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WHO MARRIED HOW? MODELING MARITAL DECISIONS IN EARLY-TWENTIETH CENTURY TAIWAN

Sping Wang
Jan Kok
Ying-chang Chuang

Marriage in Taiwan in the early twentieth century was a very diverse phenomenon. Marriages could be in the "minor" fashion, in which the bride was adopted at an early age by her parents-in-law. They could also be of the virilocal "major" type, in which young adults married and lived in the household of the husband's parents. Finally, they could be "uxorilocal," in which the husband came to live with his in-laws. The diversity of types reflects a complex mixture of motives on behalf of parents, who aimed to secure the patrilineage, but in the meantime were motivated to save on wedding expenses, safeguard their hold on the younger generation, forge alliances between clans, and bring in additional labor. In our paper, we assess the relative importance of these parental motives by applying a competing risks analysis on household registry data from nine Taiwanese communities. By combining data on the levels of the individuals, the composition of their households, the characteristics of their communities, and economic fluctuations, we demonstrate the remarkable flexibility and adaptability of Taiwanese marriage within the overriding constraint of producing male offspring.

Keywords: Taiwan; adoption; household registers; minor marriage; uxorilocal marriage; competing risks analysis

Sping Wang is a sociologist and has been responsible for the household registers project of the Institute of Ethnology, Academia Sinica, Taipei, Taiwan. She is currently a senior research associate with the Nursing Effectiveness, Utilization, and Outcomes Research Unit, Faculty of Nursing, University of Toronto, Toronto, Canada.

Jan Kok is a historian and has published widely on family history and historical demography. He is also co-editor of *The History of the Family. An International Quarterly*. He is currently a senior researcher at the Virtual Knowledge Studio for the Humanities and Social Sciences, Amsterdam, The Netherlands.

Ying-chang Chuang is a professor of ethnology. Among his books is *The Chinese Family and its Ritual Behavior* (coedited with Jih-Chang Hsieh), Taipei: Institute of Ethnology, Academia Sinica, 1992. He is currently dean of the College of Hakka Studies, National Chiao Tung University, Hsin-Chu, Taiwan.

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The overriding concern behind all Chinese marriage and adoption practices was the continuation of the patrilineage. In the ancestor cult, it was of vital importance that the funeral tablets of the ancestors, and eventually of one self, were worshipped by male descendants.¹ However, there were many ways to procure descendants. If all else failed, sons could be adopted to become the official heir. Mirroring this flexibility, marriage forms were bewilderingly varied, in particular in the southern regions of China.²

Marriages were always arranged, often through the mediation of a semi-professional marriage broker who was paid for her services. Virilocal marriage was the norm, that is, the bride was supposed to live in the household of her parents-in-law. However, many exceptions to this rule existed. Families without sons could “summon” a man to marry their daughter and live with them, often for a stipulated period of time. In some Chinese regions this also occurred when families were in need of additional labor.³ Thus, this reversal of the norm supposedly occurred only among poor families, who had no alternative.⁴ Although the marriage of young adults was preferred, in some regions many families would seek out a prospective bride for their son almost directly after his birth. The infant girl was brought to the home of her parents-in-law and raised as a foster child. Ideally, the marriage was made official soon after the menarche of the girl.⁵ This type of marriage has been named “minor marriage” to distinguish it from the “major” marriage between young adults. Another form was “delayed-transfer marriage.” In southern regions, with expanding employment opportunities for girls, families would keep their married working daughter at home for about five years, before transferring her to her family-in-law.⁶ In the late nineteenth and early twentieth centuries, the Canton Delta witnessed a surge of even more rigorous transgressions of the dominant norms, such as spirit marriages (a single woman was officially married to a deceased man) and sworn spinsterhood (a single woman would solemnly declare to remain a spinster, live in a “spinster house” and have her hair styled in the appropriate way).⁷

Chinese women almost universally married early. Those women adopted as future brides married youngest of all, in particular when a pregnancy had proven the sexual compatibility of the couple. Therefore, we find many prenuptial pregnancies in minor marriages.⁸ On the other hand, (sexual) relations were often strained in minor marriages, which were basically unions between foster siblings. Such marriages were characterized by low fertility and high divorce rates.⁹ Chinese men married somewhat later—but still young compared to western European averages—and not universal. In China, there was a permanent shortage of women, due to infanticide, female surmortality, and polygamy. Men from poor families tended to marry later and to remain celibate more often.¹⁰

In Taiwan, marriage practices were as variegated as in the southeastern part of Mainland China. Thanks to Taiwan’s excellent administration of its early twentieth-century population, the variation of marriage forms has been charted and analyzed in great detail.¹¹ The Taiwanese have married in the major, the minor, and the uxorilocal variant. In the northern part of the island, minor marriage was highly popular, in fact in some localities, it was the most common type. On the other hand, in the southern and western parts of Taiwan, major marriage was the dominant form. Everywhere, uxorilocal marriages formed a minority, but in some (western) localities it occurred surprisingly frequent.¹² From about the 1920s onwards, the popularity of major marriage surged at the expense of the other types. Increasingly, women originally adopted as *sim-pua* or “little daughters-in-law” would not marry their foster brother,

but instead marry and move out of the family.¹³ Very gradually, the practice of arranged marriage began to corrode as well.¹⁴

As to timing and frequency of marriage, the rural Taiwanese population had the same characteristics as found in Mainland China: early and universal marriage for women and a lower incidence and a later timing for men. Also, a low social status tended to delay male marriage.¹⁵ Interestingly, recent findings from Taipei city suggest that urban Taiwanese women married later and stayed single more often than rural women. Wolf and Gates claim that the high rates of female celibacy in Taipei do not stem from "urban freedom" engendered by employment opportunities, but on the contrary indicate the persisting parental authority over women. Their wage income simply made it more expedient to keep them longer at home. Evidence for this interpretation is seen in the fact that, in particular, Taipei women without older brothers tended to remain single.¹⁶

In this paper, we will use a large database with complete household histories of nine Taiwanese communities to explore variation in marriage forms in the early twentieth century. By combining information on Taiwanese individuals, their households, and the communities in which they lived, we hope to put to a statistical test a number of hypotheses regarding the choice of the marriage type. As individual destiny choices were highly subjected to the interest of the family at large, we can only unravel marriage decisions when we depart from the point of view of the parental generation. Actually, decisions about adoption of infant girls were often made by the grandparents of the child that was adopted into or out of a family.¹⁷ The purpose of our paper is to understand decisions regarding timing and type of marriage, in terms of the motivations of the (grand)parents of husband and wife. The Taiwanese dataset is ideally suited for this purpose, as will be discussed later. The parental concerns regarding the marital choices of their children were: cutting down the costs of marriage, procuring additional labor for the household, ensuring that spouses for the children would be available, acquiring prestige and status, ensuring their authority, and forging family alliances. In the next section, we will discuss these concerns and motives. Then, we will discuss how we proceed from this ethnographic evidence to the construction of statistical models. In the subsequent sections, we describe the variation in marital forms in our field sites in more detail, and we put our hypotheses to the test in three "competing risks" models.

