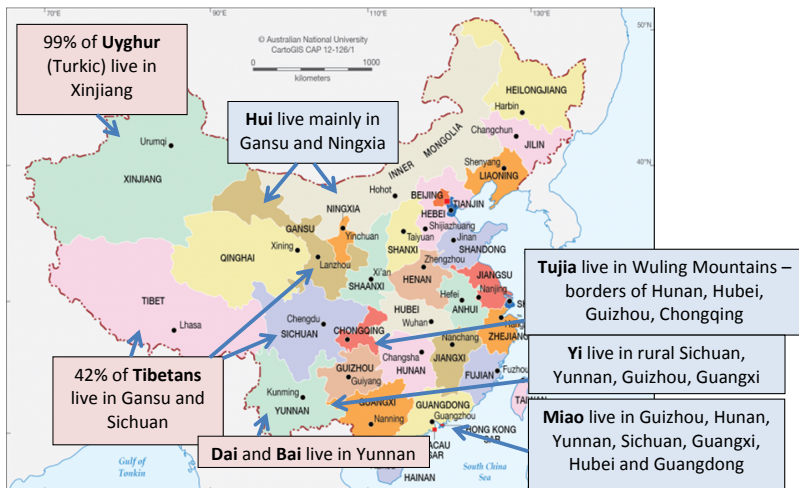
Sample Distribution by Ethnic Group



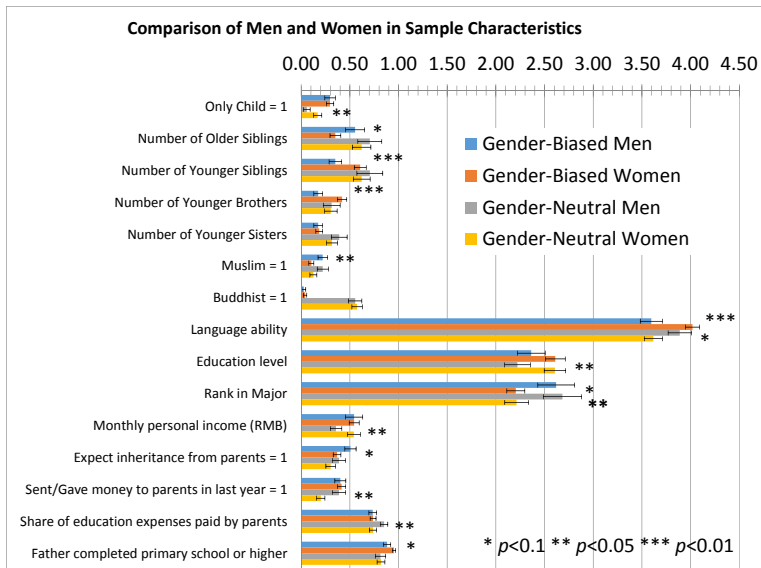
Map of China's Gender Neutral Ethnic Groups



Map of China's Ethnic Groups



Descriptive Statistics Comparing Men and Women



Instructions to Subjects

EXPERIMENT – PART A

You are asked to make a series of choices about how to divide a set of tokens between yourself and one other subject in the room. You and the other subject will be paired randomly and you **will not** be told each other's identity.

As you divide the tokens, you and the other subject will each earn money. Each choice you make is similar to the following:

Example: Divide **50** tokens:

Hold _____ tokens at 1 yuan each, and *Pass* _____ tokens at 2 yuan each.



In this choice you must divide 50 tokens. You can keep all the tokens, keep some and pass some, or pass all the tokens. In this example, you will receive 1 yuan for every token you hold, and the other player will receive 2 yuan for every token you pass.

Budget Environment

TABLE I.

ENDOWMENTS AND PRICES IN MODIFIED DICTATOR GAMES			
N Tokens	Hold Value	Pass Value	Price of Giving
40	1	4	0.25
40	1	3	0.33
60	1	2	0.50
75	1	2	0.50
60	1	1	1.00
80	1	1	1.00
100	1	1	1.00
60	2	1	2.00
75	2	1	2.00
40	3	1	3.00
40	4	1	4.00

Three Sets of Games

Subjects played the following 3 sets of games:

A + B + C

- **A:** Recipient was another subject in the room, who remained anonymous
- **B:** Recipient was the subject's elderly parent(s). Parent was given details on the game, how their child played (with the parent), and payouts to the child and the parent in the game with the parent.
- **C:** Recipient was the subject's elderly parent(s). Parent was not given any information about the details of the game
- Order of these games was randomized across sessions.

Constant Elasticity of Substitution Utility

The functional form of the CES utility function is:

$$u(\pi_s, \pi_o) = (a\pi_s^\rho + (1 - a)\pi_o^\rho)^{1/\rho}. \quad (1)$$

- π_s = one's own payoff
- π_o = payoff of the other person
- a gives the weight on "own" consumption, indicating the degree of selfishness ($a = 1$ when perfectly selfish and $a = 0$ when perfectly selfless)
- ρ determines the elasticity of substitution $\sigma = 1/(\rho - 1)$, between one's own payoff and that of the recipient.
- As ρ approaches $-\infty$, preferences are Leontief.
- When $\rho = 1$, preferences are perfect substitutes.

