

Demographic Constraint and Family Structure in Traditional Chinese Lineages, ca. 1200-1900

Liu Ts'ui-jung*

This article was originally published in Stevan Harrell ed., *Chinese Historical Microdemography* (Berkeley and Los Angeles: University of California Press, 1995), Chapter 5, pp. 121-140. (With Chinese characters added and footnotes rearranged in this text.)

INTRODUCTION

This chapter attempts to deal with the question of the relationship between family structure and demographic rates in traditional Chinese lineages. Four lineage genealogies were chosen to provide data for discussion in this paper: the Wujin Zhou 武進周 in Jiangsu, the Yihuang Huang 宜黃黃 in Jiangxi, the Wuchang Xu 武昌徐 in Hubei, and the Shaoyang Li 邵陽李 in Hunan. (The last two are also analyzed in chapter 4). Here as elsewhere. The most important criterion for choosing a genealogy for historical demographic analysis is the completeness of its recorded vital dates, and these four genealogies all fulfill this basic requirement. The data used for this paper are not the records of the entire population enumerated in the genealogy but are only a portion containing ten generations in a single patrimonial line, including all male descendants of an ancestor who stands at the genealogical apex of this particular segment. Five such patrimonial lines were selected from these four genealogies – two from the Yihuang Huang, one from the first through tenth generations and another from the fourteenth to the twenty-third, and one line each from each of the other three lineages. These five lines were selected because they contained the most complete records of the vital dates of their members.

As mentioned by Harrell and Pullum in chapter 6,¹ there is no way to discover from the genealogical data whether the families in question actually formed any particular type of households. But because the record of vital dates is reasonably complete, we can investigate the problem of family structure by carefully scrutinizing all vital dates in order to find out whether some complex form of family would have existed if the family did not divide before the death of the eldest generation male. Although this assumption about family division may not have actually held in all cases, ethnographic studies have pointed out that family division often “occurred

¹ Stevan Harrell and Thomas W. Pullum, “Marriage, Mortality, and the development cycle in three Xiaoshan Lineages,” in Stevan Harrell (ed.), *Chinese Historical Microdemography* (Berkeley and Los Angeles: University of California Press, 1995), pp. 141-162.

when one or both parents were still alive but well-advanced in years.”² Genealogies occasionally mention the event of family partition. For example, in a biography of the wife (née Li 李, 1789-1857) of Huang Juezi 黃爵滋 (1793-1853), the most eminent member of the Yihuang Huang lineage and an important official involved in the Opium War, it was mentioned that she took charge of dividing the family property among five sons in 1855.³ The timing of this family division fits the description cited above from Cohen’s ethnographic analysis. Thus the assumption of no partition until the death of the eldest generation male, along with actual vital dates as recorded in the genealogies, allows us to investigate the issue of family structure with Chinese genealogies.

For different forms of the Chinese family, scholars sometimes use different terms. According to Wolf, a stem family is “a family that contains two or more basic [conjugal] units linked by filial ties,” and a grand family is “a family that contains a minimum of three units, two of which are in the same generation and descended from a third.”⁴ In usage, Wolf’s “stem family” is identical with other scholars’ usage of that term, and his “grand/frèrèches” family is equivalent to what others have called a “joint family”.⁵ In this paper, stem family is used consistently, while joint and grand are used interchangeably.

In this chapter, my aim is to discover whether the demographic regime of the lineage in question would have supported various forms of extended families, particularly three- and four-generation stem and joint families. As the genealogies do not provide this sort of information directly, the best we can do is to examine whether it would have been possible to form or maintain households of these types, had the people chosen to do so. Nevertheless, this examination is a potentially valuable contribution to the debate about the prevalence of extended families in traditional Chinese communities.⁶

FAMILY STRUCTURE

Statistics related to the family structure of the five patrimonial lines under study here are presented in Table 1. There are altogether 808 men recorded in the five lineages; among them 104 belong to the Zhou, 119 to the Huang (1), 277 to the Huang (2), 192 to the Xu, and 116 to the Li.

² Myron Cohen, *House United, House Divided: The Chinese Family in Taiwan* (New York: Columbia University Press, 1976), p. 74.

³ Biography in the Huang genealogy, pt. 2, p. 40.

⁴ Arthur P. Wolf, “Chinese Family Size: A Myth Revitalized”, in Hsieh Jih-chang and Chuang Ying-chang (eds.), *The Chinese Family and Its Ritual Behavior* (Taipei: Academia Sinica, 1985), p. 32.

⁵ Myron Cohen, *House United, House Divided*, p. 61.

⁶ See Arthur P. Wolf, “Chinese Family Size: A Myth Revitalized”.

