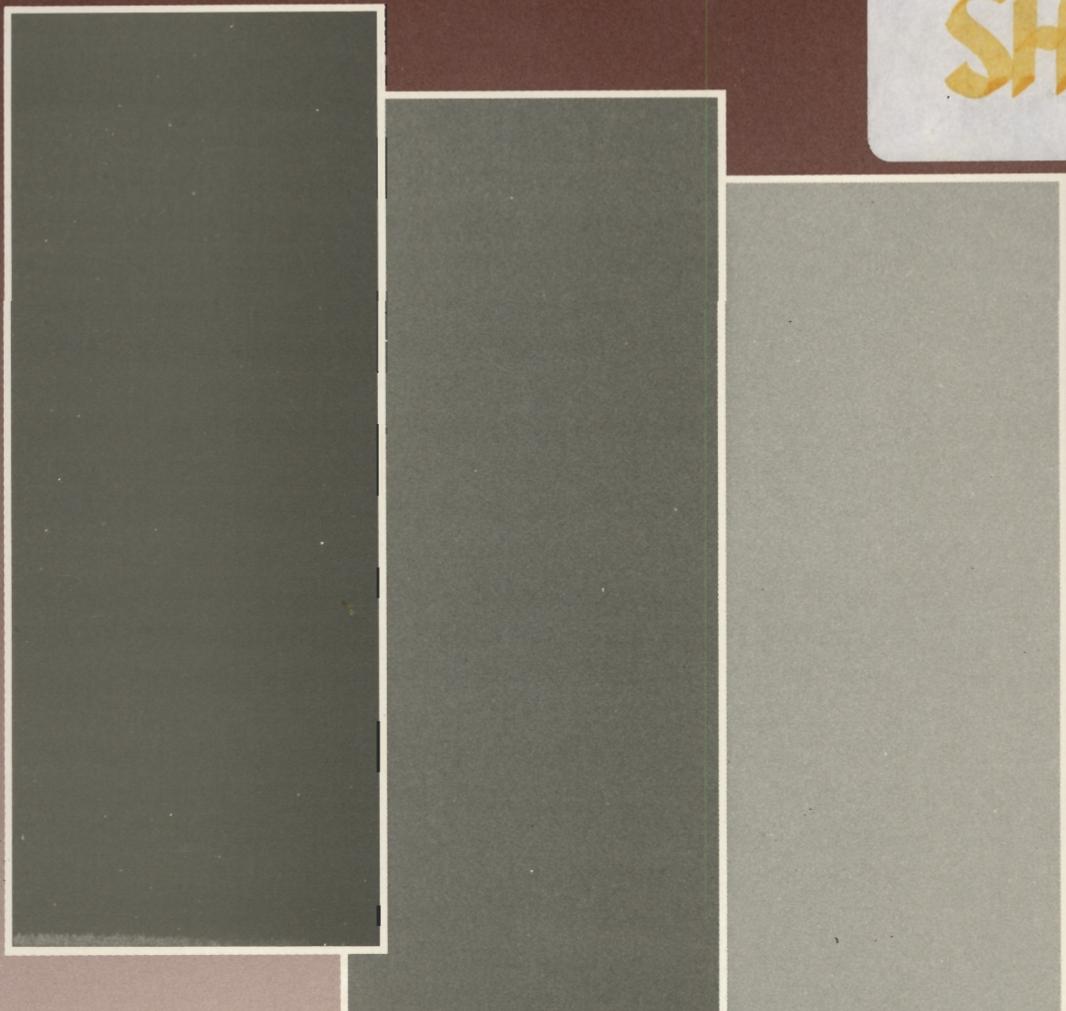


When to Marry and Where to Live? A Sociological Study of Post-nuptial Residence and Age of Marriage Among Central Thai Women

SHOW



Aphichat Chamratrithirong
S. Philip Morgan
Ronald R. Rindfuss

Institute for Population and Social Research
Mahidol University
September, 1986

IPSR Publication No 102
ISBN 974-586-082-4

When To Marry and Where to Live ?
A Sociological Study of Post-nuptial Residence
and Age of Marriage Among Central Thai Women

Aphichat Chamratrithirong*
S. Philip Morgan
Ronald R. Rindfuss

IPSR publication number 102
September, 1986

*The authors are listed in alphabetical order. Aphichat Chamratrithirong is an Associate Professor of Demography and Deputy Director at the Institute of Population and Social Research, Mahidol University, Salaya, Nakornchaisri, Nakornprathom, Thailand. Philip Morgan is an Assistant Professor of Sociology and a member of the Graduate Group in Demography, University of Pennsylvania, 3718 Locust Walk/CR, Philadelphia, PA 19104. Ronald R. Rindfuss is a Professor of Sociology and Fellow of the Carolina Population Center, University of North Carolina, Chapel Hill, NC 27514.

ACKNOWLEDGEMENTS

This research has benefited from "center" grants made to the Carolina Population Center from the Hewlett Foundation and the National Institute for Child Health and Human Development. Peter Smith and Tom Fricke of the East-West Population Institute facilitated the research reported here in numerous ways. Erika Stone's computing assistance made this research possible. Excellent data collection efforts, quantitative and qualitative, were provided by the staff of the Institute for Population and Social Research, Mahidol University. Thanks are due to Mr. Yothin Sawangdi for the implementation of focus group study. Finally, comment from Jere Behrman, Larry Bumpass, Andy Cherlin, Rebecca Huss-Ashmore, John Knodel and Allan Parnell have been very helpful.

Abstract

While the relationship between household structure and family formation has been theoretically central to family sociology and social demography, empirical evidence of strong links have been elusive. One reason is that the important links may change with modernization and vary across societies with different religious and cultural heritages. We examine the relationship in Thailand, a society with considerable flexibility regarding post-nuptial residence expectations, but also a society where this flexibility varies by ethnicity and residence. As expected, the relationship between household structure and family formation is weak, but the pattern changes within Thailand in a theoretically appealing manner. In sum, the strength of the relationship depends on the institutional context which defines the parental roles and stakes in the marital choice and fertility behavior of their children. Furthermore, and quite unexpectedly, our work shows that post-nuptial residence has been conceptualized far too simplistically. We show that living apart after marriage is, and has been for some time, quite common in Thailand. After demonstrating the plausibility of this finding, its theoretical implications are discussed.

Contents

	Page
I. Living Arrangements and Family Formation	1
II. Data	8
III. Variable Definition	11
IV. Measurement of Post-Nuptial Living Arrangements	15
V. The Post-Nuptial Residence Decision	24
VI. Age at marriage and Post-Nuptial Residence	34
VII. Discussion and Conclusion	41
REFERENCES	47

List of Tables

Table	Page
Table 1. Independent variables used in the analysis	12
Table 2. Post-nuptial living arrangements by ethnicity and place of residence	18
Table 3. Distribution of ever-married women by current marital status, age and residence category : 1960, women 13-29	23
Table 4. Polytomous logit results (beta's) for post-nuptial living arrangements	25
Table 5. Percent distribution of post-nuptial living arrangements by place of residence, origin and ethnicity : for women who did not work in the modern sector prior to marriage, and all other variables set to their mean	27
Table 6. Percent distribution of post-nuptial living arrangements by relative status of husband's and wife's families and place of residence (For Thai women who did not work in the modern sector prior to marriage. All other variables set to their mean)	31
Table 7. Percent distribution of post-nuptial living arrangement by whether or not the wife worked in the modern sector prior to marriage, place of residence , origin and ethnicity.(All other variables are set to their means)	33
Table 8. Mean age at marriage and estimated effects of post-nuptial residence on age at marriage by strata-ethnicity	36
Table A-1. Model producing the effects in Table 8	51

I. Living Arrangements and Family Formation

The connection between household structure and family formation patterns on the one hand, and industrialization, urbanization and tradition on the other hand, holds, a theoretically prominent position in family sociology and social demography (e.g. Davis, 1955; Caldwell, 1982; Ryder, 1983). For example, in premodern Western Europe an agricultural system coupled with primogeniture produced a pattern of late age at marriage and stem family living arrangements. Premodern China provides an alternative example: an agricultural system coupled with the strong Confucian imperative to retain links through male offspring between past and future generations produced an early age at marriage, extended family living and an extremely strong son preference (Levy, 1966).