Differences in CES Parameters by Gender and Gender Bias

Differences in Estimated CES Parameters by Gender and Ethnic Category

		<u>Men Only</u>	<u>Women Only</u>	<u>Gender Biased</u>	<u>Gender Neutral</u>
		Gender Biased/ Gender Neutral	Gender Biased/ Gender Neutral	<u>Only</u> Men/ Women	<u>Only</u> Men/ Women
Parents w/ No Info	a	0.054*** (0.009)	-0.011* (0.006)	0.033*** (0.009)	0.011 (0.012)
	ρ	0.017 (0.035)	-0.032 (0.029)	0.007 (0.029)	-0.022 (0.035)

Notes: Standard errors in parantheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Estimating Differential Recipient Effects

Sample is restricted to games played with strangers and games played with parents under no information, with weak preferences:

$$y_{ij} = \beta_0 + \beta_1 \text{parent}_j * \text{male}_i + \beta_2 \text{parent}_j + \beta_3 \text{male}_i + \\ \beta_4 \text{low_price}_j + \beta_5 \text{high_price}_j + \beta_6 \text{tokens}_j \\ + \beta_7 \text{strangers_first}_{ij} + \beta_8 \text{noinfo_first}_{ij} + \beta_9 X_i + \varepsilon_{ij}$$

Giving to Parents vs. Strangers

	Gender-Biased Respondents				Gender-Neutral Respondents			
Parent x Male = 1	-14.95*** (4.467)	-14.94*** (4.828)	-14.95*** (4.837)	-14.91*** (4.853)	-6.208 (5.622)	-4.481 (6.012)	-9.284 (6.084)	-9.178 (6.103)
Parent = 1	30.62*** (2.604)	30.57*** (2.746)	30.59*** (2.740)	30.59*** (2.741)	27.04*** (3.398)	26.48*** (3.650)	28.55*** (4.001)	28.51*** (4.015)
Male = 1	10.72*** (3.295)	10.91*** (3.524)	11.17*** (3.748)	10.78*** (3.694)	-2.781 (4.358)	-0.804 (3.948)	-2.127 (4.336)	-1.243 (5.034)
Price < 1	12.47*** (2.619)	12.32*** (2.790)	12.89*** (2.842)	12.88*** (2.844)	16.66*** (2.604)	16.34*** (2.569)	15.75*** (2.749)	15.75*** (2.748)
Price > 1	-10.99*** (2.395)	-10.77*** (2.501)	-11.10*** (2.567)	-11.11*** (2.573)	-13.36*** (2.737)	-13.76*** (2.891)	-14.38*** (3.287)	-14.39*** (3.292)
Mother is Recipient	-8.019** (3.645)	-8.466** (3.301)	-9.903*** (3.421)	-12.29*** (3.438)	3.263 (3.966)	2.824 (4.114)	3.317 (4.496)	4.109 (4.099)
Rural Hukou Age 3		-1.695 (3.294)	-1.694 (3.720)	0.500 (3.400)		-6.036 (3.930)	-5.474 (4.432)	-4.612 (4.681)
Only Child = 1			-3.491 (3.971)	0.0367 (4.488)			-14.74** (6.700)	-12.37* (6.967)
OCP Fine Paid = 1			0.532 (3.816)	1.398 (4.017)			-32.08*** (6.276)	-29.75*** (6.943)
Share Parents Pay for Schooling				-0.119*** (0.0368)				0.0321 (0.0593)
Observations	1,716	1,606	1,562	1,562	1,540	1,408	1,232	1,232

Summary of Results and Policy Implications

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.
- Men without son preference give parents more than men with son preference do.
- Our findings underscore the importance of addressing the underlying reasons for son preference (e.g., education and employment opportunities for women, agricultural mechanization).

Summary of Results and Policy Implications

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.
- Men without son preference give parents more than men with son preference do.
- Our findings underscore the importance of addressing the underlying reasons for son preference (e.g., education and employment opportunities for women, agricultural mechanization).

Summary of Results and Policy Implications

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.
- Men without son preference give parents more than men with son preference do.
- Our findings underscore the importance of addressing the underlying reasons for son preference (e.g., education and employment opportunities for women, agricultural mechanization).

Summary of Results and Policy Implications

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.
- Men without son preference give parents more than men with son preference do.
- Our findings underscore the importance of addressing the underlying reasons for son preference (e.g., education and employment opportunities for women, agricultural mechanization).

Summary of Results and Policy Implications

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.
- Men without son preference give parents more than men with son preference do.
- Our findings underscore the importance of addressing the underlying reasons for son preference (e.g., education and employment opportunities for women, agricultural mechanization).

Summary of Results and Policy Implications

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.
- Men without son preference give parents more than men with son preference do.
- Our findings underscore the importance of addressing the underlying reasons for son preference (e.g., education and employment opportunities for women, agricultural mechanization).

Summary of Results and Policy Implications

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.
- Men without son preference give parents more than men with son preference do.
- Our findings underscore the importance of addressing the underlying reasons for son preference (e.g., education and employment opportunities for women, agricultural mechanization).

Summary of Results and Policy Implications

- Everyone gives more to parents than strangers.
- Among those with son preference, men give parents less than women do.
- Among those without son preference, men and women give similarly to parents.
- Men without son preference give parents more than men with son preference do.
- Our findings underscore the importance of addressing the underlying reasons for son preference (e.g., education and employment opportunities for women, agricultural mechanization).