PARENTAL CONCERNS

Costs of Marriage

In Taiwan, the "major" fashion marriage was a costly affair. Apart from the costs of the go-between and the wedding feast itself, a girl had to be given a dowry. Although the parents received a bride price to compensate them for the costs of raising the girl, the dowry had to match or even surpass the bride price. Besides the prestige that the public display of a lavish dowry brought, a considerable dowry was considered a precondition for the good treatment of the girl in her new household.¹⁸ The groom's family had to raise the bride price. It has been estimated that small farmers, in other words the average Taiwanese family, would have to save ten to fifteen years to finance a major marriage, money they'd much rather spend on expanding their farm. For wage workers, the bride wealth amounted to about 240 daily

wages.¹⁹ The price for a *sim-pua* was related to her age, but amounted to only a fraction of the price for an adult daughter-in-law. In all, the costs of minor marriage were about one-tenth of the costs of major marriage.²⁰ Thus, getting a *sim-pua* for their son was very attractive to the poor. In 1896, the Canadian missionary MacKay noted: "This is much cheaper, as she earns more than she costs, and no gifts or money need to be paid her parents at the marriage."²¹ However, Wolf and Huang²² have argued that minor marriage in Taiwan was not a strategy for the poor, as it seems to have been the case in the Mainland.²³ They noticed that there was little social differentiation in the tendency to marry in this fashion. In fact, it was common among rural elites. Also, the practice was found frequently among (urban) middle classes, even more than among the urban poor.²⁴

Uxorilocal marriages, on the other hand, were unequivocally associated with poverty. For poor families, this option brought material benefits that compensated the low prestige of this marriage type. The groom did not have to provide bride wealth, whereas his parents did not have to provide him with a workable inheritance. Thus, men with many brothers married more often in this fashion. Also, men living alone, orphans, and widowers resorted frequently to this type of marriage, clearly because they could not afford a proper (second) wedding.²⁵

Additional Labor

Taiwanese households generally provided their own labor. Taiwanese women did all kinds of household chores, whereas the women of the *Hakka* minority worked in the fields, as well. They could do so, because their feet were not bound. Families that needed additional women could adopt servant girls (*ca-bo-kan*). Also, they might have preferred to have a *sim-pua* work for them rather than to exploit their own daughter. However, this does not seem to have been an important motive for choosing the minor marriage type. An indication for this is the fact that the feet of the *sim-puas* were bound just as often as the feet of other girls, so they were not adopted for their capacity to work in the fields.²⁶ The labor motive is more important in uxorilocal marriage. Families that called in a husband did so because there were no surviving sons or because the sons were still too young to work on the land. Mostly, the husband would work for his father-in-law for a stipulated period, and he would give at least one of his sons the surname of his wife.²⁷ After this period, for instance, when the youngest was old enough, he would leave with his wife and his "own" children. Calling in a husband was much less expensive than hiring laborers. In specific areas, where the ecological circumstances created a strong demand for additional field labor, uxorilocal marriage occurred frequently. The irrigations systems constructed by the Japanese seem to have diminished the demand for labor and caused a strong decline in uxorilocal marriages in the 1930s.²⁸

Availability of Spouses

A well-known problem in Chinese demography is the shortage of women. The major cause for this was female infanticide. In Taiwan during the Japanese occupation, however, female infanticide was very rare—at least it did not affect the sex ratios at birth.²⁹ Notwithstanding this, a male surplus did exist, particularly in northern Taiwan, due to the sex-specific labor migration to this tea-exporting region. In addition, mortality rates

among women were higher than among men. According to Wolf and Huang,³⁰ the resulting pressure on the marriage market triggered a mechanism on the parallel market of adoptions. Increasingly, the matchmakers would seek out families with infant girls, persuading them to give them away. They would expand their activities to adjacent markets, as well. In the whole region, the age of adoption went down. In particular, girls who were born after the birth of a son were likely to be adopted out of the family. However, infant mortality among the uprooted and bewildered *sim-puas* was high and aggravated the shortage of girls even more. Finding and acquiring a *sim-pua* did involve costs. Because the middle classes were more successful in acquiring "little daughters-in-law," lower-class families were increasingly left with no other option, but a very meager wedding in the major fashion. In turn, this lowered the social standing of major marriages, as such, and propelled the demand for minor marriage.³¹ Thus, the popularity of minor marriage in northern Taiwan was not associated with poverty, but with wealth, commercialization, and economic expansion.³² Similar market mechanisms are not relevant in the case of uxori-local marriages. The demand for men was not very strong, and there was simply no shortage of poor men to meet it.³³

Prestige

Chinese village studies testify to the need of "keeping face." Being a respected family was vital in all dealings and transactions needed for improving the family's standard of living.³⁴ Ideally, children were married in the major fashion, expensive dowries were displayed, and a big wedding party was hosted. However, as we have seen, people could and did forsake this ideal for less prestigious forms of marriages when the need arose. This holds particularly true for uxori-local marriages. Here, there were no public festivities. The ceremony would be very subdued, if held at all. Some Taiwanese informants even claimed that the husband would simply walk alone to his bride's home after dark, so as not to be seen.³⁵ In his new household, he was subjected to his wife's father and other male relatives, much like a servant. In-marriage men were widely referred to as "parasitical husbands." The marriages were deemed unstable, because men married in this way often resented their subjugated position and broke up the marriage.