Table 1 Summary of Family Possibilities in the Five Lineages

Gen.	No. Males ^a	No. Males					No. Family Types			No. Males	
		Died Young	Un-married ^b	Moved Away	Re-married	Married No Heir	2-G F	3-G F	4-G F	3-G F	4-G F
Zhou											
51-60	104[15]										
51-19	83[15]	12	4	4	7	15	63			48	7
	% of Total ^c	(14.5)	(4.8)	(4.8)	(8.4)	(18.1)	(75.9)				
	% of 2-G F ^d				(11.1)	(23.8)					
51-58	59[11]						45	17			
	% of Total							(28.8)		(57.8)	
	% of 2-G F							(37.8)			
51-57	40[6]						30		2		
	% of Total								(5.0)		(8.4)
	% of 2-G F								(6.7)		
Huang (1)											
1-10	119[14]										
1-9	79[10]	0	2	0	8	17	77			55	42
	% of Total ^c	(0)	(2.5)	(0)	(10.1)	(21.5)	(97.5)				
	% of 2-G F ^d				(10.4)	(22.1)					
1-8	53[3]						50	20			
	% of Total							(38.5)		(69.6)	
	% of 2-G F							(40.0)			
1-7	30[1]						29		7		
	% of Total								(23.3)		(53.2)
	% of 2-G F								(24.1)		
Huang (2)											
14-23	277[104]										
14-22	237[64]	75	37	5	26	26	107			113	32
	% of Total ^c	(31.6)	(15.6)	(2.1)	(11.0)	(11.0)	(46.8)				
	% of 2-G F ^d				(24.3)	(24.3)					
14-20	142[39]						65	22			
	% of Total							(15.5)		(47.7)	
	% of 2-G F							(33.8)			
14-19	98[25]						46		3		(13.5)
	% of Total								(3.1)		
	% of 2-G F								(6.5)		
Xu											
10-19	192[6]										
10-18	153[3]	4	33	0	18	28	116			114	32
	% of Total ^c	(1.8)	(21.6)	(0)	(11.8)	(18.3)	(75.8)				
	% of 2-G F ^d				(15.5)	(24.1)					
10-17	108[3]						87	25			
	% of Total							(23.1)		(74.5)	
	% of 2-G F							(28.7)			
10-16	75						59		4		
	% of Total								(5.3)		(20.9)
	% of 2-G F								(6.8)		

Table 1 (continued)

Gen.	No. Males ^a	No. Males					No. Family Types			No. Males	
		Died Young	Un-married ^b	Moved Away	Re-married	Married No Heir	2-G F	3-G F	4-G F	3-G F	4-G F
Li											
10-19	116[13]										
10-18	110[13]	2	41	10	0	9	52			59	24
	% of Total ^c	(1.8)	(37.3)	(9.1)	(0)	(8.2)	(51.8)				
	% of 2-G F ^d					(17.3)					
10-17	88[9]						50	15			
	% of Total							(17)			
	% of 2-G F							(30)			
10-16	63[7]						36		3		
	% of Total								(4.8)		(20.7)
	% of 2-G F								(8.3)		
Total											
All	808[142]										
9 g.	662[105]	93	117	19	59	95	415			389	137
	% of Total ^c	(14)	(17.7)	(2.9)	(8.9)	(14.4)	(62.7)				
	% of 2-G F ^d				(14.2)	(22.9)					
7-8 g.	449[65]						297	99			
	% of Total							(22.0)		(58.8)	
	% of 2-G F							(33.3)			
6-7 g.	306[39]						200		19		
	% of Total								(6.2)		(20.7)
	% of 2-G F								(9.5)		

^a Numbers in brackets are number of males with birth years unknown.

^b In Xu and Li lineages, this figure includes some men whose marital status is uncertain in the records.

^c Percentage of number of males in generations concerned.

^d Percent calculated using number of males with two-generation families as the denominator.

If every married man formed a conjugal family (2-G F), then the number of conjugal families formed by the first nine generations of men in the five cases can be tabulated as shown in Table 1.⁷ Starting with one family in each case, the total number of 2-G F formed was 63 in the Zhou patrimonial line, 77 in the Huang (1), 107 in the Huang (2), 116 in the Xu, and 52 in the Li. Altogether, then, there were 415 married men who, according to the assumption of this model, formed conjugal families. They accounted for 62.7% of the 662 recorded males in the first nine generations.

In each lineage, there were some men who died young or unmarried or moved out of the lineage. Sons who died young were apparently not recorded systematically in all the genealogies, as the number and percentage varied greatly among the five cases. It is notable that Huang (2) genealogy recorded seventy-five sons who died

⁷ Numbers in the tenth generation of each case are not included, as the records of this generation are not as complete as those of the first nine generations.

young in the nine generations, accounting for 31.6% of the total number of males. The number of unmarried men also varied among the five cases, with the percentage ranging from 2.5 to 37.3%. Except for the cases of Zhou and the Huang (1), in which the numbers of unmarried men recorded were small, the numbers recorded were quite large, most of the men having died unmarried simply because they died young. As for emigrants, there were not many recorded. But it is noteworthy that in the case of Shaoyang Li, there were ten men who moved, and of these eight belonged to the same generation (G15) and comprised one-third of all males in that generation.⁸ With a total of nine generations in each case, there were altogether ninety-three men who died young (14.0%), ninety-seven who died unmarried (14.7%), and nineteen who emigrated (2.9%). As these events occurred, mainly in later generations, they obviously checked the pace of population growth to some extent.

Table 1 also lists the numbers of married men who were heirless and the numbers who remarried. These numbers are again varied. When the percentages are calculated against the total numbers of married men (i.e., the number of 2-G F in Table 1), the remarried men accounted for 0 to 24.3,⁹ and the heirless for 17.3% to 24.3%. Altogether, there were fifty-nine men (or 14.2%) who remarried at least once and ninety-five men (or 22.9%) who had sons but eventually became heirless. It should be noted that when the percentages are calculated against all males in the generations concerned, then the percentages of both remarried and heirless are reduced. Altogether, the remarried men counted for 8.9% and the heirless for 14.4%.

