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Some Reflections on the Demographic Study of the Households in India

Introduction

INVESTIGATION of the household is perhaps the least developed of the demographic fields in India. Whereas leading journals are replete with articles on fertility and mortality, and contain numerous articles on migration as well, the household is left virtually untouched. On reason may be the way data on the household has been presented in the censuses. Another reason is that the importance of the household as a demographic unit in its own right is often overlooked (see Bose, Gupta and Raychaudhuri 1977; United Nations 1980). The purpose of this paper is to oiler some ideas on how existing data could be used to advance the study of the household in India, with a few examples from the 1971 Census.

Actually, there has been a long-standing interest in the Indian household by family sociologists, not by demographers. The household has been considered an important indicator of, and sometimes incorrectly equated with, the family. For instance, it was assumed for a long time that most Indian households were "complex" because the North Indian ideal family was complex, i.e. consisted of numerous kin belonging to the same patriline. The assumption was based on the study of legal documents, scriptual sources, and historical essays. *Investigators* were puzzled therefore, when early censuses found that small households were more numerous than large households. Did this indicate then that the traditional family was breaking up into smaller conjugal units?

No, average household size has remained fairly constant since the turn of the century (sec Shah 1974). One explanation for this is that the actual family often does not live up to the one idealized in the scriptures, because of demographic limitations or intra-familial conflicts. Also, variations in average family

size could be due to differences in fertility or mortality rather than to differences in household type (see Burch 1967).

Furthermore, study of the household is only one avenue by which sociologists may study the family, because the household and the family are not equivalent. Whereasahouseholdentailsco-residenccofrelatedorunrelatedindividuals, the family can comprise individuals who have particular economic or religious connections' but who do not co-reside Changes in family relationships, such as parentall authority over children's marriage. will not necessarily be indicated by household structure (Caldwell et.al. n.d)

Indeed, the household is an important demographic unit in its own right. It helps indicate separatesness from other family units in decision making, emotional attachments and or economic situation. In addition, the household can be used in projecting the future population (U.N. 1981). and is an important economic unit useful for planning purposes. Determinants of household structure include fertility, nuptiality, mortality, migration, and economic factors in addition to the family system.

Sources of Data on the Household in India

Survey enumeration is the principal somce of quantitative information on households. Sincr surveys generally enumerate households before selecting a sample, household data may he gathered in the process of obtaining other information for a general population census, economic survey, or specialized survey, in addition to surveys oriented specifically toward gathering household information. In the case of the census, a subsample of the households may be selected for the description of household-level characteristics. Unfortunately, data on households obtained by other surveys are rarely analyzed.

Household-related surveys can be performed on a nation-wide or region-wide basis, or they can be performed in detail for a city, a village, or even a special group within a village (sec Shah 1974 p. T45: Mukherjee 1975 p. 37). While small-area studies may he able to gather detailed information about household structure. a major difficulty with, interpreting the data is how representative they may be with respect to other areas. For instance, household information for West Bengal in 1951 is often used in international comparisons to represent all of India, or at least the "Indian case"' (see e.g. Hajnal 1982). Yet as will be demonstrated later, the household in West Bengal should not be taken to represent all of India. A second problem with small household surveys is that they often develop typologies which are not strictly comparable with those from other surveys. The problem of unstandardized typologies is not, of course, limited to small-scale surveys: but it is accentuated in their case, while the larger data sets may at least allow for a more precise comparison of different group?, measured by the same data set.

Measuring Household Structure

A major issue in Indian family sociology for which household data have been used is the prevalence of "joint" versus "nuclear" families. The distribution of households according to their *size* has been used as one indicator of this: that "small" and "medium" sized households (one to six members) are "nuclear", whereas "very large" households (ten or more members) are "joint" households (see Shah 1974 pp. J34-135). This is obviously an unsatisfying assumption since extended households could be small due to high mortality and;'or low fertility, whereas a nuclear household could be large.