Parental Authority

As Wolf and Huang (1980) have pointed out succinctly: the choice between minor and major marriage was often one between "peace at home" and "allies abroad." Indeed, the tensions created by the hierarchy (based on generation, age, and gender) within Chinese extended families were formidable.³⁶ In particular, the position of the daughter-in-law was problematic, at least until she had produced male offspring.³⁷ The parents-in-law feared that she would plot with their son to split the household. The forces that threatened the domestic harmony were known as "pillow ghosts." One way for the parents to minimize the threat of these ghosts was to socialize and discipline a daughter-in-law themselves. As one elderly informant put it: "The advantage of raising a *sim-pua* is that while she is not dear to her husband, she is of one mind with her mother-in-law. A girl from another family is usually dear to her husband, but almost never of one mind with her mother-in-law."³⁸ Minor marriage suited the overall patriarchal power structure of Chinese families. In southern Taiwan, where the Han had mixed with the more egalitarian Aborigines, minor marriages were less popular than elsewhere.³⁹

Family Alliances

For emphasizing friendship between clans (surname groups), major marriage was the most suitable marriage type. The links created by minor marriage were much weaker. Studies of Taiwanese elite families demonstrate the importance of exchanging brides.⁴⁰ Because Taiwan was colonized by Han Chinese in successive waves from different mainland areas, there is a regional variation in the strength of kin groups. In some areas, violent conflict between clans and villages was still rampant around 1900. According to Pasternak, this may be the cause of a stronger preference for major marriage in some (southern Taiwanese) areas where clans needed to strengthen their position by forging strategic alliances.⁴¹ Thus, we can expect less minor marriages (see above) and more major marriages in our field sites in southern Taiwan.

MODELING MARITAL DECISIONS

In making decisions as to when and how their sons and daughters should marry, Chinese parents had to juggle many pros and cons in their minds. They had to consider their material options, the benefits of a loyal adopted daughter-in-law versus the cost and dangers of having to raise her, the situation in the marriage and adoption markets, and their need for “face” in the community and for allied families. Clearly, one can never reconstruct completely these complex choices of Chinese families in the past. However, in the case of Taiwan, we can make an effort at disentangling marriage decisions.

First of all, the Taiwanese administration of households belongs to the most accurate historical micro-level sources in the world. Although the *pao-chia* system of organization on the basis of households goes back to the 18th century, it was largely inefficient until the Japanese colonial government revived and provided the system with administrative tasks.⁴² The household registers cover the period from 1905–1945. The registers meticulously record the statuses (sex, position in the sibling order, relation to the head of the household, etc.), as well as demographic changes, such as adoption, marriage, child birth, and death. Second, the household registers of a number of entire Taiwanese communities have been computerized by the Institute of Ethnology of Academia Sinica. With multivariate statistical models, we can perform an elaborate test of at least some of the assumptions and hypotheses that are discussed above. In this section, we will discuss the building of these models.

As will be clear by now, marriage in Taiwan was strongly “path dependent,” that is, determined by decisions made many years earlier. A girl adopted out at infancy was likely to be married in the minor fashion, unless she and her prospective husband could not get along at all and her foster parents sent her back or adopted her out themselves. Conversely, if parents had not adopted a *sim-pua* for their son many years before, he could not marry in the minor fashion. Thus, in our view, marriage decision making in Taiwan involves a series of choices. The first choice is to adopt a girl in or out. For girls that had been adopted, there was still an option not to marry in the minor fashion, but clearly her options were different than for girls still living at home at adolescence, who could only marry in the major or in the uxori-local fashion. Sons living at home at adolescence may marry in the major, the uxori-local, or the minor fashion, the latter on the condition that a *sim-pua* has been adopted. When there was no adopted girl present, they could only marry in the major or uxori-local

way. A related choice involves the *timing* of marriage. Because major marriage is desirable, but expensive, most families will have to save money to afford it. Poor families will need more time for saving, whereas economic pressure will lengthen the waiting time for all families. For some families, the material burden proves too high, causing them to choose the least desirable form of uxorilocal marriage.

Because the risks of marrying in a specific form are so unevenly spread, we will make separate models depending on the type of residence (or adoption status) at early adolescence (age fifteen). Our first model selects sons living in households with at least one adopted girl present. The second model selects households without potential brides present. The third model includes girls that still live with their parents at age fifteen. In our models, we will integrate the different factors that influence timing and type of marriage. In particular, we will look at the impact of economic pressure, socioeconomic status, household composition, and sex ratio. In addition, we will consider the effects of ethnicity, region, type of community, and period.

During the Japanese occupation, living standards in Taiwan were low. However, there are indications that, although the Japanese efforts were clearly directed at the exploitation of Taiwan's natural resources, some benefits did accrue to the population. From the mid-1920s onwards, mortality declined markedly, due to improvements in public health and increased medicalization.⁴³ Though Taiwan's production rose strongly, it is not clear to what extent consumption per capita rose, as well.⁴⁴ However, recent anthropometrical research suggests that birth cohorts from the 1920s onwards benefited from improved diets. The average length of successive cohorts increased, whereas this trend was much less conspicuous in Mainland China.⁴⁵ We expect that strong rises in the food prices will have caused families to delay an intended wedding, whereas a prolonged crisis will have increased the likelihood of an uxorilocal marriage. The pressure of high prices was particularly strong in 1912, 1918-1919, 1925-1926, and during the Second World War.⁴⁶

As we have outlined above, uxorilocal marriage seems to have been an option primarily for poor households, particularly those that provided the husbands. Little social differentiation is expected in the choice between major and minor marriage. The household registers only recorded the occupation of the head of the household. We have made a simple classification into five different categories: Elite, Industrial, Business, Agricultural, and Laborers. The top social class consists of families headed by teachers, physicians, administrative heads at the village level, and wealthy businessmen. The industrial group includes craftsmen, carpenters, and people working in a variety of industries, including the mat industry, metal industry, food industry, etc. The business group consists of shopkeepers, merchants, barbers, and other service workers. The laborers consist of manual labor, street vendors, cooks, and so on. The agricultural class includes fisherman and a wide spectrum of farmers, including poor tenant farmers, rich peasants, and landlords. Ideally, we would like to link occupational information to data in the land registers to assess the wealth of farming families.

Household composition is related in many ways to marriage choices. As we have discussed in the previous section, girls without (older) brothers were more likely to be married uxorilocal, which often implied a later age at marriage. Even when brothers were present, a (relative) shortage of male labor may have increased the demand for in-marrying husbands. We have created binary variables that indicate whether one has siblings at all, whether one had no brothers, and whether one had only younger brothers. The effect of male labor is captured in a variable that gives

the ratio of men aged 15-65 to all household members. In addition, we look at the effect of the size of the household. Furthermore, we expect that the presence of both parents was important in ensuring the "best" marital option for their children. Widows and widowers were probably less capable of saving for the wedding and negotiating dowry and bride price for their children. In addition, extended families probably had more resources to arrange a timely and "proper" wedding of its members. Thus, we expect adolescents living in extended households to marry relatively early and infrequent in the uxorilocal fashion.

The effect of skewed sex ratios on the marriage market was, according to Wolf and Huang in their *Marriage and Adoption in China*, vital in explaining the surge of minor marriages in northern Taiwan. Ideally, to estimate the pressure on regional marriage markets, one would like to include the sex ratio of unmarried men and women aged 15-24 in the area surrounding the communities. However, the Japanese censuses that yield this kind of detailed information were not available to us. Therefore, we have calculated the sex ratio of the unmarried men and women based on the study areas where their data was entered. We expect that in communities with a strong male surplus, the tendency for minor marriage will be strong.

Ethnicity has a potential bearing on marriage as well. In the early twentieth century, the descendants of migrants from different areas in China were known as *Hokkien* and *Hakka*. They spoke mutually unintelligible languages and constituted clearly bounded social identities in the nineteenth and twentieth centuries. Inter marriages were rare, at least until the 1930s. However, *Hakka* and *Hokkien* shared fundamental Han practices and beliefs, including patrilineal ancestor worship, Confucian-justified parental authority, equal property inheritance among brothers, and folk religion.⁴⁷ Beyond language, *Hakka* were reputed to be different from *Hokkien*—and from most Han groups—in granting women a higher position in family life, with women purportedly contributing as much or possibly more labor than *Hakka* men to the family.⁴⁸ Such conclusions primarily derive from fact that *Hakka*, unlike *Hokkien*, did not bind their daughters' feet. Although the *Hakka*'s lack of foot binding surely led to higher expectations of field and heavy manual labor contributions from girls and women, it does not necessarily follow that their gender system was any less patriarchal. Earlier studies based on the household registers show that *Hakka* and *Hokkien* marriage and adoption patterns were very similar.⁴⁹ In our analysis, we can test whether this finding is corroborated in a multivariate analysis.

Regional and local differentiation in marriage forms cannot be explained solely from variation in economic or demographic factors. For instance, where descent groups were less strong, as in the south, there was more need for major marriage to form interfamily alliances. Thus, we add a variable indicating the region of the communities. In addition, towns can have different patterns than rural areas. Expanding female employment opportunities in towns may induce the parents to delay the marriage of their daughters. Also, there will be less need for temporary labor than in rural communities, which will lead to a lower incidence of uxorilocal marriage. On the other hand, in places with a large population size, it may be easier to find a suitable partner, which may lower the age at marriage. In particular we expect this to be the case in places that are not isolated (indicated by population turnover). Finally, we add to the models a period effect that will indicate trends in the age at marriage during the period studied.

VARIATION IN MARRIAGE TYPES

In this paper, we analyze the household registers of nine communities. Seven field sites are located in the northern and western parts of the island. Most of the communities can be characterized as rural, whereas three of them are towns: Lu-kang and Ta-chia in the west and Tung-kang in the south. Obviously, in the rural communities, the occupational structure was characterized by agriculture. In the town, a sizeable proportion of people worked in commerce or in industry, the latter in particular in Ta-chia. This town was already famous for its woven sleeping mats, but in 1897 the weavers developed the Ta-chia Panama hat, which was a successful export product. Also, after the completion of the railroad (1922), the town became a convenient place to distribute goods and services to the surroundings areas. In some northwestern field sites, yearly population turnover amounted to one-fifth of the population. Interestingly, the towns of Lu-kang and Tung-kang had low rates of mobility. In almost all field sites, we find high sex ratios, in particular in the beginning of our period.

How were the types of marriage distributed (i.e., across regions, social groups, types, or residence, etc.)? For our analysis, we selected men and women born between 1880 and 1920, who came under observation on and before age fifteen. For a first impression, the distribution of the types of marriage of men suffices (Table 1). Apart from marriage types, we indicate the percentage of men "censored," meaning they either died, emigrated from the community, or were lost to observation before they married, or they were still unmarried at age thirty. The table confirms, in broad terms, the evidence from earlier studies, as discussed in the introduction. Major marriage became more popular in the younger cohort: 61.9 percent of the men born in the period 1906-1920 married in the major fashion, versus only 49.8 percent of the men born between 1880 and 1905. Marrying a *sim-pua* was much more popular in the north (17.5 percent) than it was in the south (1.7 percent). It was also more popular in rural areas (17.5 percent) than in towns (9.1 percent) areas. Contrary to findings in other studies, *Hakka* were more prone than *Hokkien* to marry in the minor fashion (22.1 percent versus 13.3 percent). Although minor marriage is frequent among Mainland *Hakka*, as well, strong ethnic intergroup differences have not been reported for Taiwan.⁵⁰ As we expected, parents would try to avoid an ignoble wedding in the case of their first-born son. Sons with no or only younger brothers married uxorilocal twice as often as sons with older brothers. Sons that were an only child, however, married often in this fashion. Possibly these sons were orphans unable to form their own family. Only and first-born sons married more often in the minor fashion, indicating that parents—anxious to continue the patrilineage—tried to arrange the marriage of their eldest boy as soon as possible. Marrying in the major fashion required the largest expenses, and apparently, was more feasible when both parents were present and able to direct household funds to the marriage. These funds could be most easily amassed in an extended family household: 61.5 percent of sons living in such a household married in the major fashion versus 53.6 percent in a nuclear and 53.4 percent in a stem family household. Conversely, men living in a broken family were more than five times as likely to marry uxorilocal as men living in an extended family. The distribution of marriages types of women still living with their parents at age fifteen (see Appendix 1) reflects Table 1. However, the differences between ethnic groups were not as outspoken. Also, first-born girls were not more likely than later-born ones to marry in the major fashion. Girls from upper-class families, extended households, and households

Table 1
Distribution of the Type of Marriage of Taiwanese Men
(Born 1880-1920), by Selected Characteristics

		<i>Total</i>	<i>Major Marriage</i>	<i>Minor Marriage</i>	<i>Uxorilocal Marriage</i>	<i>Censored</i>
		(<i>N</i> = 8,004) <i>N</i>	(<i>N</i> = 4,430, 55.4%) %	(<i>N</i> = 1, 257, 15.7%) %	(<i>N</i> = 654, 8.2%) %	(<i>N</i> = 1,663 21.8%) %
Birth cohort	1880-1905	4,317	49.8	17.3	10.0	22.9
	1906-1920	3,687	61.9	13.8	6.0	18.3
Geographic location	North	7,077	53.2	17.5	8.7	20.6
	South	927	72.1	1.7	4.2	22.0
Area	Town	1,698	64.0	9.1	4.5	22.4
	Rural	6,306	53.0	17.5	9.2	20.3
Ethnicity	Hokkien	5,663	56.6	13.3	9.0	21.1
	Hakka	2,264	52.1	22.1	6.0	19.8
	Aboriginal	77	57.1	5.2	11.7	26.0
Sibling position	Only child	856	45.4	4.4	17.1	33.1
	No brother	961	51.4	27.4	4.1	17.2
	Younger brother only	2,397	59.8	17.8	4.8	17.5
	More than one older brother	3,790	55.8	14.0	9.3	21.0
Adoption of sisters	Present	5,287	62.0	3.1	10.1	24.9
	Absent	2,717	42.4	40.3	4.5	12.8
Occupation of the Head	Elite	310	68.1	12.6	3.2	16.1
	Agricultural	4,925	57.0	17.9	7.2	17.9
	Industrial	413	56.9	12.6	7.0	23.5
	Business	496	62.5	13.3	3.4	20.8
	Labor	1,860	46.6	11.8	13.1	28.6
Parent presence	Both present	5,914	58.5	18.1	6.4	17.0
	Only father present	361	43.8	12.2	11.0	32.1
	Only mother present	1,124	49.7	10.2	10.6	29.5
	Both absent	605	42.0	4.1	19.2	34.7
Family type	Broken family	437	47.1	0.9	26.8	25.2
	Nuclear family	2,886	53.6	16.1	6.4	23.9

(continued)

Table 1 (continued)

	Total	Major Marriage	Minor Marriage	Uxorilocal Marriage	Censored
Stem family	2,477	53.4	15.5	10.0	21.1
Grand family	2,204	61.5	18.3	4.8	15.4
		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Number of household members		9.02	9.87	6.35	6.96
		(6.72)	(6.75)	(3.71)	(4.74)
Proportion of males aged 15-65 in household		0.30	0.26	0.34	0.33
		(0.16)	(0.13)	(0.21)	(0.20)

Note: Table includes individuals born between 1880 and 1920 and under observation at age 15. Variables were measured at individuals' 15 years of age.

in which they lived with both parents married relatively often in the major type, presumably because their families did not need the labor of a living-in son-in-law. To measure this more directly, we have calculated the relative presence of male workers in the households. Men marrying uxori-local did come from households with a relative abundance of male adult workers (34 percent, Table 1), whereas households that called-in husband had a much lower proportion of male workers (21 percent, Appendix 1). Interestingly, the households that sent as well as those that received uxori-local husbands were of relatively small size.

MARRIAGE TYPES AS COMPETING RISKS

Descriptive statistics are very helpful in building hypotheses for the explanation of marriage variation. However, the aggregate statistics we just discussed may hide many compositional effects. For instance, household structure and social status may be closely related. Is social status still important regardless of the household structure? Thus, to find the most relevant factors, one needs to control for many variables as well as determine the statistical significance level. For this purpose, multivariate techniques are inevitable.

Marriage in Taiwan meant that the parents had to decide both the timing and the type of the wedding. They might avoid risks and arrange an early wedding for their son with a *sim-pua*. Or they might invest in their reputation and save for a major marriage. Finally, parents down on their luck might have to choose for uxori-local marriage or even celibacy for their son. For daughters, the decisions were even more drastic. Either they were adopted out at infancy, or kept at home to be married in the major or the uxori-local fashion. Only in the latter case could they remain in familiar surroundings. For analyzing the timing and frequency of events, such as marriage, Cox regression is very

suitable. In our case, we are dealing with timing and frequency of *competing* events. Competing events are different events that can occur within the same risk period.⁵¹

In the case of Taiwanese marriage, one type of marriage can be seen as an event that removes the individual from being at risk of all other marriage types. In standard survival analysis, multiple competing events are treated as a single event even when events are qualitatively different. If the focus is on overall event time or the occurrence of any one of the multiple events, typical survival analysis is suitable. When type-specific hazard is of interest, there is a need to differentiate different kinds of events and to estimate the hazards related to a specific type of event. With the competing risks proportional hazard model, the hazard ratios for each marriage type can be estimated separately with no loss of statistical precision. One of the assumptions in competing risks proportional hazards model is noninformative censoring. According to Allison, "conditional on the covariates, those who are at particular high (or low) risk of one event type are no more (or less) likely to experience other kinds of events."⁵² This assumption holds true for the type of marriage only when we control for adoption status. A polytomous variable is created to measure whether a person had a first marriage event and in what form. Value 1 is assigned to major marriage, 2 to minor marriage, 3 to uxori-local marriage, and 0 to the censored cases.

Men in Households with Adopted Sisters

Our first model (Table 2) looks at the marital decisions pertaining to men living in households with at least one adopted girl. Obviously, we do not know for whom this girl was the intended bride. But we do know that the parents had chosen for the option to have at least one of their sons marry in the minor fashion. Almost 47 percent of the marrying sons living in such as household did marry a *sim-pua* ($N = 2,015$ observed marriages). However, 48.3 percent of the sons married in the major fashion whereas 4.8 percent left home to live as an uxori-local husband.

The competing risk analysis of proportional hazards allows us to draw two types of conclusions. On the one hand, when the effect of a particular variable is the same across the three forms of marriage, we can conclude that timing and incidence of marriage *as such* is affected. When marriage was universal, as was the case with women, the coefficients pertain unequivocally to *timing*, thus age at marriage.⁵³ On the other hand, when the effects are different between the types of marriage, we know that the *choice* between types of marriage is influenced. Indeed, many factors affected marriage as such, regardless of the type. Sons in younger birth cohorts married earlier and more frequent: The hazard ratios are significant and higher than 1.00 in all forms of marriage. Also, it becomes apparent that men belonging to the *Hakka* minority married later and perhaps remained celibate more often than others. Sex ratios affected timing and incidence in all types of marriage: The higher the male surplus, the lower the age at marriage and (presumably) the higher its incidence. Clearly, our model is not designed to indicate a relationship between a male surplus and the strategy of adopting *sim-puas*—a strategy that only much later would result in minor marriages.

Economic pressure tended to delay marriage. When the price of food increased, the age at marriage increased, as well. Clearly, the Chinese cultural preference for early and universal marriage did not preclude a cautious response to adverse times.⁵⁴ Contrary to what we expected, marriage was relatively late in communities with a large

Table 2
Cox Regression Estimates of Marriage of Sons Living in Households
in Which at Least One Adopted Girl was Present. Competing Risk Model
by Type of Marriage.

	<i>Major</i>	<i>Minor</i>	<i>Uxorilocal</i>
Birth cohort (in birth years)	1.06***	1.02***	1.05**
Northern region (vs. south)	1.16	2.73**	4.27
Town (vs. rural)	1.94***	1.09	1.92
<i>Hakka</i> (vs. non- <i>Hakka</i>)	0.66***	0.50***	0.33**
Sibling position (vs. more than one older brother)			
Only child	1.01	1.30	2.16
No brother	0.90	1.70***	0.46
Younger brother only	0.98	0.97	0.38***
Occupation of household head (vs. agricultural)			
Elite	1.92***	0.81	0.46
Industrial	0.85	0.83	1.38
Business	1.44**	1.26	0.78
Labor	0.68***	0.80*	1.00
Parental presence (vs. both present)			
Father present only	0.79	0.72	1.65
Mother present only	0.94	0.84	0.60
Both parents absent	0.91	0.21**	0.80
Family type (vs. grand family)			
Broken family	1.86	0.00	2.75
Nuclear family	1.11	1.17	1.33
Stem family	0.96	0.99	1.28
Number of household members (square root)	1.10*	1.12***	0.95
Proportion of males aged 15-65 in household	0.87***	0.89***	0.93
Sex ratio	4.62***	3.36***	21.53**
Food price	0.99***	0.99***	0.99**
Population size in thousands	0.97***	0.98*	0.90**
Population turnover rate	1.40***	1.55***	1.11
Percent with events (<i>N</i> = 2,261)	36.5%	35.0%	3.7%
Model X2 likelihood ratio	336.6***	297.6***	71.3***
Df	23	23	23

Source: Household register files of the Ethnological Institute of Academia Sinica Taipei, Taiwan.

Note: **p* < .05; ***p* < .01; ****p* < .001.

Note: For the variables Number of household members and Population turnover, the hazard ratio is expressed at a 10% increase. Events were grouped in months. We use the EXACT method to handle ties that arise from grouping continuous, united data. The following variables were measured at age 15 of the individuals: Occupation of household head, parent presence, family type, proportion of males aged 15-65 in household, number of household members, and sibling positions. Sex ratio, food price, population size, population turnover rate are time dependent covariates, with one year lag effect. Sex ratio is the sex ratio of unmarried men and women aged between 15 and 24, using study area data. Food price is the island-wide food price in Samuel P.S. Ho's Economic Development of Taiwan, 1860-1970 (1978, Appendix Tables A74,A76), in part based on Toshiyuki Mizoguchi's "Consumer Prices and Real Wages in Taiwan and Korea Under Japan Rule," Table A.2. Population size is at the township level. Population turnover rate is the proportion of population that had migrated in and out, measured annually between 1905 and 1945 at the township level.

population size. On the other hand, high rates of turnover—that we interpret as a low level of isolation—were associated with earlier marriage in major and minor fashions.

A number of variables are significant for only one or two of the marriage types, indicating choice between types. As we expected, minor marriage was most popular in northern Taiwan. Also, it was a highly unlikely choice when no parents were present in the household. Major marriage was preferred in towns, even in households with at least one *sim-pua*. Also, it was significantly more likely in the elite and business (compared to farmers) groups and less likely in the households of laborers. Both major and minor marriage benefited from the sheer size of the household. However, the relative presence of male workers in the family had the opposite effects. The more men of working age present in the household, the later the age at marriage would be (significant for major and minor marriage). Clearly, an “abundance” of labor did not encourage the parents to divert funds for an early marriage. Perhaps they were less worried about additional labor or continuation of the patriline and tended to delay the marriage of their sons, at least until they could spare them a lavish wedding. Finally, although uxorilocal marriage was a rare choice in the households with *sim-puas* present, we do find an interesting effect. It was a highly unlikely option for sons who had only younger brothers. This also suggests that *sim-puas* tended to be designated for the first-born son.

Men in Households without Adopted Sisters

Most of the men in our sample (68.4 percent) lived in households without adopted little daughters-in-law. Consequently, they could only marry in the major or the uxorilocal type. We have observed 3,051 marriages of this selected group, of which 87.3 percent were major and 12.7 percent were uxorilocal. Table 3 allows us to understand both the timing of marriage and the choice of type of marriage. A number of outcomes parallel those in Table 2. Again, we find that men in younger cohorts married earlier, that early (major) marriage was stimulated by high sex ratios, that high food prices had a depressing effect on marriage, and that population size and *Hakka* identity were associated with lower hazards of marriage. In towns, major marriage occurred more often and earlier than in villages. Laborers were more likely than farmers to marry uxorilocal, and less likely to marry in the major fashion. The choice for an uxorilocal marriage was more likely in stem family households and when the parents of the man were absent. Perhaps it was “easier” for grandparents to make this kind of drastic decision involving a family member? Leaving home to live in another household was less likely when the man was an only child, had no brothers, or had only younger brothers. This means, of course, that younger sons were the most likely candidates to be sent away for uxorilocal marriage. Major marriage, on the other hand, was less related to sibling position. An only son was more likely to marry in this way than sons with (older) brothers. Again, we see that relatively many male workers in the household lowered the age and likelihood of major marriage, whereas the size of the household influenced the age and likelihood of major marriage in the opposite direction.

Daughters Still Living in Their Parental Household

Daughters that were not adopted out at infancy left home and married in the major fashion (86 percent, $N = 3,589$ observed marriages), or stayed at home and married

Table 3
Cox Regression Estimates of Marriage of Sons Living in Households
in Which No Adopted Girls were Present. Competing Risk Model
by Type of Marriage.

	<i>Major</i>	<i>Uxorilocal</i>
Birth cohort (in birth years)	1.07***	1.05***
Northern region (vs. south)	1.13	3.61***
Town (vs. rural)	1.54***	0.98
Hakka (vs. non-Hakka)	0.45***	0.36***
Sibling position (vs. more than one older brother)		
Only child	1.07	0.67
No brother	1.23**	0.48**
Younger brother only	1.00	0.64**
Occupation of household head (vs. agricultural)		
Elite	1.04	0.82
Industrial	1.06	1.57
Business	0.95	0.51*
Labor	0.67***	1.26*
Parental presence (vs. both present)		
Father present only	0.72***	1.11
Mother present only	0.74***	1.13
Both parents absent	0.68***	1.90**
Family type (vs. grand family)		
Broken family	0.97	1.46
Nuclear family	1.03	1.06
Stem family	1.02	1.52**
Number of household members (square root)	1.13***	0.93
Proportion of males aged 15-65 in household	0.89***	0.97
Sex ratio	5.16***	2.31
Food price	0.98***	0.99***
Population size in thousands	0.98***	0.95***
Population turnover rate	1.76***	1.30
Percent with events (<i>N</i> = 2,261)	54.5%	7.9%
Model X2 likelihood ratio	1,170.0***	235.9***
Df	23	23

Source: Household register files of the Ethnological Institute of Academia Sinica Taipei, Taiwan.

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

Note: For the variables Number of household members and Population turnover, the hazard ratio is expressed at a 10% increase. Events were grouped in months. We use the EXACT method to handle ties that arise from grouping continuous, united data. The following variables were measured at age 15 of the individuals: Occupation of household head, parent presence, family type, proportion of males aged 15-65 in household, number of household members, and sibling positions. Sex ratio, food price, population size, population turnover rate are time dependent covariates, with one year lag effect. Sex ratio is the sex ratio of unmarried men and women aged between 15 and 24, using study area data. Food price is the island-wide food price in Samuel P.S. Ho's Economic Development of Taiwan, 1860-1970 (1978, Appendix Tables A74,A76), in part based on Toshiyuki Mizoguchi's "Consumer Prices and Real Wages in Taiwan and Korea Under Japan Rule," Table A.2. Population size is at the township level. Population turnover rate is the proportion of population that had migrated in and out, measured annually between 1905 and 1945 at the township level.

in the uxori-local fashion (14 percent). The competing risk model for the daughters (Table 4) forms, in some respects, the complementary of the model for sons. In particular, this holds true for the hazards of uxori-local marriage. Daughters that were the only child, those who had no brothers, and those who had only younger brothers had relatively high chances of marrying a living-in husband. Interestingly, in the case of sons, the uxori-local option was *more* likely when his parents were absent. In the case of girls, it became *less* likely without her parents, even after factors such as sibling position and social class were controlled. Parents heading nuclear families tended to choose this option more often for their daughters than parents in other household types. Contrary to our expectations, a shortage of male labor did not (significantly) increase the likelihood of calling in a husband. However, the larger the household, the less likely this became. This fits in with our findings on the effects of parental absence, sibling composition, and the nuclear family. Men were “summoned” to small families, not necessarily because of their labor capacity.⁵⁵

The other outcomes of Table 4 reflect the results in the son’s models. Overall, early marriage was more likely in the younger cohorts, in the northern part of Taiwan, in periods with favorable food prices, in relatively small communities, and in communities with a high turnover. Early (major) marriage was stimulated by high sex ratios and was more likely in towns. Major marriage tended to be delayed when the head of the household had an occupation classified as “elite,” “business,” or “industrial” (compared with farmers). Finally, *Hakka* girls, at least those living with their parents, married later than non-*Hakka* girls. Perhaps the *Hakka* did keep their daughters somewhat longer at home, because of their usefulness for outdoor work.

DISCUSSION

Using a “competing risks” event history analysis has enabled us to gain more insight into how the situation of sons and daughters in Taiwanese families affected both the timing of their marriage and how they were to be married. Apart from the family situation, our models included in the analysis the economic conjuncture as well as characteristics of the communities involved, such as the sex ratio. Thus, we were able to test, and in fact corroborate, many hypotheses that have been proposed in earlier ethnographic studies. However, our calculations have also led to results that need to be investigated in more detail. For example, a relative shortage of male workers in the household did not increase the likelihood of an uxori-local wedding whereas simply a small family size did.

Marriage in early-twentieth century Taiwan had two sides. First, it was entrenched in patriarchy and ancestor worship. Sons were needed to worship the ancestral tablets, and having sons was the prime purpose of marriage. But one married not only out of a filial sense of duty. To be married was also an inalienable personal right to be enjoyed as soon as possible. Second, Taiwanese marriage was flexible within the parameters just sketched. The timing of marriage could be adjusted to accommodate for price fluctuations. Moreover, the type of marriage—that included the residential choice of the couple—could be adapted to the families’ current situation. Thus, men from poor families with too many (older) brothers and no parents to support them could and did marry in the ignoble “uxori-local” way. That is, they came to live in the households of girls, who had no or only younger brothers and whose parents were actively engaged in making a deal with the prospective husband and his family. Many families anticipated the difficulty of finding a suitable

Table 4
 Cox Regression Estimates of Marriage of Daughters Living
 (at Age Fifteen) in Their Parental Households. Competing Risk Model
 by Type of Marriage.

	<i>Major</i>	<i>Uxorilocal</i>
Birth Cohort (in birth years)	1.03***	1.02***
Northern region (vs. south)	1.22*	3.43***
Town (vs. rural)	1.49***	1.38
<i>Hakka</i> (vs. non- <i>Hakka</i>)	0.62***	0.29***
Sibling position (vs. more than one older brother)		
Only child	0.53***	3.89***
No brother	0.61***	5.41***
Younger brother only	0.93	1.79***
Occupation of household head (vs. agricultural)		
Elite	0.81*	0.85
Industrial	0.61*	0.77
Business	0.79**	0.81
Labor	0.95	0.93
Parental presence (vs. both present)		
Father present only	0.93	0.84
Mother present only	0.92	0.94
Both parents absent	1.38*	0.27***
Family type (vs. grand family)		
Broken family	0.90	0.60
Nuclear family	1.17**	1.49**
Stem family	1.08	1.11
Number of household members (square rooted)	1.05	0.73***
Proportion of males aged 15-65 in household	0.97	1.01
Sex ratio	5.16***	2.04
Food price	0.99***	0.99***
Population size in thousands	0.98***	0.94***
Population turnover rate	1.39***	1.50**
Percent with events (<i>N</i> = 2261)	65.0%	10.6%
Model X2 likelihood ratio	590.8***	527.0***
Df	23	23

Source: Household register files of the Ethnological Institute of Academia Sinica Taipei, Taiwan.

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

Note: For the variables Number of household members and Population turnover, the hazard ratio is expressed at a 10% increase. Events were grouped in months. We use the EXACT method to handle ties that arise from grouping continuous, united data. The following variables were measured at age 15 of the individuals: Occupation of household head, parent presence, family type, proportion of males aged 15-65 in household, number of household members, and sibling positions. Sex ratio, food price, population size, population turnover rate are time dependent covariates, with one year lag effect. Sex ratio is the sex ratio of unmarried men and women aged between 15 and 24, using study area data. Food price is the island-wide food price in Samuel P.S. Ho's Economic Development of Taiwan, 1860-1970 (1978, Appendix Tables A74,A76), in part based on Toshiyuki Mizoguchi's "Consumer Prices and Real Wages in Taiwan and Korea Under Japan Rule," Table A.2. Population size is at the township level. Population turnover rate is the proportion of population that had migrated in and out, measured annually between 1905 and 1945 at the township level.

Appendix 1
Distribution of the Type of Marriage of Taiwanese Women
(Born 1880-1920), by Selected Characteristics

		<i>Total</i>	<i>Major Marriage</i>	<i>Uxorilocal Marriage</i>	<i>Censored</i>
		(<i>N</i> = 5,058)	(<i>N</i> = 3,965, 78.4%)	(<i>N</i> = 688, 13.6%)	(<i>N</i> = 405, 8.0%)
		<i>N</i>	%	%	%
Birth cohort	1880-1905	2,356	75.5	16.9	7.6
	1906-1920	2,702	80.9	10.7	8.3
Geographic location	North	4,285	77.1	14.7	8.2
	South	773	85.6	7.5	6.9
Area	Town	1,289	83.1	9.3	7.6
	Rural	3,769	76.8	15.1	8.2
Ethnicity	<i>Hokkien</i>	3,705	78.6	14.2	7.2
	<i>Hakka</i>	1,295	77.9	11.9	10.2
	Aboriginal	58	77.6	13.8	8.6
Sibling position	Only child	606	58.9	26.1	15.0
	No brother	505	51.5	37.6	10.9
	Younger brother only	1,867	82.0	12.2	5.8
	More than one older brother	2,080	87.4	5.4	7.2
Occupation of the head	Elite	263	83.7	7.2	9.1
	Agricultural	2,975	79.9	12.8	7.3
	Industrial	316	74.4	16.5	9.2
	Business	346	76.3	13.0	10.7
	Labor	1,158	75.0	16.5	8.6
Parent presence	Both present	4,161	79.9	13.1	7.0
	Only father present	172	69.8	19.2	11.1
	Only mother present	488	70.9	16.6	22.5
	Both absent	237	73.4	12.2	14.4
Family type	Broken family	157	71.4	14.7	14.0
	Nuclear family	1,895	73.0	19.4	7.6
	Stem family	1,592	80.3	11.7	8.0
	Grand family	1,414	84.2	7.9	7.9
			<i>Mean (SD)</i>	<i>Mean (SD)</i>	<i>Mean (SD)</i>
Number of household members			10.03	6.29	7.82
			(6.80)	(4.47)	(6.34)
Proportion of males aged 15-65 in household			0.29	0.20	0.21
			(0.11)	(0.13)	(0.14)

Note: Minor marriages excluded. Table includes individuals born between 1880 and 1920 and under observation at age 15. Variables were measured at individuals' 15 years of age.

spouse for their son by adopting and raising a daughter-in-law themselves. However, they were equally flexible in adopting her out again, or finding another solution, when the marriage was not to be.

Apart from economic fluctuations and household composition, our outcomes point at many other factors that influence the timing and type of marriage. These factors are behind the strong regional and temporal variation in marriage that was found when anthropological studies of various Taiwanese field sites were compared. Our analysis of individual households suggests that *Hakka* men and women, who did not marry in the minor fashion, married later than other people. This was not found in earlier studies, possibly because they were based on more aggregated material. The delay of marriage may be related to the outdoor work of *Hakka* women, whose feet were not bound. There are also differences between the north and south of Taiwan. In the north (and northwest), marriages were even earlier and more universal than in the south. However, because we have only two field sites to represent the south, we need to be cautious in this respect. People in towns had a higher propensity for major marriage than people living in rural areas.

Depending on the gender of their child, the social status of the parents had a different bearing on the marital choice. The higher the occupation of the father, the earlier the marriage of the sons. Sons of laborers tended to marry relatively later and left home more often to join another household, at least temporarily. For daughters, on the other hand, high social status was associated with marriage delay, at least to some extent.

In the period under consideration, Taiwan was undergoing rapid change. The strong male surplus of the period about 1900 was disappearing, which eased the pressure on the adoption and marriage markets. People in the younger cohorts were less inclined to adopt a *sim-pua* and less eager to marry one that was already present. In addition, people began to benefit from the rapid commercialization of the country, although the economy was strongly subjected to Japanese colonial rule. Increased wealth may have led to a renewed interest in major marriage and a decline in the need for uxrilocal marriage. Possibly, instead of reverting to uxrilocal marriage, people chose to delay the wedding date in response to economic bad times. "Modern" notions of romantic love corroded paternal hold on partner choice, at least in the most disliked form of minor marriage.

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