Here it may be mentioned by passing that a family might overcome its fate of hairlessness by means of adoption. In the five genealogies, incidents of adoption are identified but in counting the number of males in a family, adoptive relations are not taken into consideration, in order to simplify the analysis. This simplification, of course, is not at all satisfactory, for in reality an heir can be adopted. However, since the timing of adoption in these cases was not at all clear, to take into consideration would make the counting more difficult. Moreover, some adoptive relations might have been arranged just for the sake of ancestor worship, so a son could be adopted in this way by a number of families while remaining a member of his natural father's

⁸ For details of migration in Shaoyang Li lineage, see Liu Ts'ui-jung, "Ming-Qing renkou zhi zengzhi yu qianyi 明清人口之增殖與遷移 (Growth and migration of the population in the Ming-Qing period)", in Hsu Cho-yun, Mao Han-kuang, and Liu Ts'ui-jung (eds.), *Zhongguo shehui jingji shi yantao hui lunwenji 中國社會經濟史研討會論文集* (Papers from the seminar on Chinese social and economic history), (Taipei; Center for Chinese Studies, 1983), pp. 311-313; for a detailed study of migration in Fujian lineages, see Wang Lianmao, "Migration in Two Minnan Lineages in the Ming and Qing periods", in Stevan Harrell (ed), *Chinese Historical Microdemography*, chapter 8, pp. 183-213..

⁹ It just happened that this particular patrimonial line of the Li lineage did not have any remarried man. The Li lineage, as recorded in its genealogy, did not have a very high percentage of remarried men altogether (7.3% remarried once, 6.8% remarried twice). See Liu Ts'ui-jung, "Ming-Qing renkou zhi zengzhi yu qianyi", p. 288.

descent line (examples of such relationships exist in the Xu patrimonial line).¹⁰

Furthermore, if the family did not divide before the death of the eldest generation male, then some of the conjugal families could become three – or four-generation families. In seeking three-generation families, observation of family units ended with the seventh generation in the Huang (2) because there were no records of birth dates in this lineage's tenth generation, and observation ended with the eighth generation in the other four cases. In this way, it was found that there were altogether 99 three-generation families, 33.3% of the 297 conjugal families in the generations tabulated. The 99 men who lived to be grandfathers comprised 22% of the 449 males in the generations concerned.

As for four-generation families, observations ended one generation earlier than for the three-generation families. There were altogether 19 four-generation families in the five patrimonial lines, or 9.5% of the 200 conjugal families in the generations concerned. In other words, 19 (9.5%) of the men who became fathers eventually became great-grandfathers of at least one great-grandson. These 19 great-grandfathers comprised 6.2 % of the 306 males of the generations concerned.

In terms of individual members, the number who would have lived in three-generation families before the deaths of their grandfathers was 48 (57.8%) of the Zhou, 55 (69.6%) of the Huang (1), 113 (47.7%) of the Huang (2), 114 (74.5%) of the Xu, and 59 (53.6%) of the Li, for a total of 389 men (58.8%) in the five patrimonial lines studied. As for those who would have lived in four-generation families, there were altogether 137 men (20.7%). These calculations are performed by counting each man only once, regardless of his position in individual families. It should be noted here that the percentage of men who would have lived in three-generation families is somewhat smaller than that calculated for three Xiaoshan lineages by Harrell and Pullum in chapter 6 and also smaller than the 70-80% Wolf found lived in grand and frèrèches families in Taiwan between 1906 and 1946.¹¹ However, the percentage of the Huang (1) and Xu cases were rather close to the proportions found for the Xiaoshan and Taiwan cases. It should be added, of course, that this comparison is only approximate, since the data bases and methods of calculation are different.

In short, Table 1 demonstrates the fact of variation in family structure among

¹⁰ The adoption of a son by one or more families while he remained a member of his own father's line was known as *jiantiao* 兼祧. For other examples of this practice, see Liu Ts'ui-jung, "Yi Guangddong Xiangshan Xu shi wei li shilun Zhongguo jiazhezhi chengzhang ji qi gongneng zhi fahui 以廣東香山徐氏為例試論中國家族之成長及其功能之發揮 (A discourse on growth and function of the Chinese lineage: An example of the Xu lineage in Xiangshan, Guangdong), in *Proceedings of the Third Conference on Asian Clan Genealogies* (Taipei: United Daily News Cultural Foundation, 1987), pp. 411-412.

¹¹ Arthur P. Wolf, "Chinese Family Size: A myth revitalized," p. 35.

lineages. The next task is to find out how demographic characteristics relate to this variation.

DEMOGRAPHIC CHARACTERISTICS AND FAMILY STRUCTURE

Demographic characteristics of fertility and mortality will affect family structure through family size and through the longevity of family members. From genealogies, the size of family can only be estimated from the number of male family members, since daughters are everywhere unrecorded or under-recorded. Within these limitations, the simple method of calculating an average number of sons per family will serve our purpose. As for the longevity of family members, only those males whose age at death was known will be taken into consideration in calculating average age at death. Let us first look at the size of the family.