A better approach to investigating the prevalence of joint versus nuclear families, where data permit, has been to investigate the distribution of households by type: for instance, the proportion of nuclear households in a population. Yet even this approach has shortcomings if it involves a simple cross-sectional distribution, because the cross-section does not take into account the developmental cycle of the household. That is, most individuals in a society adhering to an extended family system probably spend most of their lifetime in a nuclear household, but experience an extended household arrangement at one or more periods in their lives (see Berkner 1972). Although nuclear households may be much more prevalent than extended households at any given time, this does not necessarily indicate that extended households are uncommon.

Related to this is the problem of correctly interpreting differences in the distribution of household types *between* social groups or geographic areas, even when comparable measures arc used. The distributions may be influenced by fertility, mortality, and'or the age distribution of the populations under study, as well as by their family system (see Bongaarts 1983). Unfortunately, it is difficult to standardize for Ihese various factors.

Also, past researchers have tended to use different typologies of household structure, making comparability between studies difficult. Even when "joint" and "nuclear" households are examined in the same way, problems often remain. For instance, joint families are usually considered in terms of a patriline. Nuclear families are usually considered in terms of a conjugal unit. Yet some residential groups may fall outside of either of these two categories. Consider a matrilineal extended household; a household which contains a married daughter, her husband, and their children; or a married man with unmarried siblings. Sometimes such households are considered joint, nuclear, part of a third category, or are simply ignored (see Shah 1974pp. 139-143). Different classificatory schemes may help explain why various community studies have found the percentage of nuclear to total households to range from 35 to 63 percent (Mukherjee 1975 pp. 36 38).

The diversity of possible household typologies has prompted the U.N. (1980) to suggest a standard one for all Censuses to follow in the future :

One person

Nuclear

a. Married couple **without children:**
b. Married couple with child(ren);
c. Single parent with children.

*ExtendedHouseholds.*Nuclearunitwithparent(s)orparent(s)-in-law;
a. Nuclear unit with parent(s) or parent(s)-in-law;
b. Nuculera unit with a married child with or without grandchildren;
c. Nuclear unit with other extended kin (beside those mentioned in *a* or *b);*
*d. E*xtended household without a nuclear unit.

Composite

a. Nuclear household with an unrelated individual;
b. Extended household with an unrelated individual;
c. Household comprised of unrelated individuals.

The types of composite households can be expanded to take account of each kind of nuclear or extended household. Of course, any particular study may wish, to focus on particular household types, to the exclusion or aggregation of the others. But it will improve comparability if they try to follow this standard classifierlory scheme in at least certain respects.

Unfortunately, the 1971 Census did not classify households according to type. The Census provided information on the number of unmarried or married sons brothers, daughters, sisters, fakirs, mothers, other male or female relatives of the households heads. and the number of males and females unrelated to the household head. However, the information is difficult to interpret because the tables did not show how many of these individual.-, belonged to the same household information, which would have allowed for the calculation of household types: of what the ages of the individuals were, which would allow for the calculation of age-sex specific rates for the diifferent categories. Perhaps this is why more has not been made of these data. Except for the 1951 Census in West Bengal, information concerning the distribution of households by type have come from the Sociological Research Unit of the Indian Statistical Institute or from other small-scale surveys (Shah 1974 p. 145).

A third approach to investigating household structure is to investigate age and sex-Specific household headship rates. Household headship rales arc the proportion of Individuals in any given group (age, sex, and perhaps marital status) who head their own households (sec United Nations 1981), A rate will be close to 1.0 if mojt adults head their own households (in single or single family units), and much less if adults tend 10 sliai'e households. Since the head of a conjugal couple is usually the male, headship rates for males help indicate the

degree lo which conjugal units tend to live separately. Headship rates for adult females help indicate the extent of non-marriage or marital disruption and the extent to which unmarried females live separately from other family units. If the rate is marital specific, it can of course indicate the extent to which divorced or widowed females head their own households. Headship rates do not distinguish between types of complex household, but they do standardize for age and sex, and perhaps, marital status.