Changes in both age at marriage and household living arrangements are expected in response to urbanization and industrialization. In Western Europe the increased availability of urban jobs and a variety of opportunities available in the New World led to a decline in age at marriage and stem families (see Levine, 1977). Asia provides other convenient examples. Throughout much of Asia, urbanization is proceeding rapidly, as the mode of production changes. Indeed, Asia provides some of the best contemporary examples of rapid and successful industrialization. At the same time, age at marriage is rising in much of Asia (see Smith, 1980). But while there has been some

decline, extended residence remains common and important (Palmore et.al, 1976; Freedman, 1979; Morgan and Hirosima, 1983).

Household structure and family formation are theoretically inter-related. Extended family residence patterns are often cited as a prop for high fertility (Davis, 1955; Lorimer, 1954; Goode, 1982). The economic cost of children as well as some child care is born by the extended family rather than the nuclear family. And, with some of the capital expenditures (e.g. housing) being provided by co-resident kin, earlier ages at marriage are possible--indeed encouraged. This is particularly expected when marriages are arranged. It was argued that parents wanted a pliable, and thus young, daughter-in-law. Despite the theoretical appeal of this position, early empirical research failed to establish a consistent relationship between household structure and any aspect of family formation. However, there is mounting evidence that this early literature was plagued by severe methodological difficulties, such as using household living arrangements at the time of the interview to predict fertility behavior many years in the past. (see Burch and Gendell, 1971, and Morgan and Rindfuss, 1984 for a review of the methodological problems that have characterized this literature). Two recent papers that avoid past methodological problems (Morgan and Rindfuss, 1984; Abdelrahman and Morgan, 1986) find the expected theoretical relationships in diverse settings: Korea, Malaysia, Egypt and Urban Khartoum. Although a variety of mechanisms

might be operating, it most likely involves the perception of the malleability of young brides which allows the new family member to be more easily resocialized to fit her new role. Thus, earlier marriage results because of paternal control over marriage.

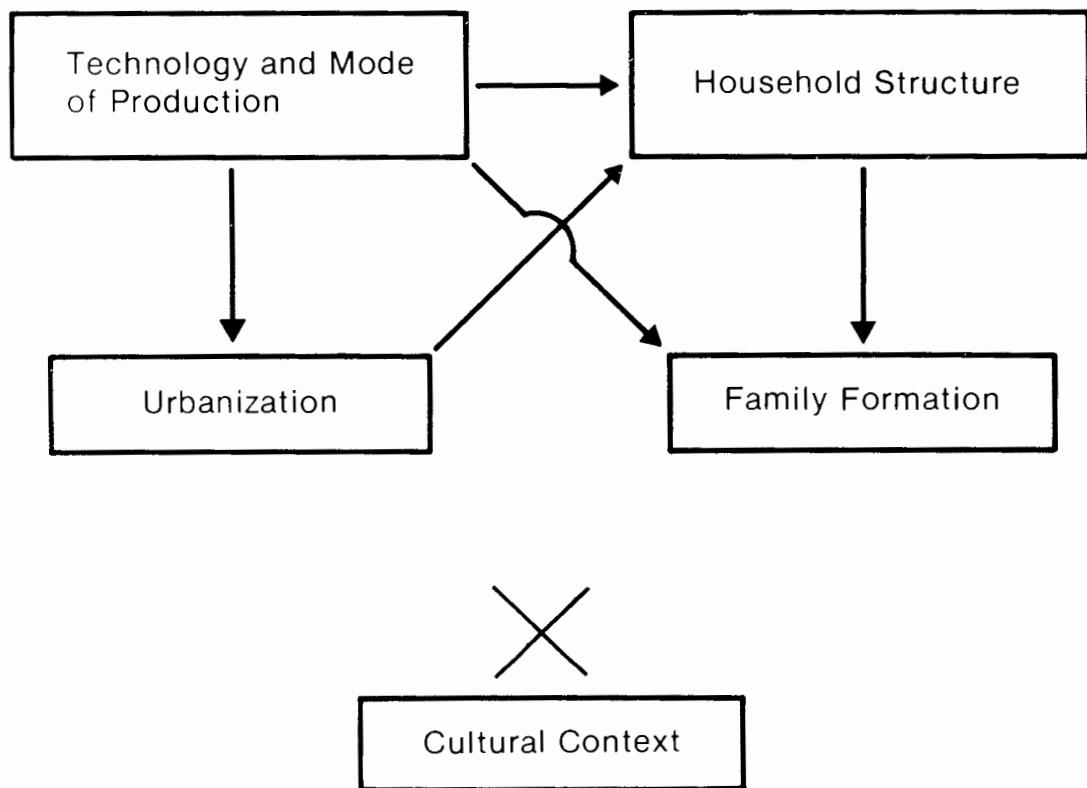
After establishing that a relationship exists between post-nuptial residence and age at marriage in several Asian and African contexts, the question of interest shifts to the conditions which determine the strength and form of the relationship. In other words, does the process shown in Figure 1 interact with social or cultural context? Are there other factors in a society's historical, religious or cultural heritage that would tend to reinforce or attenuate the relationship between household structure and the timing of family formation? We expect that the patrilocal effect will be stronger in contexts where: a) parents have a greater power to arrange marriage, b) where extended residence is expected to be long term, and c) where patriarchy is stronger. As McNicoll (1980) says:

Whether marriage decisions are made by the members of a couple themselves or by their parents is clearly a potential important distinction... Different interests may be at stake, with the parent's own welfare or their view of corporate family interests over time dominating in the later case.

Caldwell et al., (1983:348) describe a decision context in South India where the effect of residence should be quite strong:

Parents are not primarily choosing a wife for their son, with the added qualification that she should suit them. They are primarily acting as the principals in selecting their daughter-in-law, the next female generation of the stem household, and it is this role which will determine the timing of marriage and the characteristics of the girl.

Figure 1. Model of the determinants of household structure and family formation



¹ Where "X" signifies an interaction.

Ideally, to see if the strength of the household structure and family formation relationship varied across contexts, one would like micro level data from a variety of countries such that context could be a variable that explicitly varies. (see Entwistle and Mason, 1985, for an application along these lines to the question of the effect of socioeconomic development and family planning services on children ever born). Unfortunately, the appropriate micro data are not available for a sufficiently large number of contexts. So we have adopted an alternative strategy of examining a country, Thailand, where we expect weak links between post-nuptial residence patterns and age at marriage. If our expectations are confirmed, then the theoretical and empirical foundation would be present for including the requisite data in future surveys in a variety of settings allowing for a more thorough examination of contextual effects.

Post-nuptial residence and marriage timing should be weakly related in Thailand for a number of reasons. Earlier we stated that the strength of this link should vary with parental power to arrange marriages, expected duration of extended residence, and the degree of patriarchy. In Thailand, matri-local residence (with wife's parents) is the culturally preferred pattern, but the residence rules are quite flexible. The young couple often live where they have the greatest access to important resources. Further, extended family residence is expected to be temporary, thus minimizing its cost saving benefits and the stake of other family members in the choice of spouse. Fi -

nally, young Thais have substantial say in the choice of their spouse, age at marriage has been late traditionally, and women have higher relative status than in most other Asian countries.

The preference to live with wife's parents and traditionally late age at marriage (i.e., after 20) are rooted in Thai Buddhist practice. Parental activity, especially the mother's, of giving birth to and raising a child, results in the child owing them a debt, Bunkhum. The process of paying off this debt is flexible, but one should strive to pay it. By being ordained, that is entering the monkhood for three or more months, boys can pay off their Bunkhum (Rabibhadana, 1984). Since ordination does not take place until after age 20, and since one is commonly expected to be unmarried at ordination, this practice traditionally delayed marriage. Girls do not enter the monkhood. Instead they are expected to pay their debt to their parents by helping out around the house, taking care of younger siblings and otherwise assisting their parents. Hence, a preference exists for matrilocal residence.