If the size of family is defined as the number of males in a two-generation conjugal family, the average for our five cases are as follows: 2.63 for the Zhou lineage, 2.53 for the Huang (1), 3.58 for the Huang (2), 2.65 for the Xu, and 3.21 for the Li. It is notable that in all the lineages except for the Huang (1), there are some second-generation males who died young, and when they were excluded, the average size of the conjugal family shrinks. The average number of males in a conjugal family for all five cases is 2.93 when those who died young are included and 2.68 when they are excluded.

The differences in family size due primarily to fertility. The fertility of fathers in the five cases is set out in Table 2. In row (1) of this table, the parities of fathers of the conjugal families are displayed under two conditions: in columns I, sons who died young are included, and in columns II, they are excluded. Parities ranged from 0 to 9. It should be noted that the parity figures obtained under the two conditions differed for all the lineages except for the Huang (1), which did not record sons who died young. The largest difference was observed for the Huang (2), which had the largest recorded proportion of sons who died young, some even with precise vital dates.

Row (2) of Table 2 lists the total number of sons, and row (3) lists the total number of fathers, which is the same as the total number of conjugal families. The average number of sons per father, listed in row 4, shows that variation in fertility among these five cases. Fertility can also be estimated using only the men who had at least one son (i.e., excluded those listed as $n=0$ in row 1). The results are listed in row 5. Both sets of estimates for the Huang (2) show that the figures obtained excluding sons who died young are only about 68% of those including them ($1.75/2.58$). As the record of sons who died young seems rather complete in the case of Huang (2), this example gives us some idea about under-recording of male births in the genealogies

that did not record early deaths as completely as this one. In terms of family members, however, those sons who died young did not exist for very long and were probably neglected by most compilers of genealogies.

Table 2: Summary of Conjugal Families, by Lineage

	Zhou		Huang (1)		Huang (2)	
	I	II	I	II	I	II
(1)Parity						
n = 0	11	15	17	17	16	26
n = 1	21	21	28	28	21	25
n = 2	16	15	14	14	17	28
n = 3	11	9	10	10	23	15
n = 4	3	2	8	8	15	6
n = 5	1	1	-	-	6	5
n = 6	-	-	-	-	5	2
n = 7	-	-	-	-	1	0
n = 8	-	-	-	-	2	0
n = 9	-	-	-	-	1	0
(2)Total No. of sons	103	91	118	118	276	187
(3)Total No. of fathers	63	63	77	77	107	107
(4)Average No. of sons per father = (2)/(3)	1.63	1.44	1.53	1.53	2.58	1.75
(5)No. of reproductive Fathers = (3) - (n=0)	52	48	60	60	91	81
(6)Average No. of sons per Reproductive father= (2)/(5)	1.98	1.75	1.97	1.97	3.03	2.05
(7)% heirless =(n=0)/(3)x100	17.46	23.81	22.08	22.08	14.95	24.30
(8)Total No. wives	86		86		144	
(9)Average No. of wives per husband	1.37		1.11		1.35	
(10)No. of concubines	0		0		4	

	Xu		Li	
	I	II	I	II
(1)Parity				
n = 0	28	28	8	9
n = 1	31	33	8	8
n = 2	31	30	19	18
n = 3	15	14	7	7
n = 4	6	6	7	7
n = 5	3	3	1	1
n = 6	1	1	1	1
n = 7	0	1	0	0
n = 8	1	0	0	0
n = 9	-	-	1	1
(2)Total No. of sons	191	187	115	113
(3)Total No. of fathers	116	116	52	52
(4)Average No. of sons per father = (2)/(3)	1.65	1.61	2.21	2.17
(5)No. of reproductive Fathers = (3) - (n=0)	88	88	44	43
(6)Average No. of sons per Reproductive father= (2)/(5)	2.17	2.13	2.61	2.57
(7)% heirless =(n=0)/(3)x100	24.14	24.14	15.38	17.31
(8)Total No. wives	138		52	
(9)Average No. of wives per husband	1.19		1.00	
(10)No. of concubines	2		0	

Notes: I: Sons who died young included.

II: Sons who died young excluded.

Table 2 also lists the percentage of heirless fathers in row (7). It can be seen that for the Huang (1) and Xu, estimates of the two sets are the same, whereas in the other cases, estimates are quite different. Again, in the case of Huang (2), the percentages calculated including sons who died young and those calculated excluding them are much different from each other, 14.95% and 24.30%, respectively. In reality, the second, larger percentage of heirless seems closer to the actual situation, as fathers who had only one or two sons, both of whom died young, would eventually become heirless. At any rate, the percentages of heirless fathers were quite high in all five cases, ranging from 15 to 24%. These percentages are quite similar to those presented in Telford's chapter 3 and my chapter 4 in this volume.

Moreover, from the total number of wives, shown in row (8), and the average number of wives per husband, shown in row (9), it seems that remarriage itself did not affect the complexity of family structure to any drastic extent, for most remarriages involved only successive wives not concubines. As a matter of fact, the number of concubines, listed in row 10, demonstrated that the chance of two consorts coexisting at the same time was not great. In the five cases concerned, remarriage and concubinage did not affect the number of female family member to a significant extent. Families with larger number of concubines must have been quite exceptional. A preliminary investigation of over twenty-three southern genealogies found that the percentage of concubines ranged from 0 to 17.8%, with an average of 3.7%.¹² Another study of three lineages in north China found that a Wang lineage in Wangping 宛平, Hebei, had an exceptionally high percentage of concubines, accounting for 35% of all consorts, whereas the other two lineages had only 4.3% and 5.5%.¹³ This information suggests that for most of the families, remarriage and concubinage did not add to the complexity of family structure to any great extent. It was not possible to address the question of the effect of the longevity of mothers on family structure and division in this paper.

If the five cases are taken together, the parity progression ratios and distribution of family sizes in terms of male births can be calculated based on the distribution of fathers with different patrimonial lines, as shown in Table 3. Again, two sets of estimates are calculated here, including and excluding sons who died young. These two sets of estimates show that for every 1,000 fathers, there were 193-229 who had no sons, 262-277 who had one son, 234-253 who had two sons, and so on. From parity 0 to parity 2, the second set of estimates was larger than the first one, whereas from parity 3 upward, the first set of estimate was larger. This change can be

¹² Liu Ts'ui-jung, "Ming-Qing renkou zhi zengzhi yu qianyi", p. 288.

¹³ Liu Ts'ui-jung, "Hebei san jiazu de renkuo tezeng 河北三家族的人口特徵 (Demographic characteristics of three lineages in Hebei)", *Proceedings of the Fourth Conference on Asian Clan Genealogies* (Taipei: United Daily News Cultural Foundation, 1989), p. 78.

explained easily, as parities go down when sons who died young are excluded. At any rate, these two sets of estimates may be compared with those listed in Tables 4 and 5 in chapter 4, to which they are rather similar in order of magnitude.

Table 3: Summary of Conjugal Families, All Lineages

Parity	No. of fathers		Parity Progression Ratio (a_x)		Distribution of family size (No. sons per 1000 fathers)	
	I	II	I	II	I	II
n = 0	80	95	0.807	0.771	193	229
n = 1	109	115	0.675	0.641	262	277
n = 2	97	105	0.571	0.488	234	253
n = 3	66	55	0.488	0.450	159	132
n = 4	39	29	0.381	0.356	94	70
n = 5	11	10	0.542	0.375	27	25
n = 6	7	4	0.462	0.333	17	9
n = 7	1	1	0.833	0.500	2	3
n = 8	3	0	0.400	1.000	7	0
n = 9	2	1	0.000	0.000	5	2
Total No. of Sons	803	696				
Total No. of Fathers	415	415				
Total No. of Wives	506					

Notes: I: Sons who died young included.

II: Sons who died young excluded.

Since only those fathers who had at least two sons would have a chance to become head of a grand or joint family, about 50% of the conjugal families under investigation would have a chance to become grand families if the fathers of these families lived long enough to see their sons marry and have at least one descendant. In other words, assuming that fertility remains the same, a 50% chance for conjugal families to become grand families would seem the theoretical maximum, since mortality has not yet been taken into consideration.

If we assume that the families did not divide before the death of grandfathers, it is possible to find three-generation families in the records. The statistics for these families are summarized in Table 4. Counted by generation, the Zhou had eight generations in which three-generation families were formed, both the Huang (1) and Huang (2) has seven such generations, the Xu had five, and the Li has six. In other words, not every generation contained males who could have become grandfathers and formed three-generation families. In total, the Zhou formed seventeen three-generation families, the Huang (1) twenty, the Huang (2) twenty-two, the Xu twenty-five, and the Li fifteen. These numbers comprised 37.8%, 40.0%, 33.8%,

28.7%, and 30.0%, respectively, of the conjugal families in the five cases listed in Table 1. Altogether, there were ninety-nine possible three-generation families, of which thirty-three were stem families and sixty-six were grand families.

Table 4: Three-Generation Families

Lineage	Time	No. Family Type ^a		No. of Males in Families					Ave. Overlap Years	Age at D of G1	Age at B of G3
		S	G	G1	G2	G3	Tot.	Ave.			
Zhou	1588-1786	6	11	17	34	38	89	5.24	12.41	67.47	27.65
Huang(1)	1299-1510	10	10	20	40	58	118	5.90	22.55	76.95	25.00
Huang(2)	1677-1887	6 ^b	16 ^c	22	58	77	157	7.14	15.86	67.86	23.27
Xu	1757-1915	6 ^d	19 ^e	25	63	84	172	6.88	13.92	67.88	25.72
Li	1771-1902	5 ^f	10	15	32	55	102	6.80	15.07	67.40	21.60
Total		33	66	99	227	312	638	6.44	16.01	67.70	24.74

Notes:

^a S stands for stem family and G for grand family.

^b One family observed in 1842 was counted fifteen years before the death of G1, when the only member of G2 was still alive.

^c One family observed in 1852 was counted three years before the death of G1, when one member of G2 was still alive.

^d One family observed in 1888 was counted one year before the death of G1; in the next year, neither G1 nor G2 was still alive.

^e One family observed in 1810, another in 1897, and another in 1912 were counted, respectively, five, ten, and seven years before the death of G1.

^f One family observed in 1893 was counted two years before the death of G1, when the only member of G3 was still alive.

The total number of male members in these three-generation families ranged from three to eighteen. The average was 5.24 for the Zhou, 5.90 for the Huang (1), 7.14 for the Huang (2), 6.88 for the Xu, and 6.80 for the Li; the average number of male family members for all five cases was 6.44. These numbers were taken from the time period starting a few years before the death of G1 and ending with the death of G1, when the three generations were all alive at the same time.

Table 4 also lists the maximum number of years that three-generation families could have existed, i.e., the maximum overlap in the life times of the first and the third generations. As calculated from the charts, the years of overlap varied greatly, ranging from only one to as many as forty-two years. The average for the five cases were 12.41 for the Zhou, 22.55 for the Huang (1), 15.86 for the Huang (2), 13.92 for the Xu, and 15.07 for the Li. The average overlap year for all five cases was 16.01, i.e., the average numbers of years that grandfathers in these lineages populations could enjoyed having at least one grandson in their families.

The chance of being born as a grandson may be calculated from the numbers of sons (G2 in Table 4) and grandsons (G3 in the same table). Since our observation started with a certain generation in each case, sons in the second generation had no

chance of being grandsons and should be excluded. Moreover, in the case of Huang (2), forty sons belonging to the twenty-third and the last generation should also be excluded, because they had no birth years recorded and were not included in the tabulations of three-generation families. These exclusions leave 755 sons of whom 312 (41%) were born as grandsons. In other words, the chance of being born as a grandson was about two in five.

A related question concerns how early a man had to become the father of a son in order to expect to enjoy the privilege of being a grandfather in a three-generation family. This age may be investigated through a calculation of age at birth of the first son. Listed in Table 5 are the results of calculations for the conjugal families in the five cases. The frequency distribution is arranged by five-year age groups. The estimates show that the mean age at birth of a first son in the five cases was 30.49 for the Zhou, 30.33 for the Huang (1), 28.91 for the Huang (2), 27.58 for the Xu, and 27.77 for the Li. The overall average was 28.85. The overall median age at birth of first son was somewhat lower than the mean; for the five cases together, the median was 26.60.

Table 5: Fathers' Ages at Birth of the First Son in Conjugal Families

Age	Midpoint	Zhou	Huang(1)	Huang(2)	Xu	Li	Total
15-19	17	1	10	2	6	4	23
20-24	22	10	10	28	23	12	83
25-29	27	10	13	13	28	8	72
30-34	32	11	4	12	19	9	55
35-39	37	6	1	5	5	3	20
40-44	42	3	4	2	4	1	14
45-49	47	1	4	1	1	2	9
50-54	52	0	2	4	0	0	6
55-59	57	1	1	1	0	0	3
60-64	62	0	2	0	0	0	2
Total		43	51	68	86	39	287
Mean Age		30.49	30.33	28.91	27.58	27.77	28.85
Median Age		29.25	26.12	25.54	26.50	26.19	26.60

As for those who formed three-generation families, their ages at the birth of their first male descendants are shown in Table 6. The results show that the mean age of G1 at the birth of G2 was 26.71 for the Zhou, 29.25 for the Huang (1), 24.95 for the Huang (2), 27.80 for the Xu, and 28.00 for the LI. These estimates reveal that the Zhou and Huang (2) males who formed three-generation families had sons at a slightly lower age than the average man, whereas the Huang (1), Xu and Li males were very close to the average. Between the second and the third generations, however, it is quite clear that those who formed three-generation families had a much

lower age at birth of the first male in G3 than did the average man in the whole population. The average of the five cases shows that the mean interval between the first and second generations was 27.34 years, and that between the second and third generations was 25.34; the median age difference between the first and second generations was 25.62 and that between the second and third generations was 23.64. This contrasts with an average age of fathers at the birth of their sons in the whole population of 28.85. In other words, those who became grandfathers were those who had at least one son who, in turn, was able to have a son at a younger-than-average age.

Table 6: Fathers' Ages at Birth of the First Sin in Three-generation Families

Age	Midpoint	G1 Fathers				
		Zhou	Huang(1)	Huang(2)	Xu	Li
15-19	17	1	3	2	1	1
20-24	22	6	5	10	7	5
25-29	27	4	5	6	7	4
30-34	32	5	2	3 ^a	8	3
35-39	37	1	0	1	1	0
40-44	42	0	3	0	1	1
45-49	47	0	1	0	0	1
50-54	52	0	1	0	0	0
Total		17	20	22	25	15
Mean Age		26.71	29.25	24.95	27.80	28.00
Median Age		25.88	26.00	23.50	26.86	25.88
Overall Mean Age		27.34				
Overall Median Age		25.62				

Age	Midpoint	G2 Fathers				
		Zhou	Huang(1)	Huang(2)	Xu	Li
15-19	17	1	7	2	2	2
20-24	22	7	2	11	9	7
25-29	27	4	8	7	8	4
30-34	32	2	1	2 ^a	5	1
35-39	37	2	0	0	1	1
40-44	42	1	0	0	0	0
45-49	47	0	1	0	0	0
50-54	52	0	1	0	0	0
Total		17	20	22	25	15
Mean Age		27.00	25.50	24.05	25.80	24.33
Median Age		24.63	24.63	23.09	22.94	22.93
Overall Mean Age		25.34				
Overall Median Age		23.64				

^a One in each case was the second son, as the first son died young with birth year unknown.