Although not ideal, age sex specific headship rates also give some indication regarding the common relationship between the individual life cycle and the household life cycle. For instance, among men in developing countries, age-specific headship rates tend to be fairly low (under 20 percent) until the early 20's, continue to rise until age 64 years, and then decline slightly (U.N. 1981 p. 9). This suggests a paitern of: marriage, eventual establishment of an independent household, and In later years, greater dependence on offspring who head their own households. Among women, headship rates tend to be lowest under 20 years, and increase gradually until about 60 years, after which they decrease gradually. Again, there appears to be an increase in residence in another's household in old age.

In India in specific, little research on the household has used headship rates despite the greater ease in computing them compared to household distributions, and despite their direct control for age and sex, and indirect control for fertility and mortality. In contrast to having to tabulate households by type from the potentially many records of co-residing individuals, the computation of headship rates only requires the distribution of household *hemh* by age and sex, and the distribution of the adult population by age and sex.

Unfortunately, the Census has not published tabulations *of* household heads by standard age categories, with the exception of the 1951 Census for West Bengal. Whereas the usual way to present the number of household heads is by ten year age group between 1 5 and 64 years of age, and by a 65 + year age group (U.N. 1981), the 1971 Indian Census used only three age groups: under 30 years, 30-49 years, and 50 + years[1]. While the broad categorization minimizes some of the problems inherent in age misreporting, it. becomes difficult to compare headship rates in India with those in other countries. Such comparison is necessary to establish the relative degree of household complexity in India compared to countries with other household formation systems.

We compare the age and sex-specific headship rates for five states in India with specially-computed rates for the United Stales. Figures are shown in Table 1. The rates are based on a 4 percent sample of the household population in India, and a 20 percent sample of the household population in the

1. The under 30 years, of age group is henceforth treated as 20-29 years of age for computation reasons. We do not expect many males or females under 20 years of age to head their own households in India.

TABLE 1—AGE-SEX SPECIFIC HEADSHIP RATES FOR 5 STATES IN INDIA, 1971, AND THE UNITED STATES, 1970

	20-29 *Yrs.*	*30-49 Yrs.*	*50+ Yrs.*
		India	
AndhraPradeshGujarat			
Males	.322	.803	.888
Females	.019	.101	.195
Gujarat			
Males	.298	.793	.883
Females	.012	.060	.142
West Bengal			
Males	.288	.723	.867
Females	.017	.055	.120
Mysore (Karnataka)			
Males	.221	.712	.856
Females	.019	.098	.188
Punjab			
Males	.236	.709	.839
Females	.018	.057	.104
		United States	
Males	.672	.928	.934
Females	.105	.133	.325

Note : In India, the headship rates for the 20-29 year age group have been calculated **using** the number of households reported to be headed by individuals **"under** 30 years of age" as the numerator, and the population 20-29 years of age as the denominator.

SOURCE : Census of India 1971, Series 2 (Andhra Pradesh), 5 (Gujarat), 14 (Mysore), 17 (Punjab), and 22 (West Bengal). Part II. C. Tables C-l and C-2.
United States **Bureau of** Census. *1970 Census of Population, Volume* ***1 Part 1.*** *United States Summary* Section 2 Table /Q4.

United States. **There** was a clear contrast between **the United States and all** five **of** the **Indian** states. **For instance,** of **the** five **Indian states,** the highest

headship rate for *males 20-29* years *of age was 32 percent: in Andhra Pradezh,* compared to 67 percent in the United States. Whereas the highest headship rate for males 30-49 years of age was 80 percent in\Andhra Pradesh, the comparable figure for the United States was 93 percent. Finally, whereas 20 percent of all females 50 years or over headed their own households in Andhra Pradesh, 33 percent did in the United States. In conclusion, headship rates were consistently lower in India than in the United States, indicating greater household complexity there[8].

There were interesting contrasts between the Indian states. The biggest contrast in most cases, among the states we selected, lay between Andhra Pradesh in the South, and the Punjab in the North. For instance, 80 percent of all men 30-49 years of age headed their own households in Andhra Pradesh, compared to only 71 percent in the Punjab. Similarly, 20 percent of all women 50 years and older headed their own households in Andhra Pradesh, compared to only 10 percent in the Punjab. In effect, household complexity was less in Andhra Pradesh than in the Punjab, It was not simply a north-south divide, for the headship rates for Karnataka (Mysore) were more similar to those in the Punjab than in Andhra Pradesh. This was more true of the male headship rates than the female headship rates, however. Among females 30-49 and 50-;-years of age, the rates tended to be considerably higher in the south than in the north.