However, one should not assume that the residence rules are rigid. Instead they are quite flexible (Rabibhadana, 1984; podhisita, 1984; Limanonda, 1983; Chamrattrithirong, 1984). Foster (1975:35) notes:

Newly married couples determine where they will go to live on the basis of expediency rather than on the basis of some kind of neat, clear cut, and widely observed rule.

While a clear exaggeration, flexibility is a central tenant of the Thai post-nuptial residence arrangements. In referring to this pattern of living where the resources are greatest, we shall make use of Jacobson's (1980) term lucrilocality, defined as living in an extended or shared household and choosing among a variety of options (his parents, her parents, his relatives, her relatives) based on "where one has access to strategic resources." Flexibility also extends to the length of time the couple spends living with either his or her parents (Podhisita, 1984). In most cases, the expectation is that the stay will be temporary. The length of stay is determined by the circumstances and resources of both the newly married couple and the older generation.

Our analysis does uncover an association between post nuptial residence and age at marriage--and, as expected, it is quite weak. However, in addition to examining this theoretically interesting case, our work shows, and frankly quite by accident, that post-nuptial residence has been conceptualized too simplistically. A three category variable is usually used: lived with wife's parents, lived with husband's parents, and lived neolocally. Sometimes a small residual group, such as living with relatives, is included. This information is typically obtained by asking one of the spouses whether they a) continued to live with their parents, b) moved to the spouse's parents household, or c) set up their own household. Alternatively there is a question that presupposes cohabitation, such as : After marriage where did you and your husband live? Indeed this presumption of post-

marital cohabitation is firmly rooted in the sociology of the family. Despite the fact that sociologists in Western countries are concerned with cohabitation prior to marriage, post-marital cohabitation is never questioned. Our data suggest that many newly married Thai couples do not reside in the same household immediately after marriage, and that this has been case in Thailand for quite some time. Qualitative data obtained from several focus groups also suggest that living apart after marriage is common, and this qualitative data provides possible explanations for living apart. Separate from the implications of marital non-cohabitation for the post-nuptial resident and age at marriage hypothesis, the high prevalence of non-cohabitation raises more fundamental questions about the manner in which sociologists conceptualize marriage--a topic to which we will return in the concluding section.

II. Data

The principal data set used is the Thailand Asian Marriage Survey, Conducted December 1978 - April 1979. Three strata were included in the sample design: rural, urban middle, and urban lower. The rural sample was obtained from a small community in Angthong Province, in the Central plains of Thailand, approximately 70 kilometers north of Bangkok. This area represents Buddhist Central Thailand socio-culturally. Rice farming predominates. The urban middle sample was drawn from the Bangkok metropolitan area. It characterizes the urban capital of the country and is generally identified by Central Thai culture. The

lower urban sample was taken from a well-known and established squatter community in Bangkok called "Slum Kong Toey." The area is representative of the urban-poor in Bangkok. Thus, it should be pointed out that this data set should not be used to generate descriptive distributional statistics for Thailand. Rather it reflects central plains culture. It is a very rich data set that allows for exploration of structural and cultural processes surrounding marriage; but one should not take our estimates as representative of all of Thailand.

Interviews were conducted with 1,679 evermarried women aged less than 45. In addition, 994 of their husbands who were available for interview were also interviewed. As will soon become apparent, a clear and unique identification of post-nuptial residence requires information from both the wife and the husband. Thus our analysis will be limited to those couples where both the husband and wife were interviewed.¹

Since this is an ever-married sample with an upper age limit, the youngest birth cohorts and the oldest marriage cohorts are biased towards a young age at marriage (e.g., Westoff and Ryder, 1977, Appendix C 2). In order to limit the effect of this bias and to focus attention on recent behavior, we have restricted our analysis to women first married in the last 15 years. Given

1

We checked to see whether any of the variables in which we were interested were significantly related to whether or not the husband was interviewed. The only one that was is strata. Urban husbands were somewhat more difficult to locate than rural husbands. Thus, as long as we control on strata, results based on the husband interviewed sample should be unbiased.

that very few women first marry past age 30 in Thailand (see Rindfuss, et al. 1983), this set of marriage cohorts is essentially unbiased.

In addition to the quantitative results, the unexpected nature of some of our results prompted us to obtain qualitative data to both confirm our results and suggest explanations. We conducted a series of focus groups--a technique which has recently been successfully used by social scientists in Thailand (e.g., Knodel, et al. 1984) and has been a staple in marketing research in the United States. Basically the procedure consists of bringing together a small number of individuals with roughly similar characteristics for a group discussion directed by a moderator working with a prearranged set of discussion questions. Initially, four discussion groups were assembled. Two in the rural area from which the Thailand Marriage Survey data was collected and two in the "Slum Klong Toey" section of Bangkok. In both cases, one focus group consisted of ever--marriage women who had been married 10-15 years, and the other consisted of ever--married women who had been married less than 5 years. All four of these focus groups dealt with the general topic of age at marriage and post-nuptial living arrangements. Subsequently, a fifth focus group was added which consisted of ever-married women from "Slum Klong Toey" who were separated from their husbands in the period immediately following marriage. This last focus group

III. Variable Definition

Our quantitative data set, the Thailand Marriage Survey, contains a rich set of variables that should affect both post-nuptial living arrangements and age at marriage. Some are quite standard and would be expected to have a strong effect in a variety of countries. Others are more uniquely representative of Thailand. We discuss these independent variables, their rationale and measurement, prior to discussing the measurement of post-nuptial living arrangements.

Marriage cohort represents trend. Other things being equal, we expect the more recent cohorts to marry later (Smith, 1980) and to establish nuclear households (Goode, 1963; 1982). After some experimentation, we dichotomized marriage cohort: 1-7 years and 8-15 years. (Sample distributions are shown in Table 1).

Table 1. Independent variables used in the analysis

Variable	Definition	Mean ¹
Marriage cohort	1 if most recent ²	.57
Place of birth and Strata :		
Rural born-Urban low		.19
Urban born-Urban low		.11
Rural born-Urban middle		.17
Urban born-Urban middle		.14
Rural born-Rural	Omitted category	
Chinese	1 if Chinese	.12
Relative social status		
Wife is higher		.11
Equal	Omitted category	
Husband's higher		.13
Education		
4 years		.14
4 years	Omitted category	
4 years		.24
Wage work	1 if worked for wages before first marriage	

¹These are the means for women first married in the last 15 years whose husband's were also interviewed.

²Married in the seven years preceding the interview.

Because the data consist of essentially three separate samples, we include strata (rural, urban-low and urban middle) as a variable. We also systematically checked whether strata interacted with other relevant variables. In our preliminary analysis there were a substantial number of such interactions. However, it became clear that most of them were the result of differences in place of birth. To simplify the analysis, we constructed a five category² variable that represents the interaction of place of birth (rural or urban) and strata.

Thailand, like many South-East Asian countries, has a substantial Chinese minority. Even though they are well integrated into Thai society, the influence of traditional Confucian heritage on both post-nuptial living arrangements and age at marriage would be expected. For example, we expect Chinese to be far more likely to live with husband's parents than non-Chinese Thais. There was no direct question included on ethnicity, but there were several ways to identify Chinese, including questions on father's and mother's place of birth, and questions on the rituals used in the marriage ceremony. Overall, one in eight of our couples is of Chinese heritage.

A question was included on the relative status of the spouses' parents. The question in the wife's questionnaire was:

²The sixth possibility, urban-born and currently rural, empirically was an empty cell.

H.26: Please compare your parent's status and that of your husband's parents at the time of your marriage. Socially speaking, were your parents of - - -

higher social status than your husband's	= 1
about equal social status as your husband's	= 2
lower social status than your husband's	= 3
don't know	= 4

Given the expectation that couples will reside where the most resources are available, these perceptions should affect post-nuptial living arrangements. When both husband and wife were interviewed, the husband's family was coded as having a higher level of resources if both husband and wife agreed this was the case. Similarly, if they both agreed that the wife's family had more resources, then the resources variable was so coded. All other respondents (roughly three-quarters of the sample) were treated as if the two families had equal levels of resources.

Education would be expected to have strong effects on both age at marriage and post-nuptial residence patterns. In Thailand, a fourth grade (or pratom) education is the mode, 62% of our sample. We hinged our education variable on this strong mode and created three education categories: <4, 4,>4.

Finally, we expect that the wife's work status before marriage would affect both post-nuptial living arrangements and the timing of her first marriage. Several dimensions of her work status were examined in our preliminary work. First, some women did not work before marriage. Approximately one third of the women worked on a family farm or in some agricultural activity. While most of those who worked in farming tend to currently

live in rural areas, there are some in the urban areas who also worked in farming. Most of these, of course, migrated to the urban area subsequently. The remaining women worked in various nonagricultural activities prior to getting married. We subdivided these nonagricultural workers into whether or not they worked in a family business. Our expectation was that the presence of a family business might make the husband more likely to be drawn into the wife's family, including residentially. Approximately 20% of the women worked in a non-farm, family business. These family businesses range from street vendors to more substantial businesses. The remaining women worked for wages in a non-farm activity prior to marriage. Our initial work with both dependent variables showed that the big distinction was between working in the modern sector and all others. Thus in the results presented here, we collapsed the work before marriage variable into two categories: those who worked for wages in the modern sector before they were married and everyone else.

IV. Measurement of Post-Nuptial Living Arrangements

Respondents were not directly asked about their post-nuptial living arrangements. Instead they were asked a series of questions that makes the calculation of post-nuptial living arrangements possible. The particular series of questions asked have the additional advantage that they allow us to see if the husband and wife are residing in the same household. As we shall

see, this approach serendipitously allows for considerably more insight into the nature of post-nuptial residence than the traditional approach of just asking one spouse one question. Respondents were first asked about living arrangements just prior to marriage:

C.6: Whom were you living with in the period just before you first married ?

Both mother and father	=	01
Mother but not father	=	02
Father but not mother	=	03
Mother and stepfather	=	04
Father and stepmother	=	05
Dormitory/with friends	=	06
Employers's house	=	07
other's: (specify)	=	08

The substantially later in the interview they were asked if they had changed residence immediately after marriage. If they had, they were asked:

H.33: Did you move

to a house of your spouse's family	=	1
to a house of your family	=	2
to a house of your own	=	3
other (specify)	=	4

From this series of questions it was possible to classify each respondent into one of the following categories: own parents, spouse's parents, neolocal, and relatives. When both husband

and wife are interviewed, it is possible to cross-classify these two variables to see whether or not the couple was living together early in marriage.³ Following these procedures we obtained the distribution for post-nuptial living arrangements shown in Tables 2.

³In the situation where they both indicated that they were living with relatives, we do not know for sure whether they were living together or not. We classified all such couples as living together.

Nevertheless, among those who did not conceive premaritally, the proportion childless at 2 years of marriage is significantly higher in the "apart" group, again suggesting the classification of post-nuptial residence is valid.

Another possible source of misclassification arises from couples who live together prior to marriage. If a couple is living together before marriage, the sequence of questions above could make it appear that they are living apart after marriage. For example, if both before and after marriage they were living together in the wife's uncle's house, then both would be classified as not having changed residence after marriage. Given our conservative assumption of no cohabitation prior to marriage, they would then be classified as living apart after marriage. Unfortunately we have no information on whether they were cohabiting prior to marriage. However, it seems safe to assume that if either or both were living with their parents prior to marriage, it is unlikely that they were cohabiting. Of those, where the husband, wife or both lived with their respective parents immediately prior to marriage, 34 percent are classified as living apart after marriage. Among those couples for whom neither spouse was living together prior to marriage, 49 percent were living apart after marriage. This calculation suggests that there might be some overestimating the percent living apart after marriage. But even among those living with their parents prior to marriage, more than a third were not residing with their spouses immediately after marriage. Thus, if we are overestimating the living

apart group, it is only by a modest amount.⁴ Clearly a substantial proportion of couples belong in this category.

Further corroborating evidence on the proportion living apart from their spouses comes from the 1960 Census as reported by Goldstein and his colleagues (1973). Table 3 shows the distributing of ever--married women by marital status and residence status in 1960. This table refers to current status rather than post-nuptial. Nevertheless, it clearly suggests that living apart is quite common in Bangkok, and exists in nontrivial proportions throughout the rest of the country. For example in Bangkok, one half of the 13-19 year olds are living apart for reasons other than marital discord, as are one third of those aged 20-24 and one fifth of those 25-29.

It short, even though there may by some misclassification of the "apart" category (because it was obtained inferentially rather than directly) we feel confident that living apart is very common experience for newly married Thai couples and that our estimates are in the correct range. The focus group data confirm this claim, as will be discussed subsequently. Further-

⁴ It is also quite possible that we are underestimating the living apart group. Recall that our analysis is limited to couples where both the husband and wife were interviewed. Those women for whom the husband was not interviewed may be more likely to have begun married life by living in separate households and may still be living in separate households.

V. The Post-Nuptial Residence Decision

Since the post-nuptial residence variable is an unordered categorical variable with five choices (wife's parents, husband's parents, neolocal, relative, and apart), we used polytomous logistic regression as the estimation technique (McFadden, 1976; Pinddyck and Rubinfeld, 1981; Schmidt and Strauss, 1975). We fit a wide variety of models which tested for additive and interactive effects of independent variables. Our final or "preferred model" incorporates the substantively interpretable and statistically significant effects uncovered in these earlier analyses. Here we present the results of our preferred model without reporting the details of the model selection process.

Table 4 shows results from the polytomous logistic regression. The betas are shown for all possible contrasts. These coefficients represent reductions or increases (depending on the sign) in the log odds of being in the first category relative to the second. All of the predictor variables are categorical, so the coefficients should be interpreted relative to the reference category. It may be helpful to remember that coefficients of 1.0 and 0.5 represent respective increases of approximately 2.7 and 1.6 times the probability of being in the first versus the second category.

Despite the tremendous changes in Thailand's economy and substantial rural-urban migration, there has been very little

Table 4. Polytomous logit results (beta's) for post-nuptial living arrangements

Contrast:									
	Husband's parents vs wife's parents	Neolocal vs Wife's parents	Relative vs Wife's parents	Apart vs Husband's parents	Neolocal vs Husband's parents	Relative vs Husband's parents	Apart vs Husband's parents	Relative vs Husband's parents	Apart vs Husband's parents
Predictor Variable									
Marriage cohort	-0.20	-0.28	-1.00*	-0.49	-0.07	-0.80*	-0.29	-0.72	-0.21
Residence and place of birth:									
Urban low, Rural born	1.62*	2.52*	4.90*	2.79*	0.90	3.27*	1.18*	2.38*	0.28
Urban low, Urban born	1.01*	0.59	3.08*	0.99*	-0.41	2.08*	-0.02	2.49*	0.39
Urban middle, Rural born	3.76*	3.49*	6.16*	3.80*	-0.26	2.40*	0.04	2.67*	0.31
Urban middle, Urban born	0.67	0.10	2.14*	0.91*	-0.77	1.47	0.24	2.49*	1.01
Chinese	1.75*	1.33*	0.27	1.00*	0.41	-1.47*	-0.74	-1.06	-0.33
Relative social status:									
Husband's higher	0.99*	0.07	-1.94	0.11	-0.93*	-2.94*	-0.88*	-2.01	0.04*
Wife's higher	-0.84*	0.43	-0.41	-0.70*	0.40	0.43	0.14	0.02	-0.27
Education									
High	0.21	0.25	-0.95	0.19	0.04	-1.16*	-0.01	-1.21*	-0.05
Low	0.08	0.34	-0.05	0.50	0.41	0.04	0.58	-0.39	0.16
Wage Work	-0.41	0.07	2.47*	0.03	0.49	2.89*	0.44	2.40*	-0.05
Wage work by urban interaction	-0.03	0.79	-2.75*	-0.27	0.82	-2.72*	-0.25	-3.54*	-0.11
									2.47*

* = Significant at 0.05.

change across marriage cohorts in post-nuptial residence patterns. The only exception is the propensity to live with relatives: couples in the most recent marriage cohort are less likely to live with relatives than was the previous cohort.

The effects of place of birth and current residence, are somewhat complex because of interactions, between these variables and with wage work. To make the effects more visible, we have evaluated the model for each place of residence combination-- for non-Chinese women who did not work in the modern sector prior to marriage, setting all other variables equal to their mean. Since the typical Chinese is urban born, and middle class, we have also evaluated the model for this group as well. The results are shown as percentages in Table 5. These results can be thought of as simple percentages, but they are not. Rather they represent probabilities for the types of individuals specified, and incorporate the multivariate power of logistic regression.

Table 5. Percent distribution of post-nuptial living arrangements by place of residence, origin and ethnicity : for women who did not work in the modern sector prior to marriage, and all other variables set to their mean¹

Post-nuptial residence	Rural born :			Urban born :		Urban-middle Chinese
	Rural	Urban low	Urban middle	Urban low	Urban middle	
Wife's parents	46	6	2	22	27	10
Husband's parents	17	10	27	23	19	40
Neolocal	5	8	7	5	3	4
Relatives	1	11	12	7	3	2
Apart	32	64	53	42	47	45
Total ²	100	100	100	100	100	100

¹ Unless specified, these distributions are for non-Chinese couples.

² May not add to 100 because of rounding error

The results in Table 4 and 5 suggest that living apart, with relatives, or neolocally--none of which are preferred arrangements--are responses to migration, and most likely influenced by economic opportunities. Those born in rural areas but currently living in Bangkok are most likely to establish their own residence, live with relatives or live apart. The majority of the rural born who are currently living in the Klong Teoy Slum lived apart post-nuptially. This finding suggests that the spouses resided wherever they could find work--a possibility often suggested in the focus group discussions. Note, that the other groups in Table 5 also have a third or more living apart. While some separation surely results from work related migration, the focus group data suggest numerous other reasons why couples might live apart post-nuptially. For example, in order to "force" the marriage some would live apart:

Some did not ask the parents for permission and slept together without begging pardon (a Thai ceremony). They did not want anyone to know so they lived at separate places. Sometimes they would be at the same house but could not sleep together because they did so secretly and could not reveal it.

In the focus group that consisted entirely of couples who had lived apart subsequent to marriage, we asked if they had considered postponing marriage until such time as they could have a joint residence. Several suggested that they were afraid the marriage would never take place:

If we waited, we might split up.

Just that if he meets a new girl, more beautiful, he will fly away.

Afraid that he will get a new woman if we don't hurry.

An additional reason is suggested by the temporary nature of living in the wife's parents' house after marriage. For both the Indian and Chinese marriage systems, the woman is expected to reside in the husband's parents' house, and this arrangement is expected to be relatively permanent. The literature on both family systems is replete with references to the conflict that extended family living can generate. Yet curiously, the literature on the Thai family is almost silent on this obvious source of conflict. It may be that temporary migration is a means of avoiding conflict with in-laws:

The mother of the bride does not like the son-in-law, or the mother of the groom doesn't like the daughter-in-law. That is why the couple is separated.

Some couples are separated because the girl's father is cruel. The following exchange more explicitly illustrates the role of conflict. A woman who lived separately from her husband at marriage was asked how long they lived apart:

Nearly 2 months. [Moderator: Why was it so long?] He dare not. He was afraid of my parents.

From our focus groups we have several examples of government officers who are required to live "up country" or are employed in construction work that required moving to various sites around the country. Finally, there is another reason that was repeatedly hinted at in the screening for the lived apart focus group: the wife was a minor wife (i.e. mistress or second wife) or the wife had been a prostitute. Because of the sensitive nature of both of these reasons, such individuals did not participate in the focus

group--indeed discussion along these lines would probably be inappropriate for a focus group. Nevertheless, both are possibilities in Thailand and both might lead to separate residences.

As we showed earlier, Thais and Chinese have distinct residence patterns. These are clearly evident in Table 5. Thais are more likely to live with the wife's parents; Chinese with the husband's parents. Rural Thais are the most likely to follow the traditional practice of living with the wife's parents because housing conditions in the rural area are most amenable to extended families.

In addition to the strong preference to live with wife's parents, there is also a tendency to live with the parents who have the most resources, i.e. *lucrilocality*. The effect of relative parental resources clearly indicate *lucrilocality*. Table 6 shows the post-nuptial residence distribution for three categories of parental resources. Since post-nuptial living arrangements vary with residence, the distributions are shown once for rural couples and once for urban-born, middle-class couples. The pattern is clear and strong in both cases: an imbalance in resources makes the richer set of parents a more attractive post-nuptial residence choice. Furthermore, if both sets of parents have approximately equal resources, then the couple is more likely to live apart.

Table 6. Percent distribution of post-nuptial living arrangements by relative status of husband's and wife's families and place of residence (For Thai women who did not work in the modern sector prior to marriage. All other variables set to their mean)

Post-nuptial residence	Rural			Urban middle,		Urban born
	Wife's higher	Equal	Husband's higher	Wife's higher	Equal	Husband's higher
Wife's parents	62	45	34	42	26	20
Husband's parents	9	16	33	13	18	37
Neolocal	5	6	5	3	3	2
Relative	1	1	0	5	4	0
Apart	23	33	28	38	48	41
Total ¹	100	100	100	100	100	100

1

May not add to 100 because of rounding error.

Sociologists often predict that modernization will bring about a reduction in extended family living (e.g., Goode 1963; 1982). Even though the marriage cohort results argue against this expectation, one might expect the better educated women to be more likely to reside neolocally. This, however, is not the case. Education has little affect on post-nuptial residence (see Table 3). The only exception is that those with the highest level of education are less likely to live with relatives.

The final predictor variable we examined is whether or not the wife worked for wages in the modern sector prior to marriage. The effect of premarital work interacts with current residence, thus making interpretation of the results cumbersome. In Table 7 we show the effect of wage work on post-nuptial residence patterns for three different current residence groups: a) rural, b) rural born currently urban middle, and c) urban born Chinese currently living in an urban middle area (As before, all the other predictor variables are set to their means.) For rural couples, if the wife worked in the modern sector, living with relatives is more likely and living with husband's parents is less likely. We expect that these are women who were living in Bangkok both before and after marriage, and have since returned to the rural areas. Such return migration to rural areas is common in Thailand, particularly in the central region where our rural sample was obtained. On the other hand, for urban women, having worked in the modern sector prior to marriage increases the pro-

bility of neolocal residence. This is the case for both groups of urban residents shown in Table 7.

Table 7. Percent distribution of post-nuptial living arrangement by whether or not the wife worked in the modern sector prior to marriage, place of residence, origin and ethnicity. (All other variables are set to their means)

Post-nuptial residence	Rural		Rural born-Urban middle		Chinese-Urban Middle	
	Worked in modern sector	Did not work in modern sector	Worked in modern sector	Did not work in modern sector	Worked in modern sector	Did not work in modern sector
Wife's parents	44	46	2	2	12	10
Husband's parents	11	17	20	27	31	40
Neolocal	6	5	19	7	12	4
Relatives	8	1	10	12	1	2
Apart	32	32	48	53	44	45
Total ¹	100	100	100	100	100	100

¹ May not add to 100 because of rounding error.

VI. Age at Marriage and Post-Nuptial Residence

We now turn to the issue of the relationship between post-nuptial living arrangements and the timing of marriage. This is a issue that raises questions regarding the relationship between temporal ordering and causal ordering. What is operationally measured is the actual behavior: a) year and month of marriage and b) living arrangements during the first three months of marriage. If one is concerned with the temporal order of these two behaviors, then clearly marriage proceeds living arrangements. However, these behaviors a lengthily and complex decision making process which is not measured. In the Thai context, and indeed in virtually any context, it is inconceivable that a couple would fix the date of marriage without having discussed and made decisions about where to live subsequent to marriage. This consideration of post-nuptial arrangements in turn influences the marriage timing decision. Thus, we assume that residence decisions causally influence age at marriage and that such decisions are accurately represented by the actual residence after marriage.⁵

⁵ It might be argued that the couples that marry at the very youngest ages live with parents because they have not had sufficient time to accumulate the resources necessary for setting up a nuclear household. Even given this scenario, we expect that the decision to live with parents proceeds the marriage timing decision, and that if the parents refused for whatever reason the marriage would be delayed. Hence, post-nuptial residence is still causally prior to marriage timing.

The first column of Table 8 shows age at marriage for Thais and Chinese by sample strata. Living in the urban-low strata lowers the age at marriage sharply for Thais and, by a lesser degree, for Chinese. Net of this difference, Chinese have a late age at marriage, as seems to be the case for ethnic Chinese all over Asia (Hirschman and Rindfuss, 1982; Smith 1980).

The remainder of Table 8 shows the effects of post-nuptial residence on age at marriage. Both additive and interactive effects of strata (rural, urban low, and urban middle), rural origin and ethnicity (Thai and Chinese) are controlled for as well as the additive effects of relative status of husband's and wife's parents, education, cohort, and the wife's premarital work experience. Since the dependent variable is straight-forwardly measured on an interval scale, ordinary least squares multiple regression was used. Because the results involve complex interactions, we have presented the residence effects as deviations from the omitted category, specifically neolocal residence. The full model upon which these deviations are based is shown in Appendix Table A-1. We should note that the results shown here are the end wife's premarital work experience. Since the dependent variable is straight-forwardly measured on an interval scale, ordinary least squares multiple regression was used. Because the results involve complex interactions, we have presented the residence effects as deviations from the omitted category, specifically neolocal residence. The full model upon which these deviations are

Table 8. Mean age at marriage and estimated effects of post-nuptial residence on age at marriage by strata-ethnicity

Strata- ethnicity	Mean age at marriage	Effects of post-nuptial residence on age at marriage: ¹			
		Husband's parents	Wife's parents	Relatives	Live apart
Rural-Thai	21.9	-0.12	1.12	2.35	0.12
Urbmid-Thai	21.7	-0.12	-0.71	2.25	0.12
Urblow-Thai	19.6	-0.12	-0.71	2.35	0.12
Urbmid-Chinese	22.7	-1.50	-0.22	-4.47	-0.37
Urblow-Chinese	22.3	-1.50	0.22	-4.47	-0.37

¹ These effects are relative to the omitted category (neolocal residence), and are calculated from a model that allows for the additive and interactive effects of strata, rural origin and ethnicity, as well as the additive effects of relative status of husband's and wife's parents, education, cohort and the wife's premarital work experience. The full model upon which these deviations are based is shown in appendix Table A-1.

based is shown in Appendix Table A-1. We should note that the results shown here are the end product of a lengthily model testing process which is not shown here. However, it should be made clear that when we have constrained the various strata coefficients it is only after testing to insure that such constraints were consistent with the observed data.

As expected, we find that living with husband's parents has a consistently negative effect on age at marriage, compared to living neolocally. However, for Thais these effects are weaker than those found in Malaysia, Korea and urban Khartoum, and they are not statistically significant. Earlier we noted that this was to be expected because of more flexible norms concerning post-nuptial residence in Thailand, a smaller role of parents in the marriage dicision making process, and an expectation that living with parents post-nuptially is a temporary life cycle stage. Also as predicted, the effect of patrilocal residence is much stronger for Chinese than for Thais. Again we acknowledge that the observed difference is not statistically significant⁶, but it is consistent with our substantive eapectation. Moreover, the difference in estimated effects is not trivial substantively.

⁶ The number of Chinese available for analysis is small, thus making statistical significance unlikely.

The effects of matrilocal residence are inconsistent as has been the case in other countries (Morgan and Rindfuss, 1984). Such a variable pattern must be interpreted by several explanations specific to a given strata-ethnicity. To begin, the effect of matrilocal residence for rural Thais is strongly positive--it is associated with an age at marriage over one year later compared to those in the omitted category, those living neolocally. Additional analyses (not reported here) suggest that those living with wife's parents in rural areas are the most traditional--perhaps necessarily so to gain entrance into the wife's household. For instance, when we control on whether the husband spent time as a monk prior to marriage (a traditional period of religious service for all Thai men) the effect of living with wife's parents is sharply attenuated. Monkhood raises age at marriage because this period of service should be performed prior to marriage but after reaching adulthood--generally after age 20.

Also, traditionally in rural areas, parents wish to maximize the time daughters spend unmarried and in the household. In short, the traditional rural matrilocal influence in rural areas is to delay marriage (e.g., Lauro, 1979). This is also clearly reflected in our rural focus groups. They expect that those who live with the wife's parents will marry later;

Those who live with the parents after marriage marry late because they are not ready.

They have to earn some money for establishing a house. If they are afraid of trouble or haven't enough money, they will wait.

The ones who live with their parents get married later because they have the burden of taking care of their parents.

The effects of living with either set of parents is negative for Thais in urban areas. We suggest, given the norm of *lucrilocality*, that young couples are marrying earlier in urban areas if they have parents with whom they can reside. Having an available post-nuptial residence means couples do not have to delay marriage while they accumulate the assets necessary for setting up a nuclear residence.

The availability of wife's parents' resources as a facilitating mechanism for earlier marriage in the urban areas was also reflected in the urban focus group:

The ones who live with their parents get married more quickly because if they have no money they can depend on their parents. If they married and moved to a separate house, they'd have to support themselves. They cannot depend on anyone. They must save enough money.

Presumably this rural-urban difference in matrilocal effects involves differences in the occupational structure. In the urban setting it is unlikely that the man's occupation will involve his in-laws. Rather, his occupation will be independent of them. In the rural case, his occupation will typically involve agriculture, and often this means farming the wife's family land. In such circumstances he would probably wait to marry until he had the prospects for sufficient resources to establish a separate household should extended family living prove problematic.

Finally, the later age at marriage for Chinese who live with the wife's parents may suggest the difficulty of arranging

such marriages. Remember that this type of residence is not preferred among Confucian heritage populations (e.g., Wolf, 1972). If a social stigma is attached to those who live with the wife's parents after marriage then such marriages may be more difficult to arrange, thereby leading to postponement. Although this explanation is plausible, substantial caution needs to be exercised because of the relatively small sample of Chinese and the small proportion of those who live with the wife's parents.

Living with relatives has a strong positive effect on marriage age for all Thai groups combined. Estimates for different residence groups were quite unstable though, and we hesitate to push far with an explanation except to note that living post-nuptially with relatives undoubtedly involves more idiosyncratic reasons than any of the other post-nuptial residence arrangements.

The earlier analysis of post-nuptial residence patterns focused attention on the proportion of newlywed couples who live apart after marriage. We find that the age at marriage of these couples is uniformly like those who live neolocally after marriage.

We have rerun the analysis shown in Table 8 including only those who had surviving parents at the time of marriage (This analysis is not shown here). Since the likelihood of not having surviving parents to live with increases with age, age-at-marriage could be spuriously related to living arrangements. Results for this restricted sample mirror those shown above. We also reran the analysis with the natural logarithm of age at marriage as the dependent variable--in order to assure that these

results did not reflect the influence of a few extreme age at marriage values. Again the pattern of coefficients was the same as above.

VII. Discussion and Conclusion

Extended family residence is consistent with net wealth flows either from younger to older generations or from older to younger generations. In the first case, husband's parents may prefer a young age at marriage for their daughter-in-law so that she can easily be socialized into her role in her husband's family. This explanation is most persuasive when parents have a strong say in the marital choice and when extended residence is presumed to be long term. These conditions hold in many traditional, patriarchal societies (see Caldwell, 1982). Families in such societies are characterized by sex and age inequality. Young age at marriage, large age differentials between spouses, and extended residence are strategies used by elder family members to promote intergenerational solidarity. Such institutional relationships typically maintained and provided a justification for the flow of wealth to older family members and to males.

But with economic development and urbanization, the power of older family members that derived from land ownership in an agricultural society began to erode. Often, a crucial element of this change is availability of extrafamilial employment (e.g., Wolf, 1972). When young couples are no longer totally dependent on elders for subsistence there is an intergenerational power shift,

and the expectation is that the incidence of extended family living will sharply decline. Yet extended residence may sometimes be preferred under the new conditions for quite different reasons. Morgan and Hirosima (1983) argue that extended residence provides substantial benefits for some of the more modern segments of modern Japanese society. Those living with parents were less concerned about the economic costs of having additional children, did not have to worry about the high cost of housing, and received substantial child care and housework assistance from the older generation. Data we collected from focus group participants in Bangkok show that young Thais see these same advantages in extended residence. Thus urbanization and industrialization are not necessarily incompatible with extended residence. Instead, we would argue that structural factors and changes therein, are filtered through the social, historical and cultural traditions.

With this perspective, the current study affirmatively answers the question posed at the beginning namely the strength of the relationship between post-nuptial residence and age at marriage depends upon the social and cultural setting. Unlike Korea, Malaysia, or the Sudan, we did not expect a strong effect of patrilocality in Thailand. Matrilocal residence is the culturally preferred residence pattern and the duration of extended residence is expected to be short. Our focus group data strongly suggests that these expectations are widely known throughout the society. Our focus group data is also consistent with ethnographic and survey data which show a limited parental role in

matchmaking. Additionally, living where one has access to resources or where one is needed most were explicit reasons for choice of residence given by almost all focus group participants. The multivariate analysis confirms the importance of resources by showing that residence is most likely with the higher status parents. Given this context, we do indeed find a weak effect of patrilocal residence for Thais. Further confirmation for our argument comes from the stronger effects of patrilocal residence for the Chinese Thais--again an expected finding given the greater patriarchy that characterizes this group's family patterns.

The analysis of the determinants of post-nuptial residence fits nicely into the above argument. First, partilocal residence is much more likely among the Chinese-Thais, which reflects the greater patriarchy of the Confucian family system. But for both groups, Thai and Chinese-Thais, available resources strongly influence the choice of post-nuptial residence. The effect of urbanization, as measured by the contrasting residence patterns of rural and urban Thais, is to weaken the "normatively preferred" matrilocal residence pattern, thereby suggesting the growing importance of lucrilocality as the urbanization process proceeds.

Finally, and somewhat unexpectedly, we find that living apart during the early stages of marriage is relatively common. In addition to the results from the Thailand Marriage Survey, earlier census data and our focus group data support this conclusion. There are a wide variety of reasons why the couple may

be sleeping in different residences, including different employment or education locations, in-law conflict, minor wife, or even being a live-in domestic servant. (This latter possibility is discussed in Goldstein, et al. 1973). In interpreting our estimate of 41% for the total sample, it must be remembered that our sample is not representative of all Thailand, rather it is illustrative of the central region. But even if the proportion were half of what we found this still would have substantial implications for the sociology of the family, which generally presumes co-residence as a component of marriage. Indeed, this is how consensual unions are defined.

The question naturally arises, how widespread is post-nuptial non-cohabitation? Of confined to Thailand, its sociological significance is more limited. Unfortunately, the expectation of post-nuptial cohabitation is so firmly ingrained in studies of marriage and the family that other studies of post-nuptial residence simply do not allow examination of the phenomena. Perhaps the example that comes most readily to mind is child marriage in India where co-residence does not begin until the woman has reached maturity. Child marriage is qualitatively different from the current issue, but there are other scattered reports of marital non-cohabitation. In the United States, the media often report on couples living in different cities for job related reasons. While these are typically the rich and famous, and hence "newsworthy", it may also exist in a non-trivial proportion among the entire population. In much of the Muslim world, the possibi-

lity of marital non-cohabitation early in marriage has been recognized by providing two formal rituals (Kuchiba, et al., 1979; Alwibin Alhady, 1962). While the time between the two ceremonies is usually quite short, it can extend well over a year. In Cario, for example, severe and persistent housing shortages have tended to lengthen this period of marital non-cohabitation.

A final example comes from a pilot study of the determinants of fecundability being conducted by J. Richard Udry (personal communication) in Zimbabwe. The study design is straightforward: obtain a panel of recently married couples and contact them repeatedly in order to measure fecundability. Unfortunately the pilot study encountered problems because in close to half the cases the husband and wife were living in different residences. Typically the wife would be in the rural areas working on family farm land.

High on the future research agenda ought to be an examination of the nature, extent and duration of post-nuptial separation in Thailand. Our focus group data suggest that each is highly variable. In some cases, separated husbands and wives would see one another almost daily, and the duration of non-co-residence was very short. In other cases, the duration was measured in terms of years, and the husband wife would rarely see one another.

Finally, these results have clear and general implications for the conceptualization and measurement of marriage. Since marriage ceremonies are such clearcut markers in many societies,

there has been a tendency to simply consider and inquire about dates of marriage. It has typically been assumed that co-residence, sexual relations, sharing of financial resources and family building begin with the date of marriage. Yet marriage is a socially defined institution, and its definition varies over time, across societies, and within societies. The variance in premarital sexual relations is perhaps the most widely discussed example. Premarital cohabitation in Europe and North America has also received substantial attention in the past decade. Yet we continue to assume that after the marriage ceremony there is no variation in the standard functional definitions of marriage, and thus do not bother to measure these dimensions. Our results indicate that marriage should not be used as a proxy for sexual relations, the start of a permanent relationship, coresidence, or any of the other conventional marital functions. Instead, if investigators are interested in these dimensions of marriage they should collect information on them directly.

REFERENCES

Abdelrahman, A.I. and S. Philip Morgan
 1985 "Socio-economic and Institutional Determinants of Family Formation: Urban Khartoum, 1975." Working paper, Population Studies Center, Univ. of Pennsylvania, Philadelphia, PA

Alwi bin Alhady
 1962 "Malay Customs and Traditions", Singapore, Donald More Press.

Burch, T.K. and M. gendell
 1971 "Extended Family Structure and Fertility: Some Conceptual and Methodological Issues" in S. Polgar (ed), Culture and Population: A Collection of Current Studies (Chapel Hill: Carolina Population Center) pp. 87-104.

Caldwell, John C.
 1982 Theory of Fertility Decline. New York: Academic Press.

Caldwell, John C., P.H. Reddy and P. Caldwell
 1983 "The Causes of Marriage Change in South India." Population Studies 343-61.

Chamratrithirong, Aphichat
 1983 "Loosely-Structured Thailand: The Evidences from Marriage Culture." Paper presented at the Conference on Marriage Determinants and Consequences, Pataya, Thailand, May 30-June 3.

Davis, K.
 1955 "Institutional Patterns Favoring High Fertility in Underdeveloped Areas. " Eugenics Quaterly 2:33-39.

Entwistle, Barbara and William M. Mason
 1985 "Multilevel Effects of Socioeconomic Development and Family Planning Programs on Children Ever Born", American Journal of Sociology 91(3): 616-649.

Foster, Brian L.
 1975 "Continuity and Change in Rural Thai Family Structure." Journal of Anthropological Research 31:34-50.

Freedman, Ronald
 1979 "Theories of Fertility Decline: A Reappraisal." Social Forces 58:1-17.

Goldstein, Sidney, Alice Goldstein and Sauvaluck Piampiti
 1973 "The Effect of Broken Marriage on Fertility Levels in Thailand." Institute of Population Studies Chulalongkorn University, Paper No. 4.

Goode, William J.
 1963 World Revolution and Family Patterns. NY: Free Press.

Goode, William J.
 1982 The Family: 2nd Edition. Englewood Cliffs, N.J.: Prentice Hall.

Hirschman, Charles and Ronald R. Rindfuss
 1982 "The Sequence and Timing of Family Formation Events in Asia." American Sociological Review Volume 47, Oct. 1982.

Jacobson, D.
 1980 "Flexibility in Central Indian Kinship and Residence". David, K. (ed) The New Wind: Changing Identities in South Asia. The Hague: Mouton.

Knodel, John, Napaporn Havanon and Anthony Pramualratana
 1984 "Fertility Transition in Thailand: A Qualitative Analyses." Population and Development Review 10:297-328.

Kuchiba, M., Y. Tsubouchi, and N. Maeda
 1979 "Three Malay Villages: A Sociology of Paddy Growers in West Malaysia. Univ. Press of Hawaii.

Lauro, Donald J.
 1979 The Demography of a Thai Village: Ph.D. Dissertation, Department of Demography, Australian National University, Canberra, Australia

Levine, David
 1977 Family Formation in an Age of Nascent Capitalism. New York: Academic Press.

Levy, Marion J.
 1966 Modernization and the Structure of Societies: A Setting for International Affairs, Princeton: Princeton University Press. Volume 2.

Limanonda, Bhassorn
 1979 "Mate Selection and Post Nuptial Residence in Thailand" Bangkok: Institute of Population Studies, Chulalongkorn University, Paper no. 28.

Limanonda, Bhassorn
 1983 "Marriage Patterns in Thailand: Rand-Urban Differentials." Institute of Population Studies, Chulalongkorn University, Paper #44.

Lorimer, Frank
 1954 Culture and Human Fertility. Paris: UNESCO.

McFadden, D.
 1976 "Quantal Choice Analysis: A Survey." In Annals of Economic and Social Measurement 5.

McNicoll, G.
 1980 "Institutional Determinants of Fertility Change", Population and Development Review 5:217-45.

Morgan, S. Philip and Kiyosi Hiroshima
 1983 "The Persistence of Extended Family Residence in Japan: Anachronism or Alternative Strategy." American Sociological Review 48:269-281.

Morgan, S. Philip and Ronald R. Rindfuss
 1984 "Household Structure and the Tempo of Family Formation in Comparative Perspective." Population Studies 38:129-139.

Palmore, James, R.E. Klein and A. bin Marzuki
 1970 "Class and Family in a Modernizing Society." American Journal of Sociology 76:375-398.

Pindyck, Robert and Daniel Rubinfeld
 1981 Econometric Models and Economic Forecasts. McGraw-Hill.

Podhisita, Chai
 1984 "Marriage in Rural Northeast Thailand : A Household Perspective" in Aphichat Chamratrithirong, (ed.), Perspectives on the Thai Marriage. Bangkok: IPSR, Mahidol University, pp. 71-112.

Rabibhadana, Akin
 1984 "Kinship, Marriage and the Thai Social System" in Aphichat Chamratrithirong, (ed.), Perspectives on the Thai Marriage. Bangkok: IPSR, Mahidol University, PP. 1-30.

Rindfuss, R., A. Parnell and C. Hirschman
1983 "The Timing of Entry to Motherhood in Asia: A Comparative Perspective." Population Studies 37:253-272.

Ryder, Norman B.
1983 "Fertility and Family Structure." Population Bulletin of the United Nations. No. 15.

Schmidt, Peter and Robert Strauss
1975 "The Prediction of Occupation Using Multiple Logit Models." International Economic Review, 16(2): 471-486.

Smith, Peter C.
1980 "Asian Marriage Patterns in Transition." Journal of Family History 5:58-96.

Westoff, Charles F. and Norman B. Ryder
1977 "The Contraceptive Revolution", Princeton, New Jersey, Princeton University Press.

Wolf, Margery
1972 "Women and the family in Rural Taiwan", Stanford, California, Stanford University Press.

Table A-1. Model producing the effects in Table 8

Independent variable	Beta	(SE)
Marriage cohort ^a	.48	(.31)
Place of birth and strata ^a :		
Rural born-Urban low	-2.15	(.54)
Urban born-Urban low	-3.62	(.63)
Rural born-Urban middle	-1.01	(.54)
Urban born-Urban middle	.21	(.62)
(Rural residents omitted category)		
Ethnicity and strata ^a :		
Chinese	1.95	(1.46)
Chinese-Urban low	.49	(1.33)
(Thais omitted category)		
Post-nuptial residence ^b :		
With wife's parents	-.17	(.77)
With husband's parents	-.12	(.66)
With relatives	2.35	(.78)
Living apart	.13	(.58)
(Neolocal omitted category)		
Wife's education ^a :		
< 4 years	.64	(.48)
(4 years omitted category)		
> 4 years	.89	(.38)
Wife worked for wage before marriage	.84	(.38)
Relative status ^a :		
Wife is higher	.69	(.48)
(Equal status is omitted category)		
Husband is higher	-.33	(.45)
Interaction terms:		
Live with wife's parents-Rural strata	1.84	(.77)
Live with wife's parents-Chinese	.49	(2.09)
Live with husband's	-1.38	(1.65)
Live with parents-Chinese	-6.82	(2.78)
Live apart-Chinese	-.49	(1.63)
<4 years education-Chinese	-1.62	(1.36)
Wage work-Chinese	-1.63	(.66)

^a See Table 1.

^b See text for discussion of measurement.

Recent Publications
Institute for Population and Social Research
Mahidol University

(97) โยชิน แสงดี, กฤดยา อชาวนิจกุล และอภิชาติ จำรัสสุทธิรังค์, ความยากจนกับการย้ายถิ่น : การศึกษาแบบจัดกลุ่มสนพนา, ๒๕๒๕.

(98) Aphichat Chamratrithirong and Elizabeth Hervey Stephen, Determinants of Contraceptive Method Choice in Thailand, 1986.

(99) จารยา เศรษฐบุตร และศิรินันท์ สายประเสริฐ, การศึกษาการยอมรับการวางแผนครอบครัวตามธรรมชาติ, ๒๕๒๕.

(100) ปราโมทย์ ประสาทกุล, อภิชาติ จำรัสสุทธิรังค์, แอนโทนี้ เบนเนต และโยชิน แสงดี, ปัจจัยที่มีผลต่อการไม่ใช้วิธีคุ้มกำเนิดในกลุ่มชาวไทยชนบทที่พูดภาษาเขมร, ๒๕๒๕.

(101) ชาญ โพธิสิตา, ความเสี่ยง ความไม่แน่นอนกับพฤติกรรมทางเกษตร ข้อพิจารณาเกี่ยวกับการยอมรับนวัตกรรมของชาวนา, ๒๕๒๕.

(102) Aphichat Chamratrithirong, S. Philip Morgan and Ronald R. Rindfuss, When to Marry and Where to Live ? A Study of Post-nuptial Residence and Age of Marriage among Thai Women, 1986.

(103) Sivaporn Pokpong, Factors Affecting the Household Indebtedness : A Case Study in Nongrong District, 1986.

(104) Amara Soonthorndhada, The Effects of Informal Communication on Vasectomy Practice in Rural Areas of Thailand, 1987.

(105) Amara Soonthorndhada, Uraiwan Kanungsukkasem and Sirinan Saiprasert, A Time Allocation Study on Rural Women : An Analysis of Productive and Reproductive Roles, 1987.

(106) อุมา ศุนทรชาดา และอรพินทร์ พิทักษ์มหากุล, การศึกษาคุณภาพ ปริมาณและพฤติกรรมการใช้น้ำดื่มของชาวชนบทในประเทศไทย, มกราคม ๒๕๓๐.

(107) อรพินทร์ พิทักษ์มหากุล และจารยา เศรษฐบุตร, คู่มือการพิมพ์วิทยานิพนธ์, มกราคม ๒๕๓๐.