The inverse of the previous question is also important: how long did a man need to live in order to become a grandfather in a three-generation family? In answering this question, the average age at death was calculated for all men and for those who became grandfathers. Listed in Table 7 are the distributions of ages at death for all men recorded in the five cases. The numbers of men with known age at death are first distributed by five-year age groups. It should be noted that there are quite a number of men whose ages at death are not known and that the proportions vary among the five cases. Although it is possible to estimate ages at death for men whose death dates are not actually given,¹⁴ it should suffice here to compute the age at which a man became a grandfather using only those whose ages at death are known.

Table 7: Age at Death, All Men in the Five Cases

Age	Mid-point	Zhou	Huang (1)	Huang (2)	Xu	Li	Total	
							Including Huang(1)	Excluding Huang(1)
0-4	2	0	0	5	1	0	6	6
5-9	7	0	0	4	2	2	8	8
10-14	12	0	0	2	1	0	3	3
15-19	17	0	0	4	1	0	5	5
20-24	22	3	0	2	6	0	11	11
25-29	27	2	0	8	7	2	19	19
30-34	32	3	3	7	11	1	25	22
35-39	37	4	0	8	8	2	22	22
40-44	42	9	1	5	11	3	29	28
45-49	47	5	1	12	6	1	25	24
50-54	52	7	4	10	14	9	44	40
55-59	57	10	1	12	8	4	35	34
60-64	62	12	7	6	7	7	39	32
65-69	67	6	16	8	6	5	41	25
70-74	72	7	14	9	6	8	41	30
75-79	77	4	3	3	3	3	16	13
80+	85	1	17	4	4	6	32	15
No. of age known		73	67	109	102	53	404	336
No. of age unknown		25	48	61	90	64	288	240
Total		98	115	170	192	117	692	576
% Age known		75	58	64	53	45	58	58
No. of age known from 15 to 80+		73	68	98	98	51	387	320
Mean age at death		54.16	69.25	50.60	48.60	61.08	55.33	52.42

¹⁴ Stevan Harrell, "The rich get children: Segmentation, stratification, and population in three Chekiang lineages", in Susan B. Hanley and Arthur P. Wolf (eds.), *Family and Population in East Asian History* (Stanford: Stanford University Press, 1985), pp. 84-85.

From Table 7 we can thus see that the mean age at death varied among the five cases. These estimates are derived using only the distribution of deaths from ages fifteen to eighty and above. The estimates for the Xu and Li males are comparable to those listed in Table 6 in chapter 4, as they belong to the same lineages. The estimates for Zhou males are somewhat higher than those listed for the Jiangdu Zhu in chapter 4. The estimate for the Huang (1) is exceptionally high compared with those for the Huang (2) and the other cases. It should be noted that the Huang (1) males belonged to the first ten generations of this lineage and that their active period was around 1200-1500. As mentioned in Chapter 4, the observed deaths for the early years of a lineage tended to be at higher ages, and the difference between the Huang (1) and Huang (2) provides a good example to support this argument. Excluding the Huang (1), the mean age at death of adult males was 50.65.

Listed in Table 8 are the distributions and estimates of mean ages at death for those men who became grandfathers in three-generation families. Except for the Huang (1), all the lineages had mean ages at death about sixty-seven or sixty-eight. With all observations of the five cases combined, the average age at death for these grandfathers was 69.55. These findings suggest that for an average man, who died around age fifty, the chances of becoming a grandfather were not very great.

Table 8: Ages at Death, Grandfathers in Three-Generation Families

Age	Midpoint	Zhou	Huang(1)	Huang(2)	Xu	Li	Total ^a
45-49	47	0	0	1	1	0	2
50-54	52	0	0	3	1	3	7
55-59	57	3	0	2	4	1	10
60-64	62	5	1	1	4	2	12
65-69	67	2	2	4	4	2	12
70-74	72	3	6	5	5	3	16
75-79	77	3	3	3	2	2	10
80+	85	1	8	3	4	2	10
Total		17	20	22	25	15	79
Mean age at death		67.47	76.95	67.86	67.88	67.40	67.70

^a Not including Huang (1); for an average including all observation see Table 4.

In addition to three-generation families, it is also feasible to find some possible four-generation families, again assuming that the family did not divide before the fourth generation was born. Listed in Table 9 are the nineteen four-generation families. Of these nineteen, two belonged to the Zhou, seven to the Huang (1), three to the Huang (2), four to the Xu, and three to the Li. It is reasonable that we find more four-generation families in the Huang (1) lineage, since its mean age at death was much higher than the other cases. Of these nineteen four-generation families, three were stem only, and the other sixteen were possibly grand.