A fourth indicator of household structure which can be computed from data available in the 1971 Indian Census is the proportion of all individuals in a given age group who live alone. The proportion of males and females in diiTerent age groups who live in a single person household for five Indian states and for the United States are shown in Table 2. The contrast between the Indian states and the United States is again clear. No where did the proportion of males 20-29 living in single households exceed 3 percent in India, compared to 7.5 percent in the United States. Less than 1 percent of the females in that age group lived alone in India compared to almost 5 percent in the United States. Contrasts ill the proportion of older people living alone are even more striking. Whereas the maximum proportion of older mules living alone was 4.9 percent in Punjab, the figure in the United states was more than twice that much. Whereas the proportion of older women living -alo-iv; wus 7.3 percent in Atidhru Pradesh, it wits more than three times as much in the United States.

The proportions living alone were so low for the various Indian states that it was difficult to observe differences between them which might he of any consequence. The one exception appeared to be the proportion of older females who lived alone. That proportion was *twice as great in Andhra Pradesh us in*

2. It should be nottd in passing llml a similar aye patiern in headship rales **cxidl** in India and the United Slates. Headship rates for both males and females increase wiiri age. The 504-age group probably marks a decline in headship among those 65 years and over.

TABLE 2-PROPORTION OE INDIVIDUALS WHO LIVE **IN** SINGLE PERSON HOUSEHOLDS—FIVE INDIAN STATES 1971, UNITED STATES 1970

	20-29 Yrs.	*30-49 Yrs.*	*50 + Yrs.*
		India	
Andhra Pradesh			
Males	.020	.018	.030
Females	.004	.019	.073
Gujarut			
Males	.022	.021	.032
Females	.002	.009	.065
West Bengal			
Males	.028	.031	.033
Females	.002	.010	.046
Mysore			
Males	.024	.018	.025
Females	.004	.014	.051
Punjab			
Males	.030	.028	.049
Females	.004	.004	.036
		United States	
Males	.075	.069	.108
Females	.049	.037	.234

Note : In India, the headship rates for the 20-29 year age group have been calculated using the number of households reported to be headed by individuals "under 30 years of age" as the numerator, and the population 20-29 years of age as the denominator.

SOURCE : Census of India, 1971. Series *2, 5,* 14, 17, 22- Part II C- Tables C-l and C-2.
United States Bureau of the Census. *197Q Census of Population, Volume I Part I. United Stales Summary* **Section** 2 Table 204.

the Punjab. This could be indicative of differences in the status of women which relate to the basic north-south differences in kinship structure (Dyson and Moore 1983).

A fifth indicator of household composition, available for computation in the 1971 Census, is the proportion of individuals who reside in a household in which they are unrelated to 1he household head. A contrast often made between the family systems of Wester: ".Europe historically, ;.nd those of India and China, is That many people lived as servants in another':- household in the former, whereas unrelated individuals were quite rare in the latter (see e.g. Hajnal 1982). However, the contrast is quite smaller today than it may have been in the past. Whereas between 10 and 18 percent of the population were listed as "servants" or unrelated individuals in the 17th and 18th centuries ,in England (Smith 1981 p. 603), only about 1.5 percent of the household population were unrelated to the household head in the United States in 1970. The comparable figures for the Indian states discussed above are only half of 1 percent or less.[3] Again, differences between the proportions among the various Indian states appear inconsequential.

Urban-rural Difference:; in Household Complexly

One of the issues involved in the debate- over the household in India is whether household complexity is different in rural and urban areas. It is often thought that industrialization and urbanization Kelp break up the co-residing extended family presumed to predominate in rural areas (see Wirth 1938; Goode 1970). However, empirical studies have failed to support this idea in either Western or non-Western countries (e.g. Andersen 1971; