Sex Preference for Children in a Meifu Li Community in Hainan, China

William Lavely
Jianke Li
Jianghong Li

CCPR-009-01

April 2001

California Center for Population Research
On-Line Working Paper Series

Sex Preference for Children in a Meifu Li Community in Hainan, China

William Lavely
University of Washington

Jianke Li
Research Center for Rural Economy
Ministry of Agriculture, PRC

Jianghong Li
University of Western Australia

We gratefully acknowledge the support of the Henry Luce Foundation and the assistance of the Chinese Association for Rural Community Development. Yong Cai ably assisted the project. William M. Mason and John R. Shepherd provided valuable advice. An earlier version was presented at the Annual Meeting of the Association for Asian Studies, San Diego, CA, March 9-12, 2000. Address correspondence to: William Lavely, Department of Sociology, University of Washington, Seattle, WA 98195. E-mail: lavely@u.washington.edu

Introduction

Sex preferences for children, and their behavioral manifestations, take form within a complex lattice of social and environmental contexts. Perhaps the most sweeping generalization of social context is the *family system*, describing a cluster of interrelated family processes. It has been argued, for example, that son preference of the Han Chinese is inherent in the patrilineal joint family system common across much of Asia (Skinner 1997). It would follow then, that the family systems of many southern Chinese minority nationalities, which share characteristics that accord a higher value to females, would produce a pattern of sex preference divergent from the Han pattern. Evidence from an isolated Li community in Hainan Island is generally consistent with this proposition: juvenile sex ratios are roughly even and sex ratios at higher parities appear biased in favor of females. However, even within this small community, sex preferences are not homogeneous. The observed disparities suggest that sex preferences are sensitive to local variations in economic context.

Although the Li are unique to Hainan, a great island in the South China Sea, they are related to numerous fragmented minority communities indigenous to China's southern frontier and the nations of Southeast Asia. The Li language is thought to belong to the Kam-Tai language stock, suggesting kinship with the Zhuang, the Buyi, and the Dong, among others (Australian Academy 1988; Ramsey 1987:233-234). The Kam-Tai peoples, the descendants of the Yue tribes that inhabited the Yangzi Valley in ancient times, are connected by common cultural characteristics including material culture,

language, and social structure.[1] Common forces have also shaped their social histories. Centuries of Han domination and decades of Chinese Communist rule have transformed their economies and incorporated them to varying degrees into the broader economy and provincial and national cultures.

In Hainan this transformation began quite early. The Li have been a minority in Hainan since ancient times. By 1412 (Ming Yongle 10) Hainan's population numbered around 340,000, of which the Li represented 12 percent (Sa and Yang 1995:145). By 1950, Hainan's population was 2.3 million, of which the Li were about 15 percent (Situ 1994:80). Recent estimates put Hainan's population at approximately 7.33 million, of which the Li number approximately 1.17 million (Hainan 1999 II:131). Rapid population growth since 1950 has been accompanied by large-scale migrations, ecological change, and the foundation of a modern agricultural and urban economy. Under these assimilative forces the Li have taken on many trappings of contemporary Han culture. Most reside in concrete dwellings, work in wage occupations or produce for the market, receive education in a national system of schools, and speak a Chinese dialect, at least as a second language. There remain few Li communities that are not "modern" in these limited senses of the word.

We intentionally sought a Li community that is the rear guard of change, in a highland township as yet weakly incorporated into provincial and national cultures. For a baseline understanding of Li culture we rely on numerous sources, both Chinese and western.[2] Of these, ethnographic studies done by Chinese researchers in the 1950s and early 1960s are

among the most valuable. These were part of a burst of scholarly activity in the early years of the People's Republic to describe and classify minority nationalities. Political conditions did not permit publication of these studies until fairly recently.[3] There have been remarkably few new studies of the Li in recent decades, and virtually no demographic studies.[4]

Sex Preference for Children

Sex preferences are important because of their behavioral manifestations. Parental sex bias may be manifested at the family level as differential care or investment in sons and daughters, in sex-selective abortion, or in sex-selective infanticide. Sex-biased behaviors are often detectable in populations as abnormal sex ratios or in differential survival rates of children. Theories of sex preferences, virtually without exception, emphasize the role of context or milieu in shaping preferences. Beyond this simple generality there is less agreement.

Although many taxonomic distinctions are possible, the most fundamental division in the theories of sex preference and sex preferential behavior is between "rational choice" and Darwinian theories, broadly conceived. Rational choice assumptions are implicit in a broad spectrum of economic, sociological and demographic research on reproductive behavior. This approach views parents as self-interested actors whose reproductive behaviors maximize utility, where utility may be understood as material as well as "psychic" welfare.[5] Parental preferences are thus guided by their perceptions of the costs and benefits of children, on a balance sheet that includes such familiar items as labor

power, earnings, old age support, marriage expenses, prospective affinal ties, and companionship.

The Darwinian approach, current in anthropology, goes under a number of guises, including sociobiology, human behavioral ecology, and evolutionary ecology (Sieff 1990; Cronk 1991; Voland 1998). In this view, reproductive behavior is strategically geared to enhance reproductive success, that is, to increase the likelihood that parental genes will be passed on to future generations. Parental preferences are thus guided by the reproductive potential of their offspring, with an accounting of costs and benefits of children in reproductive terms. This accounting is complex. Indirect pathways to reproductive success include roles that promote the reproduction of relatives ("kin selection"); and because an investment in one offspring diverts investment from others, parents may eliminate some offspring in order to enhance overall reproductive success. Although we adopt the rational choice approach, we draw freely on the rich empirical literature and insights of the evolutionary ecologists.

Sex preference is clearly related to kinship systems. Dyson and Moore (1983) invoke kinship systems to explain the high sex ratios and low female survivorship in north India relative to south. In north India, patrilineal kinship and exogamic marriage rules produce a society organized around agnatic descent groups, whereas in south India, endogamous marriage customs produce a society more organized by affinal ties. These structures determine the cost of marriage, the autonomy of females, and economic value of women. Skinner (1997) generalizes these insights to argue that sex preferences are embedded in

the logic of family systems, by which he means the norms of marriage, succession, and transmission of property, as well as the normative roles associated with family statuses and relationships, and customary bias by gender and relative age that pertain to the system as a whole (1997:54). To take two polar examples, male and female offspring are valued very differently in the context of the patrilineal joint family system of the Han Chinese as compared to that of the matrilineal joint family system of the Tonga of southern Zambia (Clark et al. 1995).

Within systems of kinship, sex preferences may vary by social position. Numerous empirical studies an association between high parental status and male bias and high sex ratios. In stratified societies with intense male competition for mates, polygyny and marital exchange generally favor success (reproductive and otherwise) for males at the top of the social hierarchy but impose heavy financial costs, in the form of dowries, on elite families seeking to marry off a daughter. This explains female infanticide among high caste Indians under the British Raj as well as among traditional Chinese elites (Dickeman 1979). In a study of nineteenth century German villages, Voland et al. (1997) find higher survivorship of female infants relative to male in the lower classes than in the upper. Bereczkei and Dunbar (1997) find lower sex ratios of children, and greater investment in daughters among a gypsy underclass than in the general Hungarian population, which they attribute to the better marriage prospects for gypsy girls. Although these studies generally take the Darwinian view, their findings are fully consistent with rational choice explanations.[6]

Sex preference is also contingent on the position of a child within the family. The value of a particular child depends on the number and sex of its siblings, as has been demonstrated by a long line of research (Pakrasi and Halder 1971; Smith 1977; Das Gupta 1987; Muhuri and Preston 1991). Even when parents prefer balance in the number of male and female children, they may prefer a first child of a certain sex, or alternation of sex (Skinner 1993). Skinner (1997) makes the overlooked point that even in family systems with a net preference for males, families desire daughters. His analysis of the frequency of possible configurations of surviving offspring sets in Taiwan, Korea, and India demonstrates that configurations that include both boys and girls occurred more often than they would if childbirth and survival were random with respect to sex, while certain configurations (for example, all girls) occurred far less frequently than expected. Skinner proposes that the normatively ideal offspring set can be inferred from the observed distribution of offspring sets in the population. In patrilineal joint family systems, Skinner concludes that a son is more highly valued by his parents the fewer his brothers, and the earlier born he is in the brother series. A daughter is more highly valued by her parents the fewer her brothers, and the earlier born she is in the sister series (1997:66-75).

Up to now we have spoken of sex preference and sex preferential behavior as if they were synonymous, which they are not. Although we anticipate a correlation between preference as a psychic state and behavioral manifestations of the preference, their relationship is mediated by intervening variables. One mediator is intensity of the preference. In patrilineal systems, for example, parents might consider it imperative to

have at least one son, while having a daughter or a second son is desirable but not essential. On the other hand, sex preferential behavior may be constrained by external factors. While there may be no constraints on subtle discrimination between a son and a daughter, for example, in length of breastfeeding, there could be quite powerful sanctions against infanticide or abandonment. It is also important to note that the desire for some minimum offspring set may be obtained without any sex preferential behavior at all, as long as fertility is unconstrained. Suppose there was a population in which the minimum preference were for one son. If every couple could have five children, only three percent of couples would naturally be at risk of an all girl family.[7] In such a population, only the unlucky three percent would be at risk of intervening to obtain the desired male.

These qualifications are relevant to the case of China, where sex ratios have risen sharply in recent decades. It is extremely doubtful that the rise is due to a change in underlying preferences; what have changed are the mediating circumstances. First, fertility has fallen sharply since the mid-1970s under pressure from the national birth planning program. Many more parents who desire a certain minimum offspring set cannot achieve it without some intervention. Parental manipulation of the sex of offspring has thus emerged in China just as it has emerged in other Asian populations with very low fertility (Gu and Roy 1995). At the same time, the external constraints on sex selection have been eased by the rising availability of the technology for pre-natal sex determination. Sex preferences, latent in the population, have thus found expression in rising sex ratios.

The family systems of the southern Chinese minorities, at least as they existed in some indefinite past, had several stylized features that are conducive to female status and value:[8] (1) Descent was relatively unimportant. Communal property and simple productive tools, implied by shifting cultivation (swidden, as contrasted with sedentary agriculture), meant that inheritance was not crucial. Paternity was thus not a critical issue, as suggested by the sexual freedom accorded unmarried girls. Lacking a writing system, there were only oral genealogies, and the ancestors thus more easily went undifferentiated or unremembered. (2) Affinal ties were relatively strong, enhanced by uxorilocal and delayed transfer marriage, and local endogamy. Living near her parents, a daughter could continue to be useful to them after marriage, as well as seek the protection of kinsmen. (3) Freer mate choice and premarital sexual experience was conducive to post-marital autonomy for women and stronger affective ties between spouses. (4) Marriage had less significance for the family, which promoted female autonomy. A communal property regime separated marriage from property considerations. Simple marriages with limited gift exchanges were at once a cause and effect of this fact. Divorce and remarriage of both men and women were accepted. (5) The sexual division of labor accorded women a crucial economic role. In swidden agriculture, women plant and cultivate the fields and do day-to-day work. This ruled out footbinding or other immobilizing customs.

The Li, at least in times gone by, did fit this stylized pattern, but their economy and family system have evolved and have undoubtedly converged to various degrees with Han family norms. In contemporary China, moreover, birth planning is an important

factor differentiating the contexts of Han and minority families. National minorities in China, and southern minorities in particular, are under more relaxed constraints from the birth planning program. This means that a mere comparison of sex ratios between Han and minority could be a misleading indicator of underlying preferences. Regarding the sex preferences of the Li, there is little information to go on. According to the 1990 Chinese Census, the juvenile sex ratio (age 0-14) of the population of Hainan was 113 males per 100 females, compared to 107 for the Li Nationality alone (China 1993: Tables 1-6; 3-5). The sex ratio of birth (SRB) of Han Chinese in Hainan was 117, compared with 107 for the Li (Hainan 1992:Table 03-13). These differences are suggestive, but due to the differential constraints imposed by the birth planning program, insufficient to conclude that there are group differences in preferences.

The Meifu Li

Ethnographers distinguish five major linguistic communities (or "tribes") among the Li, all residing in Hainan's southern tier. The *Run* (or *Bendi*), the *Li* (or *Jiamao*) and the *Qi* reside in the central and southeast, while the *Ha* (or *Xiao*) and *Meifu* reside in southwest. The Meifu is the smallest group, numbering approximately 30,000 or 4 percent of the Li (Australian Academy 1988:C-14). For the Li communities on the west side of the island, informative ethnographic work is included in the *Hainandao Lizu shehui diaocha* [Social investigation of the Hainan Island Li] (*HLSD* 1992) and in reports of surveys conducted by Japanese researchers in the early 1940s (Odaka 1950; Okada 1966).[9]

Although the Meifu and Ha Li live in close proximity and may have common origins, they have been distinct for centuries.[10] In legend, the Meifu are descended from a common patrilineal ancestor, a Han named *Fu*, explaining the surname borne by most, but not all, Meifu.[11] The *Fu* surname serves to identify Meifu to the Han world, but among themselves the Meifu use totemic names identifying their patriline. Although the Meifu are historically considered more sinicized than other Li tribes, due in particular to their adoption of sedentary agriculture, the contemporary Meifu are less sinicized than the Ha. The Ha Li tend to live at lower elevations, and like the Han, have elaborate wedding ceremonies, dowries, and graves. The Meifu have simple weddings with virtually no exchange of gifts and utilize common lineage graves.

Li culture no longer corresponds to the ideal type described above, if it ever did. Still, we hoped to find a traditional community that had been relatively undisturbed in recent decades. Such places are rare. Fifty years ago southern Hainan was covered by a tropical forest that supported hunting and shifting cultivation for small settlements of people, much as can be observed in northern Thailand or (to a lesser extent) southern Yunnan today. In the decades since 1950 the forest gave way to state rubber plantations, sedentary agriculture, and scrub vegetation. Forest cover declined from 25 percent of Hainan's area in 1956 to less than 10 percent in 1980 (Situ 1994: 78), the result of both plantation conversion and intensified swidden cultivation.[12] Hand in hand with this transformation, the government has pursued a long-term policy of population consolidation and resettlement that continues to the present.

The field site. Our fieldwork took place in the summer of 1998. We selected an area in the western highlands that we will call "Meifu Township." The township has had sporadic links to the outside, but with the construction of a new road, is now fully open to the coastal plain. There is once-daily bus service to the county town, and twice-daily service to the county seat of a neighboring county. The trip from the coast to the township takes about two hours, much of it over a dirt track in mountainous terrain. Township density is low, approximately 60 persons per square kilometer. The township encompasses part of a major new reservoir, the rising waters of which was the occasion for resettlements in the five years prior to our fieldwork. The township consists of ten administrative villages made up of 21 hamlets, nearly all Meifu (the exceptions are Miao). The Meifu hamlets form a natural endogamous community.[13] We conducted open-ended interviews in three hamlets through interpreters recruited from among teachers in a minority school. With the advice and consent of township officials we eventually selected one hamlet for more intensive study, which we refer to here as "Tianfu Hamlet." Tianfu is at once a hamlet, that is, a unitary settlement, and an administrative village. We were able to record household register data for six of the hamlets including Tianfu, together comprising four administrative villages. Since our data are limited to these six hamlets, and Tianfu is distinctive in many respects, we will with some frequency contrast Tianfu to the other five Meifu hamlets for which we have household data.

Through the interpreters we conducted a questionnaire interview with every ever-married woman in Tianfu Hamlet, a total of 115 respondents age 19 to 75. Although a few

elderly women were unable to participate due to ill health, we were able to interview at least one person from every household. As this was our first lengthy encounter with Li society, we were uncertain of the feasibility of doing a demographic survey in such a population. Unlike the Han Chinese, the Li lack written records and are unconcerned about astrological signs or dates of birth. The official Household Register, compiled by a literate hamlet official, contains a plausible account of birth dates, although it too may be notional.[14] Respondents were vague about their own ages and those of their children, making it impossible to elicit a standard event history.

Economy and Living Standards. With 104 households, Tianfu is the second largest of the six hamlets for which we have household data. It has been in the same location for as long as anyone can remember. Except for the absence of a bamboo stockade and for the presence of a masonry schoolhouse, it outwardly resembles early descriptions of Li settlements. It is a compact hamlet of thatched huts and granaries on stilts, set next to a broad irrigated field. Older women wear traditional black skirts and vests, woven on back looms; younger women wear modern dress, but don traditional dress for ritual occasions. Males have not worn the traditional breechcloths since the early 1960s.

The township hamlets practice a mixture of agricultural modes, reflecting hamlet endowment of land. Table 1 shows the percent distribution of cultivated area by type of cultivation for Meifu Township, the five hamlets, and Tianfu hamlet. Approximately half of all cultivation in the township is shifting cultivation or swidden (*shanlan*).[15] Meifu township swiddens are cultivated at four-year intervals and produce maize, sorghum,

barley, beans, sweet potatoes, and cane, among other crops. The next most important category is irrigated field, devoted to paddy rice, followed by dry field (that is, dependent on rain), used for upland rice and maize, among other crops. Some hamlets are also ringed by garden plantations (*tingyuan*)—family plots mainly devoted mainly to coconut and betel nut palms, which fall into the "other" category. The five hamlets account for about a third of the cultivated area of the township and are fairly closely match the township distribution of cultivation types.

Table 1 here

By contrast, Tianfu has a distinctive mix of agricultural modes. It has the largest endowment of irrigated land of any village, and the largest endowment of garden plantation. Tianfu is further distinguished by cultivating the least area of swidden of any village in the township. Because irrigated fields are productive compared to swiddens, Tianfu has an enviable economic position within the local community. By some accounts this advantage in land goes back at least several decades,[16] and has been reinforced by its fortunate location away from the lowlands behind the dam, which has allowed it to avoid relocation. According to township officials, approximately 40 percent of the township population had been relocated in the past decade. Not all relocations were dam-related; some remote villages were moved closer to the road. Movers were in principle compensated with some irrigated field, but it is likely that the re-settlements involved a next loss of productive land, forcing the relocated to expand swidden cultivation.

The land tenure system governing irrigated fields has undergone major change in the past half century. A "rich peasant" household once owned most of Tianfu's fields. The agrarian revolution of the 1950s redistributed land and then placed it under collective management. Under the economic reforms of the 1980s, the fields were re-allocated to household contractors on a per capita basis.[17] Over the same period, the swidden tenure system has undergone only nominal changes. Hill land traditionally belonged to the community and was available to any family with the labor power to cultivate it—a convention common to shifting cultivators across southeast Asia (Pelzer1945:18). This traditional practice persisted through the collective era and is essentially unchanged under the current "responsibility system."[18] The local government encourages swidden exploitation under the slogan "whoever exploits receives the benefits" (*shei kaifa, shei shouyi*).

Even given Tianfu's favorable position, living standards are simple. Only three percent of respondents (ever-married women in the hamlet) reported themselves as able to read, compared with about 20 percent of their husbands (Table 2). Only seven percent of respondents speak a language other than Meifu, and about 50 percent of their husbands (Table 3). Comparison of the older and younger age cohorts suggests some educational progress for males but none for females. Only 23 percent of households have any modern goods, and this includes minor items such as a watch or a thermos (Table 4). But there is exposure to the outside world: half of respondents have been to the county town, and 46 percent have watched a video in the past month. An entrepreneur in the hamlet has a VCR that he powers with an electric generator. The main fare is *gongfu* movies.

There is no television in the hamlet, an item that the hamlet cannot afford, but which is ardently sought by hamlet leaders. Notably, only 21 percent of respondents reported that they eat meat more than once a year (Table 4).[19] We did not investigate nutrition, but we observed the stature of the villagers to be very small. Although these socioeconomic indicators refer to Tianfu Hamlet specifically, they are unlikely to understate the living standards of neighboring hamlets.

Tables 2 through 4 here

Family and marriage. Meifu marriage is in the main virilocal. In Tianfu 84 percent of respondents reported that they resided with husband's parents after marriage. According to the household registers, 63 percent of the households in the five Meifu hamlets are nuclear, compared with 57 percent in Tianfu. We are unable to assess the frequency of uxorilocal marriage because the household registers do not distinguish in-laws. The non-nuclear households are virtually all stem households in which a parent or parents are co-resident with a son who heads the household. Headship in the younger generation is notable, since in most Han rural areas, titular headship generally remains in the older generation. Household composition, it should be noted, can be a very misleading indicator of family relations. Even after division of housing units, households can and do hold property in common and work land jointly. Our survey found that labor sharing between households (usually between agnates) was common.[20] Inheritance is partible, with property divided among the male offspring.[21]

The hamlet is highly endogamous. Families are divided among four patrilines, some of which extend to neighboring hamlets. Table 5 shows that 63 percent of our respondents were born in Tianfu, that is, they married into their natal hamlet. Another 32 percent came from one of the nine local hamlets, and only 5 percent came from elsewhere. These figures if anything understate the level of hamlet endogamy, since among women who originated in Tianfu, half report that their own mother *and* mother-in-law were also born there. Comparison of younger and older age cohorts suggests that this pattern is not of recent origin. Marriage within the same patriline is avoided, but given the small pool of eligibles, the probability of marriage with blood kin is high.[22] Within the endogamous community of the Meifu hamlets, Tianfu Hamlet is highly self-contained. Brides from outside come mainly from neighboring hamlets less than two kilometers away. The result is a hamlet with a multiplicity of relations between households that often share blood ties, affinal ties, and neighborly relations across several generations.

Table 5 here

The Meifu have simpler weddings than the Ha Li, but there is still some exchange of goods. In Tianfu, over 70 percent of respondents reported that they brought some goods with them when they married, while gifts from the groom's family were involved in only 20 percent of marriages, and the reported amounts are small. However, according to our informants, substantial gifts (a buffalo or a hunting rifle) may go from the husband's to the wife's family after marriage. Such an exchange would be very significant in the austere economic context of the Meifu hamlets.

What personifies the Li in the popular Chinese imagination is the custom of permitting adolescent girls to live in a separate hut (*longgui* or *liaofang* in Mandarin, *prunkau* in Meifu) where they may entertain male visitors. This is but one variant of customs, common among the peoples of south China and Southeast Asia, that accord considerable sexual freedom to unmarried women.[23] We found the *longgui* to be fairly common in the Meifu hamlets, but with some change of significance. As once practiced, daughters had virtually unlimited freedom; a pregnancy would be the signal for marriage arrangements. But parents now supervise their daughters' activities fairly closely. The *longgui* is sited close to the main house, not out in the bush, and parents attempt to manage who visits. Mothers fear that their daughter will get pregnant, and the exigencies of the birth planning program add to their anxiety, since a pregnancy will require a trip to the county town for an abortion. *Longgui* appeared to be quite common in the neighboring Meifu hamlets, but relatively uncommon in Tianfu, where only 10 percent of our respondents reported having ever resided in one.