Table 9: Four-Generation Families

Lineage	Gen. No.	Time	Type ^a	No. of Males in Families					No. of Overlap Years	Age at Death of G1	G3's Age at Birth of G4
				G1	G2	G3	G4	Total			
Zhou	51	1588	S	1	1	2	1	5	2	79	19
	52	1617	G	1	1	2	1	5	2	84	29
Huang (1)	2	1305	G	1	2	3	3	9	13	91	18
	2	1299	S	1	1	2	1	4	6	81	16
	5	1392	G	1	3	8	1	13	8	69	16
	6	1425	G	1	4	7	3	15	9	83	32
	6	1432	G	1	3	4	1	9	14	87	23
	7	1455	G	1	2	1	2	6	8	71	26
	7	1447	G	1	3	3	3	10	10	79	21
Huang (2)	14	1677	G	1	3	4	2	10	5	77	23
	15	1703	G	1	1	6	1	9	9	82	22
	19 ^b	1852	G	1	1	4	7	13	9	87	21
Xu	15 ^c	1888	G	1	1	6	5	13	18	84	19
	16	1858	S	1	1	1	1	4	3	83	20
	16	1907	G	1	1	2	1	5	7	84	19
	16	1907	G	1	1	8	2	12	4	86	19
Li	12	1777	G	1	1	9	2	13	4	82	23
	13	1797	G	1	5	12	1	19	8	75	22
	13	1801	G	1	3	9	2	15	3	69	19
Total			3S 16G	19	38	92	40	189	142	1538	412
Average								9.95	7.47	80.95	21.68

^a S stands for stem family and G for grand family.

^b This family was counted three years before the death of G1, when one of G2 was still alive; at the death of G1 the family contained only three generations without G2.

^c This family was counted one year before the death of G1.

The results of simple calculations show that four-generation families had a larger average number of male family members than did three-generation families (9.95 vs. 6.44), that they existed for a shorter period (7.47 vs. 16.01 years), that they had a higher average at death for the first generation (80.95 vs. 69.55), and that they had a lower father's age at birth for the last generation (21.68 vs. 25.34). The chance of being born as a great-grandson in a four-generation family was much smaller than the chance of being born as a grandson (one in twenty vs. two in five). In short, the chance for an average man in these traditional Chinese lineages to become a great-grandfather was indeed very small. And we should add that there were no five-generation families formed in the five cases investigated. Although the possibility of the formation of such a family cannot be ruled out, these families must have been very rare indeed and have remained nothing but an ideal in Ming-Qing China.

In sum, the above investigation demonstrates that the predominant family type in these lineages was the simple two-generation conjugal family, for even when the

family was not divided sheer demographic conditions would not allow three- or four-generation families to become prevalent. It should also be noted, however, that most of the possible three- and four-generation families were potentially of the grand type, indicating the complexity of family structure.

CONCLUDING REMARKS

In the five cases investigated here, there were 808 males, among whom 662 belonged to the first nine generations of these patrimonial lines. Among these 662 males, 93 (14.0%) died young; another 97 (14.7%) died unmarried and 20 (3.0%) had uncertain marital status; and 19 (2.9%) moved out of their lineages. There were 238 males (35.9%) who did not form conjugal families and 415 men (62.7%) who married and became fathers. Furthermore, the 662 males in the first nine generations, 389 (58.9%) could have lived in three-generation families and 137 (20.7%) in four-generation families.

There were altogether 99 men who may have become grandfathers in three-generation families. In terms of family units, the 99 three-generation families counted for one-third of the 287 conjugal families in the first seven or eight generations of those patrimonial lines. In other words, 99 men (one-third) who were heads of conjugal families also became heads of three-generation families. As individuals, these 99 grandfathers were 22% of the 449 males in the generations concerned. In addition, there were 19 men who became great-grandfathers and thus may have formed four-generation families. As individuals, these 19 great-grandfathers counted for 6.2% of the 306 males in the generations concerned. This calculation may also be done the other way around. From the standpoint of sons under observation, 312 (41%) of 755 in the generations concerned were born while their grandfather were still alive and thus may have lived in three-generation families; 40 (5%) of 741 were born while their great-grandfathers were still alive and thus may have been great-grandsons in four-generation families.

No matter how the calculations are done, these results seem to suggest that for a traditional Chinese male, the chance of becoming a grandfather was about one in five, of being born as a grandson, about two in five, and of becoming a great-grandfather or being born as a great-grandson both very small, about one in twenty.

The average size of a conjugal family was 2.93 males, of a three-generation family 6.44 males, and of a four-generation family 9.95 males. An average man became father of a son when he was 28.95 years old. In those families that had the possibility of forming a three-generation family, the first descendant in the third generation was born, on the average, 3.51 years earlier than the average first son of

the entire population, and in those that may have formed a four-generation family, a fourth-generation descendant was born an average 7.17 years earlier. The average age at death of an adult male was 52.42, that of a man who became a grandfather was 69.55, and that of a man who became a great-grandfather was 80.95. Five-generation families were very rare and, even if formed, would not have lasted very long, for the overlap of generations in even a four-generation family was on the average less than eight years.

Although as stem family with a depth of three or four generations is quite complex, the structural form of the three- and four-generation families in this study was very likely dominated by the grand type, indicating complex intrafamilial relations between quite a large number of individual members. It is perhaps in this respect that the traditional Chinese family could be described as being complex. However, the findings in this paper seem to suggest that because of demographic constraints, a synchronic sample of traditional Chinese families would not have been dominated by three- and four-generation households, and certainly not by five-generation ones. The ideal type of five generations living together (*wushi tongtang* 五世同堂) remained just an ideal for the Chinese people, and demographic constraints made it difficult for them to realize that ideal.