It is fascinating to observe that in family matters the arrow of change seems to point toward a Confucian past. In Tianfu, parental involvement in mate choice was higher for younger cohorts than it was for older cohorts of women. Almost two thirds of respondents 40 and over reported that they chose their own husband compared with only a third of respondents under 40. Mate selection thus appears to be converging with traditional Chinese norms.[24]

Despite their general lack of education, Meifu women enjoy better relative status than do Han women in similar economic circumstances. A number of factors, including mating customs, the sexual division of labor, and hamlet endogamy are conducive to women's status. For example, day-to-day cultivation of the swidden fields is women's work, which takes women out into the fields on their own. Women may come and go without obtaining husband's permission. Husband-wife relations appear agreeably companionate; wives report a high degree of marital satisfaction. Divorce is available to women, and there appears to be no stigma on a divorced woman returning to her natal family to live. Meifu women answered questions easily and were not at all cowed by exotic visitors. In short, Meifu women were composed and confident in comparison to the reticent Han women that can still be encountered in China's rural interior.

Demography and birth planning. Since the late 1980s state birth planning policies have specified a local limit of three children per couple. Pre-marital pregnancies are generally terminated by abortion, which is sought in the county town. Table 6 contains some simple fertility indicators. Reported completed fertility is low. Even the cohort over age 50, which reported little experience with contraception, averaged only 4.5 children. A number of factors could account for this. Average age at first birth, at 23.5 years, is moderately high, while lengthy breastfeeding durations, averaging over 3.5 years, contribute to the long interval between births. Respondents reported that it is customary to breastfeed until the next child is born. The reported average age at weaning for the last surviving child was 42 months, which is quite long in comparative perspective. The linkage between nutritional balance and fertility is controversial (Wood 1994:522-529),

but in this austere context perhaps deserves investigation. Reported fertility is also reduced by the under-report of births that die in infancy, an issue to which we shall return below.

Table 6 here

Although we have no direct measures of birth planning program performance, we are able to construct a plausible indicator of the enforcement of the program. Under the assumption that in the absence of birth planning limits most couples would have at least four children, we can measure birth planning performance by constructing the ratio of families who go on to have a fourth child among those who have had three. The lower the progression ratio, the closer a population is to the policy mandate. This measure indicates that birth planning has been more effective in Tianfu than in the neighboring hamlets. Only 11 percent of "at risk" couples in Tianfu progressed to a fourth child since 1990, compared to 30 percent in the Five Hamlets (see Table 7). This is consistent Tianfu's elite position in the area, since Chinese birth planning enforcement is highly correlated with socioeconomic status, individually and collectively.

Table 7 here

A rough estimate of mortality conditions in the hamlet is possible using mothers' reports of children ever born and surviving. Table 8a shows the numbers born and surviving by sex of child and age cohort of mother. There is little difference in survival by sex of

child, so the results are combined for the two sexes in the last columns. For respondents under 40, approximately 81 percent of children born are alive, and for respondents over 40, approximately 73 percent are alive.

Table 8a here

The survival rate of children ever born is analogous to the *lx* column of a life table. This suggests the use of model life tables to estimate life expectancy. Because respondents reported on children over a broad range of ages, we attempt to bracket the median age using a range of estimates. These ages are then used to select the closest Model West level implied by *lx*, shown in Table 8b. The separate estimates implied by the two age cohorts of respondents are reasonably consistent. Given the imprecision of our information, it would not do to put too fine a point on it. The mothers' reports suggest that life expectancy at birth for both males and females is around 50 years. This is quite low for rural China but consistent with the marginal economic conditions observed. Obviously the estimate requires a number of perilous assumptions. The method also exaggerates survival by assuming that the birth reports omit no dead children, which is unlikely to be the case for either sex. This is a particular problem for females, an issue to which we shall return below.

Table 8b here

Sex Preference of the Meifu

Although child sex ratios can be influenced by many factors, they can provide a fair indicator of sex preference. In a population closed to migration, higher ratios may be indicative of lower female survival or differential underreporting of females, both manifestations of sex-biased behavior. Table 9 provides the juvenile sex ratio (ages 0-14) for several relevant populations. The ratio is high in rural Hainan at 115 males per 100 females, and still high in the rural area of our study county, both mainly Han populations. But in Meifu Township, mainly inhabited by Meifu Li and Miao, it is low, around 100, and this is also the ratio found in the neighboring Meifu hamlets eight years after the census, as compiled from the official household registers. Tianfu Hamlet, with a sex ratio of 124, does not fit the local pattern.[25] However, these measurements are based on small numbers. As may be observed from the wide confidence intervals, there is no statistically significant difference between the sex ratio of Tianfu and its neighbors. This is a familiar problem in the study of the sex ratio of small populations. We address it by considering additional evidence that would indicate a pattern of sex preference.

Table 9 here

Another way to detect sex preference is to observe the sex ratio contingent on the position in the offspring set. Reproductive decision-making is a process that unfolds over the course of childbearing, with decisions contingent on the number and sex of previous surviving children. Invisible within individual families, the results of the process are detectable in a population of children for which the number and sex of elder siblings is

known. Ideally, one would use methods, such as retrospective birth histories, which permit the reconstruction of the surviving offspring set at the time of a birth event. Birth histories were not available, but household register data can be used to assign a "sibset position" to each juvenile in the population.[26]

Sex ratios of juveniles by sibset position are shown in Table 10, separately for the five Meifu hamlets and for Tianfu. We have limited the comparison to sibsets of three or more to eliminate incomplete sibsets, but the pattern is the same regardless. In the absence of sex-selective behavior we would expect an approximately even ratio regardless of sibset position. Instead we see clear evidence of sex-selection, although of different patterns for the two populations. In both populations we observe a male bias for the first child. For the case of a child with one or more elder sisters but no brothers, there is clear selection of males, but this bias appears stronger for Tianfu Hamlet than for the neighboring hamlets. For the case of a child with one or more elder brothers but no sister, there appears to be a mild female bias in both populations. The starkest contrast between the two populations is in the case of a child with one or more elder brothers and sisters: the five hamlets select females, whereas Tianfu Hamlet selects males.

Table 10 here

We estimated a model of the log odds that a child is a male, taking sibset and hamlet as predictors. An additive specification, implying that Tianfu and the five hamlets differ by the level of sex ratios but not by sibset-specific pattern, fails to capture the sibset-specific

patterns observed in Table 10. These patterns are captured by the inclusion of interaction terms representing children in Tianfu with at least one sister, and children in Tianfu with at least one sister and one brother, so that the model includes sibset position, hamlet, and two interaction terms, as follows:

$$\text{logit}(male) = \beta_0 + \sum_{k=2}^{k} \beta_k (sibset)_{ijk} + \chi(Tian) + \delta(sis * Tian) + \gamma(sis\ \&bro * Tian)$$

The result yields only weak support for the hypothesis that Tianfu differs from the other hamlets. The coefficient of the last interaction term, representing the contrast between Tianfu and the five hamlets for children with at least one brother and one sister, is significant at the .1 level.[27]

Other data confirm that son preference is strong in Tianfu. We administered the psychometrically-based Coombs Preference Scale (Coombs et al. 1975; Coombs 1977; Coombs and Sun 1978). Respondents are presented with sets of hypothetical three-child families, each with different sex configurations. Respondents then go down a tree of responses, contingent on the previous responses.[28] The distribution of responses is shown in Table 11. The first response option is three girls (0B3G, or 0 boys and 3 girls). No one selected that option. The responses are quite homogeneous: 84 percent of respondents selected 2 boys and 1 girl as first choice, and fully 93 percent selected paths from the male-biased end of the scale. In fact, this pattern of sex preferences is typical of the patrilineal joint family system (Skinner 1997).

Table 11 here

The sex ratio of births reported by respondents provides another independent piece of evidence on sex preference in Tianfu. A ratio of 105 to 106 males per 100 females is the biological norm for most human populations. Substantial deviations from the norm must be due to sex-selective fetal mortality, selective underreporting of births, or random variation. The mothers' reports in Tianfu imply an SRB of 124 (see data in Table 8a). For respondents under age 40 the ratio is 120, for those 40 and over 130. Because these ratios are based on only 357 births, the deviation from normal could of course be due to random variance. But this result cannot be viewed in isolation from the overall pattern of evidence. The elevated sex ratio is consistent with the pattern of sex ratios by sibset position observed in the household register data in Table 10, as it is with pattern of responses to the Coombs scale. It is most likely that female births have gone unreported. The exact mechanism of selection cannot be known, but the missing girls are most likely dead. There was no report of adoption in the hamlet. Had girls been given to families in the locale, their fate would be known to the mother and thus less likely to be omitted from the birth report. Sex-selective abortion is also exceedingly unlikely as an explanation. An elective abortion would be very costly for Tianfu women, and a sex selective abortion even more so.[29]

The most likely means is thus "child control," post-natal intervention that permits selection on the basis of observable characteristics such as sex (Skinner 1997:66-67). Selection appears to occur soon after birth, as once a child is reported as born, its survival chances are the same regardless of sex (see Table 8a). In other words, when a girl is "wanted" her survival chances are as good as her brothers', and this would apply equally

to the missing boys in the five Meifu hamlets. It is possible that an unwanted infant is not considered a birth at all.[30]

To summarize, we anticipated that the Li would have a weaker preference for sons than the Hans. Data from a peripheral Li township are consistent with this expectation. Independent enumerations in 1990 and 1998 reveal balanced juvenile sex ratios. Sex ratios by sibset position imply a pattern of daughter preference in families with one or more children of either sex. However, one hamlet proved exceptional, as indicated by an accretion of evidence. Household registers data show that Tianfu has a high juvenile sex ratio and sibset-specific sex ratios indicating parental manipulation favoring sons. Survey data indicate high son preference as revealed by responses to the Coombs Scale, and a high sex ratio of births. Tianfu appears as an island of son preference in a Li community otherwise characterized by even sex ratios and a penchant for daughters.

Explanations

Because of Tianfu's singular economic position, it would be tempting to view Tianfu as leading the way in a shift from a low intensity to a high intensity agricultural system, with a corresponding social evolution. But Tianfu is not so much a leader as a survivor. By long tradition, the Meifu have practiced both swidden and paddy rice cultivation. Tianfu is a merely lucky place that has been able to retain its endowment of irrigated land. The neighboring hamlets practice a mix of subsistence strategies, but by accident of history, find themselves more dependent on swidden than in earlier times. The cultural sequence may well correspond to this economic regression,

Drawing on the insights of cultural ecology, there are two basic reasons why Tianfu should favor males. The first is that agricultural system is related to the sexual division of labor. Cross-culturally, the intensity and complexity of agriculture correlates with the increasing assignment of tasks to males (Netting 1974:29). Paddy rice cultivation, with its plowing and earthworks, requires a greater reliance on male labor. The second is that irrigated agriculture places an emphasis on property an on capital improvement in property, hence on descent. Setting aside the collective era, rights to field land pertain to families, and may be passed on to male heirs. More sons mean more land and more power in the hands of agnates. Valuable tools and draft animals are essential for paddy rice. These too can be inherited and shared among agnates.

Another possible explanation for male preference in Tianfu is the pattern of stratification in the Meifu community. Although elders speak of an earlier era of rich peasants and landlords, Meifu society was probably never stratified in the manner of agrarian China.[31] Land reform and contemporary land redistributions have further leveled distinctions between households. But as elsewhere in China, controls on mobility and the absence of a market in land have tended to crystallize economic differences between places, creating sharp economic gradients in space at both regional and very local scales. This spatial stratification has important implications for marriage, observable in the Meifu community. Tianfu's superior economic position makes it an attractive destination for women in marriage. Of the women who married into Tianfu, 73 percent reported that it is better than their natal hamlet, and only 6 percent said that their natal hamlet was better

off. Location in the spatial hierarchy is thus a significant characteristic of a prospective husband, an example of "spatial hypergamy" (Lavely 1991). Given their favorable location, Tianfu women also compete to marry a man from their natal hamlet. These incentives may account for the extreme hamlet endogamy.

Ironically, given their simple living standards, the residents of Tianfu are a local elite, sharing some of the concerns of elites in other stratified societies. Competition for Tianfu husbands produces a marriage market squeeze for Tianfu women, plausibly making it more costly to marry off a Tianfu daughter. Some of the forces affecting son preference among elites in hypergynous dowry societies (Dickemann 1979) are thus presumably at work in Tianfu. Because Tianfu's economy is based on land, draft animals and tools, the status of affines can influence family fortunes. A child's choice of mate thus takes on more importance, and parents thus take a more direct interest in it, as has occurred in Tianfu in recent decades.

We are now in a better position to interpret the divergent patterns of sex ratios by sibset position observed in Table 10. Like the Han, the Meifu desire children of both sexes (Skinner 1997:68-72). A son is important for Meifu families because a son is key to maintaining what is essentially a stem family system. In Tianfu, the desire for a son takes on special urgency, reflected in a relatively high degree of parental manipulation in favor sons. This urgency may be due in part to stricter birth planning enforcement in Tianfu. In the other hamlets that are not limited to three births, sonless families may view the birth of daughters with more equanimity because a subsequent birth can supply a son. But

birth planning limits cannot explain the biases of families with one or more children of each sex. In this situation, Tianfu parents tend to intervene to obtain an extra son, while in the other hamlets the intervention is to obtain an extra daughter.

The reasons for this daughter bias go back to our stylized image of the family system of the aboriginal peoples of south China. The Meifu hamlets have few concerns about property. The hillsides are a communal resource exploitable by those who have the labor power, which daughters can supply. Because swidden agriculture does not involve land tenure, draft animals, or costly tools, inheritance is less important, and because it does not involve complex patterns of labor coordination, descent groups are also less important. There is correspondingly less concern with a daughters' sexuality, so the *longgui* continues to thrive. Given their inferior economic position, sons are at a disadvantageous position in the marriage market, and obtaining a bride for a second son may be a considerable expense. In this situation, an extra daughter may offer more potential economic benefits.

References

Australian Academy of the Humanities and the Chinese Academy of Social Sciences. 1988. *Language Atlas of China*. Pacific Linguistics, Series C, No. 102. Hong Kong: Longman Group (Far East) Ltd.

Bereczkei, Tamas, and R.I.M. Dunbar. 1997. Female-biased reproductive strategies in a Hungarian gypsy population. *The Royal Society Proceedings: Biological Sciences* 264,1378:17-22.

Bongaarts, John and Robert G. Potter. 1983. *Fertility, Biology, and Behavior: An Analysis of the Proximate Determinants of Fertility*. New York: Academic Press.

China, Population Census Office under the State Council and Department of Population Statistics, State Statistical Bureau. *Zhongguo 1990 nian renkou pucha ziliao* [Tabulation on the 1990 population census of the People's Republic of China]. Beijing: Zhongguo tongji chubanshe.

Clark, Sam, Elizabeth Colson, James Lee, and Thayer Schudder. 1995. Ten thousand Tonga: A longitudinal anthropological study from southern Zambia, 1956-1991. *Population Studies* 49,1:91-109.

Coale, Ansley J. and Paul Demeny. 1966. *Regional Model Life Tables and Stable Populations*. Princeton: Princeton University Press.

Coombs, Clyde H., Lolagene C. Coombs, and Gary H. McClelland. 1975. Preference scales for number and sex of children. *Population Studies* 29,2: 273-298.

Coombs, Lolagene C. 1977. Preferences for sex of children among U.S. couples. *Family Planning Perspectives* 9,6:259-265.

Coombs, Lolagene C. and Te-hsiung Sun. 1978. Family composition preferences in a developing culture: The case of Taiwan, 1973. *Population Studies* 32,1:43-64.

Cronk, Lee. 1991. Human behavioral ecology. *Annual Review of Anthropology* 20:25-53.

Das Gupta, Monica. 1987. Selective discrimination against female children in rural Punjab, India. *Population and Development Revie*w 13:77-100.

Deng Hanzeng. 1990. Development and conservation in Hainan Island. In Yang Shigao and Jiang Lilong (eds.), *Huanan redai yaredai dili yanjiu* [Studies of south China tropical and semi-tropical geography] (Beijing: Kexue chubanshe), pp. 61-69.

Dickemann, Mildred. 1979. Female infanticide, reproductive strategies, and social stratification: A preliminary model. In Napoleon A. Chagnon and William Irons, eds., *Evolutionary Biology and Human Social Behavior: An Anthropological Perspective* (North Scituate, Massachusetts: Duxbury Press):321-367.

Dyson, Tim and Mick Moore. 1983. On kinship structure, female autonomy, and demographic behavior in India. *Population and Development Review* 9:35-60.

Eberhard, Wolfram. 1968. *The Local Cultures of South and East China*. Leiden. E.J.Brill.

Fu Chen and Su Haiou, eds. 1982. *Lizu minjian gushi ji* Guangzhou: Huacheng chubanshe.

Gu, Baochang and Krishna Roy. 1995. Sex ratio at birth in China, with reference to other areas in East Asia: what we know. *Asia-Pacific Population Journal* 10,3:17-42.

Guangdong Minzu Xueyuan Zhongwenxi, ed. 1983. *Lizu minjian gushi xuan* [Selected folktales of the Li]. Shanghai: Shanghai wenyi chubanshe.

Guangdong Province Editorial Group. 1986. *Lizu Shehui Lishi Diaocha* [Surveys of Li social history]. Beijing: Minzu chubanshe.

Hainan 1992. *Hainan sheng 1990 nian renkou pucha ziliao* [Hainan province 1990 population census data]. China Statistical Publishing House.

Hainan 1999. *Hainan nianjian* [Hainan yearbook]. Two volumes. Haikou: Hainan Nianjianshe.

Henry, B.C.A.M. 1886. *Ling-Nam*. London: S.W. Partridge and Co.

HLSD 1992. *Hainandao Lizu shehui diaocha* [Social investigation of the Hainan Island Li]. Guangxi renmin chubanshe (2 volumes).

Jenks, Albert Ernest. 1905. *The Bontoc Igorot*. Manila: Bureau of Public Printing.

Lavely, William. 1991. Marriage and mobility under rural collectivism. In Patricia Ebrey and Rubie Watson, eds. *Marriage and Inequality in China* (University of California Press):286-312.

Morgan, Lewis H. 1964 [1878]. *Ancient Society.* Cambridge, Massachusetts: The Belknap Press of Harvard University.

Muhuri, Pradip K., and Samuel H. Preston. 1991. Effects of family composition on mortality differentials by sex among children in Matlab, Bangladesh. *Population and Development Review* 17:415-34.

Netting, Nancy S. 1997. The deer turn her head: Ethnic options for the Hainan Li. B*ulletin of Concerned Asian Scholars* 29, 2:3-17.

Netting, Robert McC. 1974. Agrarian ecology. *Annual Review of Anthropology* 3:21-56.

Odaka, Kunio. 1950. *Economic Organization of the Li Tribes of Hainan Island* [translation by Mikiso Hane]. Yale Southeast Asia Studies Translation Series. New Haven: Yale University, Southeast Asia Studies.

Okada, Yuzuru. 1966. Social organization of the Li tribe of Hainan Island. Pp. 115-126 in Paul Halmos (ed.), *Japanese Sociological Studies*. *The Sociological Review* Monograph 10. Keele, Staffordshire: The University of Keele.

Pakrasi, Kanti, and Ajit Halder. 1971. Sex ratios and sex sequences of births in India. *Journal of Biosocial Science* 3:377-87.

Parish, William L. and Martin King Whyte. 1978. *Hamlet and Family in Contemporary China*. Chicago: University of Chicago Press.

Pelzer, K.J. 1945. *Pioneer Settlement in the Asiatic Tropics*. New York: American Geographic Society.

Ramsey, Robert S. 1987. *The Languages of China*. Princeton: Princeton University Press.

Schafer, Edward H. 1970. *Shore of Pearls*. Berkeley: University of California Press.

Sieff, Daniela F. 1990. Explaining biased sex ratios in human populations. *Current Anthropology* 31,1:25-48.

Skinner, G. William. 1993. Conjugal power in Tokugawa Japanese families: A matter of life or death. In *Sex and Gender Hierarchies*. Edited by Barbara D. Miller. New York: Cambridge University Press, pp. 236-70.

_____. 1997. Family systems and demographic processes. In *Anthropological Demography: Toward a New Synthesis*. Edited by David I. Kertzer and Tom Fricke. Chicago: University of Chicago Press, pp. 53-95.

Situ Shangji. 1994. Population, resources, environment, and development in Hainan Island: conflicts and resolution. *Chinese Environment and Development* 4,4:75-88.

Smith, Eric Alden and S. Abigail Smith. 1994. Inuit sex-ratio variation: Population control, ethnographic error, or parental manipulation? *Current Anthropology* 35,5:595-624.

Smith, Thomas C. 1977. *Nakahara: Family Farming and Population in a Japanese Village, 1717-1830*. Stanford: Stanford University Press.

Stockard, Janice E. 1989. *Daughters of the Canton Delta. Marriage Patterns and Economic Strategies in South China, 1860-1930*. Stanford: Stanford University Press.

Stübel, Hans. 1937. *Die Li-Stämme der Insel Hainan*: *Ein Beitrag zur Volkskunde Südchinas*. Berlin: Klinkhardt & Biermann, Verlag, 1937.

Voland, Eckart. 1998. Evolutionary ecology of human reproduction. *Annual Review of Anthropology* 27:347-74.

Voland, Eckart, Robin I.M. Dunbar, Claudia Engel, Peter Stephan. 1997. Population increase and sex-biased parental investment in humans: evidence from 18th and 19th-century Germany. *Current Anthropology* 38,1:129-135.

Wen Mingying. 1989. Lizu yu tongyuzu zhuyuyan de shengdiao duiying [Correspondence of tone between Li language and various languages from the same family]. *Zhongyang Minzu Xueyuan Xuebao* [Journal of the Central Nationalities Institute] 5: 72-77.

Wood, James W. 1994. *Dynamics of Human Reproduction: Biology, Biometry, Demography*. New York: Aldine de Gruyter.

Sa Rula and Yang Tiemei. 1995. Lizu renkou [Li population]. In Yang Kuifu, ed. *Zhongguo shaoshu minzu renkou* [China's minority nationality population]. Beijing: Zhongguo renkou chubanshe.

Trivers, R. L. and D. E. Willard. 1973. Natural selection of parental ability to vary the sex ratio of offspring. *Science* 179:90-92.

Yin Suliao and Su Ruguang. 1989. Lizu funu fuzhuang ji gongyi [The dress and handicraft of Li women]. *Zhongyang Minzu Xueyuan Xuebao* [Journal of the Central Nationalities Institute] 5: inside covers.

Zhang Beining. 2000. Tourism development and changes of social values in the Li ethnic area. Unpublished paper presented at the Annual Meeting of the Association for Asian Studies, San Diego, March 9-12.

Zhang Tianlu and Wen Mingying. 1993. Hainan Lizu shequ renkou diaocha [An investigation of the community demography of the Hainan Li]. Pp. 135-149 in Zhang Tianlu, Huang Rongqing, and Gu Jiantang, (eds.), *Zhongguo shaoshu minzu shequ renkou yanjiu* [Demographic studies of China's minority nationality communities]. Zhongquo renkou chubanshe.

Table 1. Percent Distribution of Cultivated Area by Cultivation Type: Meifu Township, Five hamlets, and Tianfu

Cultivation Type	Meifu Township	Five hamlets	Tianfu
Irrigated	18	15	36
Dry field	16	24	4
Swidden	51	55	7
Other	15	6	53
Total	100	100	100
Total area in *mu*	8394	2846	941

Source: County Statistics Bureau

Table 2: Percent of Respondents and Husbands Who Can Read, by Respondent's Age

Respondent's age	Respondent %	Husband %	N
<40	3	18	76
40+	5	26	39
Total	3	21	115

Source: Tianfu survey.

Table 3: Percent of Respondents and their Husbands Who Can Speak Hainanese or Mandarin, by Respondent's Age

Respondent's age	Respondent %	Husband %	N
<40	4	58	76
40+	13	41	39
Total	7	52	115

Source: Tianfu survey.

Table 4: Indicators of Living Standards and Outside Exposure: Tianfu Hamlet (N=115)

	Percent
Eat meat more than once per year	21
Household has modern goods	23
Ever been to the city	54
Watched a video last month	46

Source: Tianfu survey.

Table 5. Respondent's Hamlet of Origin: Tianfu Hamlet

Origin	N	Percent
Tianfu Hamlet	72	63
Neighboring Meifu Hamlets	37	32
Township seat or elsewhere	6	5
Total	115	100

Source: Tianfu survey.

Table 6: Reproductive Indicators by Age Group of Respondent, Mean Values and (N): Tianfu Hamlet

Indicator	Age		
	<35	35-49	50+
Children ever born	2.1 (51)	3.7 (37)	4.5 (24)
Age at first marriage (years)	19.6 (51)	20.7 (35)	21.3 (24)
Age at first birth (years)	20.9 (50)	21.7 (35)	23.5 (23)
2^{nd} birth interval (months)	45 (30)	43 (33)	44 (21)
Breastfeeding duration, youngest surviving child (months)	36 (28)	43 (33)	40 (24)

Source: Tianfu survey.

Table 7: Progression from Third to Fourth Birth after 1989 as a Birth Planning Indicator: Tianfu Hamlet and the Five Meifu Hamlets

Population	Respondents with three children as of 1989 (at risk)	Respondents having a fourth birth in the 1990s	Progression Ratio
Five Hamlets	112	34	.30
Tianfu	26	3	.11
Total	138	37	.27

Source: Meifu Household Registers

Table 8a: Survivorship As Reflected in Respondent Reports of Children Ever Born and Surviving, by Age of Respondent and Sex of Child: Tianfu Hamlet

Age of R	Males			Females			Total		
	Born	Alive	Survival Rate	Born	Alive	Rate	Born	Alive	Survival Rate
< 40	106	86	.81	88	72	.82	194	158	.81
40+	92	68	.74	71	51	.72	163	119	.73
Total	198	154	.78	159	123	.77	357	277	.78

Source: Tianfu Survey

Table 8b: Estimates of Life Expectancy at Birth (E_0) Based on West Model Life Tables: Tianfu Hamlet

Age of respondent	l_x	Assumed Age range of children	Implied Model West Level		Implied E_0	
			Male	Female	Male	Female
< 40	.81	5 - 10	14 - 15	13 - 14	49.5 - 51.8	50.0 - 52.5
40+	.73	20 - 30	12 - 14	12 - 13	44.5 - 51.8	47.5 - 50.0

Source: Table 8a and Coale and Demeny 1966.

Table 9: Sex Ratio of the Population Age 0-14: Rural Hainan and the Study Areas

	Sex Ratio Age 0-14 (95% confidence interval)	N	Source
Hainan rural	115 (114.4 – 115.6)	608,921	1990 Census (Hainan 1992)
County rural	110 (108.1 – 111.9)	51,975	1990 Census
"Meifu Township"	101 (93.2 –109.4)	2,394	1990 Census
Five Meifu hamlets	99 (85.7 – 119.1)	567	Register, 7/98
Tianfu Hamlet	124 (93.0 – 166.3)	184	Register, 7/98

Table 10: Sex Ratio (and *n*) of Population 0-14 by Sibset Position for Sibsets of Three or More: Five Meifu Hamlets and Tianfu Hamlet 1998

Number and sex of older surviving siblings ("sibset position")	*Five Hamlets*	*Tianfu Hamlet*
No older siblings (eldest surviving)	131 *(88)*	107 *(31)*
No brothers, one or more elder sisters	98 *(79)*	183 *(34)*
No sisters, one or more elder brothers	98 *(91)*	93 *(29)*
One or more elder brothers and sisters	62 *(89)*	133 *(28)*
Total	94 *(347)*	126 *(122)*

Source: Household Registers

**Table 11: Coombs Sex Preference Scale,
Percent Distribution of Responses:
Tianfu Hamlet (N=115)**

Response path	Percent of Respondents
0 Boys 3 Girls	0
1B2G, 0B3G	0
1B2G, 2B1G, 0B3G	0
1B2G, 2B1G, 3B1G	4
2B1G, 1B2G, 0B3G	3
2B1G, 1B2G, 3B0G	60
2B1G, 3B0G	21
3B0G	13
Total	100

Source: Tianfu survey.

Footnotes

[1] According to the *Language Atlas of China*, a genetic relationship connecting Kam-Tai speakers is demonstrated by a large number of cognate words shared by their languages and various cultural similarities, including dwelling style and wedding and funeral customs (Australian Academy 1988).

[2] Edward Schafer's *Shore of Pearls* provides a delightful account of early Chinese sources (1970:55-76). Foreign sources include Reverend B. C. Henry's *Ling-nam* (1886), Hans Stübel's *Die Li Stämme der Insel Hainan* (1937), and Kunio Odaka's *Economic Organization of the Li Tribes of Hainan Island* (1950).

[3] An example of this work is a report of 21 hamlet studies from across the island conducted in 1954 and 55 undertaken by a researchers from various organizations, first published for internal circulation in 1957 (as the *Hainandao Lizu qingkuang diaocha* [Survey of the conditions of the Hainan Island Li]). Under an editorial committee made up of scholars from Zhongnan Nationalities Academy, Zhongshan University, Guangdong Provincial Nationalities Institute, and the Hainan Provincial Nationalities Committee, it was revised and republished in 1992 as *Hainandao Lizu shehui diaocha* [Social investigation of the Hainan Island Li] (*HLSD* 1992). Another important example is a series of investigations in Tongza County from 1956 to 1960 by researchers appointed by the National People's Congress and the State Nationalities Commission, and constituted as the Guangdong Province Minority Nationality Social History Survey

Group. The studies were published in 1986 as *Lizu Shehui Lishi Diaocha* [Surveys of Li social history], edited by one of the researchers of the original group, Professor Lai Caiqing of Guangdong Nationalities Research Institute (Guangdong Province Editorial Group 1986).

[4] Most ethnographic work has been concerned with folklore, linguistics, material culture, or identity (see for example: Fu and Su 1982; Guangdong Minzu 1983; Wen 1989; Yin and Su 1989; Netting 1997; Zhang 2000). One of the few demographic studies is Zhang et al. 1993.

[5] Sociological and cultural theories that stress the role of norms are a subset of economic explanations in that they implicitly view sex preferential behavior as rooted in the interest of parents.

[6] Evolutionary biologists read such findings as supportive of the Trivers and Willard (1973) hypothesis, which holds that parents will invest resources where those resources can most benefit reproductive success (Sieff 1990:27).

[7] Assuming a sex ratio of birth of 105 males per 100 females and no mortality, the proportion of five-daughter families would be $(.4878)^5 = .02762$.

[8] These points are gleaned from Eberhard 1968 and Pelzer 1945.

[9] Okada mentions that the ethnologist Takeo Kanaseki (1897-1983) made a survey in the Meifu region in the 1942. We have not yet located reports from this survey.

[10] The timing of the Meifu migration to Hainan is obscure. Stübel, as quoted by Schafer (1970:57), believes the Meifu, Ha, and Qi are latecomers to Hainan, as compared to the Li of the Baisha *dong* (grotto) [the *Run* or *Bendi* Li]. Kaneseki, as quoted in Okada (1950:15), suggests that the Meifu had arrived on the island by the end of the Ming dynasty.

[11] One account holds that 40 generations ago a Han trader named Fu Daoke married a Meifu girl, and all Meifu are their descendants (HLSD 1992 II:449-450). This same account notes that some Meifu bear the surname *Liu*. However, all the Meifu we encountered had the surname Fu, and insisted that all Meifu bear this surname. There are apparently many such legends of the Han ancestor. In one case, a group of Ha Li became Meifu and adopted the Fu surname (HSLD 1992 II:401-402). It thus seems dubious that all Fu are blood relations (see HLSD 1992 II:476).

[12] By the late 1980s it was estimated that approximately 6 percent of Hainan's land area remained under shifting (swidden) cultivation (Deng 1990:64).

[13] The community or *Kom* was the unit of administration under Qing and Republican regimes (Okada 1966:115). We have not been able to ascertain whether the township corresponds to the former *Kom*.

---

[14] Comparison of the register kept by the hamlet with that kept by the township revealed numerous discrepancies in dates of birth.

[15] The main characteristics of swidden agriculture are its lack of tillage, the rotation of fields rather than crops, clearing by means of fire, absence of draft animals and manuring, use of human labor only, employment of dibble stick or hoe, and short periods of soil occupancy alternating with long fallow periods (Netting 1974:25, following Pelzer 1945:17).

[16] In the pre-Communist era area hamlets contested the good bottomland held by Tianfu. One Tianfu elder considered the suppression of low-level warfare an important advantage of Communist rule: "People feel safer now. You can sleep at night."

[17] The first distribution (known as the "first cycle contract") occurred in 1983, the second in 1998. The Hainan government required that the first contracts be extended for an additional 30 years, but local governments made adjustments. Tianfu did in fact adjust the contracts to reflect changed household composition.

[18] *Shanlan* cultivators sign contracts for their land, but the contracts are formalities that do not limit the expansion of cultivation. Contracts are signed with the *jingjishe* established at the level of the village small group and headed by the small group leader. The small group is a level at or below the hamlet. At the village committee level this organ is called the *jingji lianshe*, headed by the administrative village leader.

---

[19] In his careful survey of economic conditions in 1942, Kunio Okada (1950:26) noted that the Meifu seldom eat fish or game, and never eat domestic animals (cattle, pigs, chickens, etc.) except on very special occasions. Then as now, this was by necessity.

[20] Based on a 1942 survey, Okada notes:

> Among the Moi-Fau Li, although the eldest son will form a separate family on marriage, when there are several sons in the family there will be no division of property until the second son too marries and forms a family. In this case, despite the apparent existence of a 'separate' family, there is no nuclear family in the sense of a completely independent unit (1966:117).

[21]Okada (1966:118), based on observations made 60 years earlier, notes that the eldest male child is normally regarded as somewhat more important than his siblings, and may receive a somewhat larger share of property.

> Among the Moi-Fau Li it is usual for the parents to take their meals with the eldest son, even after he has married and formed his own family, and even when the whole family holds its property in common during the lifetime of the parents, the parents will normally eat at the house of the eldest son, who will also take responsibility for looking after them in old age. The parents tend therefore to treat the eldest son with slightly more attention than their other children (1966:117).

[22] In a neighboring Li township (apparently a Qi Li community) 86 percent of couples were reported to be unions of blood relations (Zhang et al. 1993:138).

[23] These customs include parties for "matching songs" (*duige*) and other unsupervised meetings of unmarried youth. Han "girls' houses" in the Pearl River Delta region (Parish and Whyte 1978:231-232; Stockard 1989:31-41; 170-171) are probably a vestige of the aboriginal *longgui*. Mating practices strikingly similar to the Li are also found among the Bontoc Igorot of Northern Luzon (Jenks1905: 66-68).

[24] In another example of this trend, our informants told us that some Meifu are giving up the custom of common graves in favor of individual graves.

[25] Our survey yielded a juvenile sex ratio of 139. Comparison of the two sources indicates that some females had died between the time the register was compiled and the time of our survey. For all comparisons across hamlets we utilize register data only.

[26] Although roster data are inferior to birth history data for this purpose, they are quite serviceable. Unlike birth history data, which can be used to reconstruct the offspring set at the time of a birth, roster data reflects the situation at a time after the birth. That the death of elder siblings in the interim between birth and survey will alter the position in the offspring set of the index child is not a deficiency for the measurement of sex-selection. If such deaths are random with respect to sex, they should not affect the pattern, and if they are not random with respect to sex, then they can be considered part

of the sex-selection process. A more serious problem of roster data concerns the potential for incomplete sibling sets due to adoptions, divorces, or marriages and out-migrations of elder siblings. This does not appear to be a serious problem in this population, in which marriage age is relatively late and adoption and migration of children appear to be rare.

[27] Here, statistical inference should not be understood in the conventional sense. The six Meifu hamlets represent a population universe. Other Meifu hamlets exist, but we do not maintain that our six represent any others. In the present case, inference is to the universe of juveniles in the six hamlets. Data collected at one time point can be imagined as a single population sampled from a procession of juvenile populations. The estimation was performed in Stata using the survey estimator option appropriate for samples grouped in a small number of clusters, with the results as follows:

Log odds of sex = male, Six Meifu Hamlets (n=469)

Variable	**Coefficient**
Sibset (0 brothers, 1+ sisters)	-.28
Sibset (1+ brothers, 0 sisters)	-.26
Sibset (1+ brothers, 1+sisters)	-.73*
Tianfu Hamlet	-.13
Tianfu*Sibset (0 brothers, 1+ sisters)	.76
Tianfu*Sibset (1+ brothers, 1+ sisters)	.90*
Constant	.25

* $p < .1$

---

[28] The Coombs scale was administered using cards showing drawings of boys and girls representing the four possible alternative compositions of three-child families: three girls, two girls and one boy, one girl and two boys, and three boys. Respondents are first presented with all four alternatives. If one of the extreme options is selected (i.e., all boys or all girls), no further alternatives are offered. If one of the mixed options is selected (i.e., containing two boys or two girls), then the selected option is withdrawn and the respondent is presented with the two closest options to either side.

[29] Abortion services are generally offered on a sliding scale of fees. Abortions mandated by the birth planning program are provided at nominal cost, while fees for elective abortions are considerably more. Cost of transportation is another significant factor. Sex-selective abortion implies an ultrasound examination, which, if available, would involve an additional fee.

[30] Okada (1966:120) observed the Meifu custom of waiting three or four days after a birth to give a child a name.

[31] Kunio Odaka makes this point in his 1942 study of Meifu economy. He found virtually no class distinctions, and a relatively slight difference in living standards between rich and poor (1950:69-70).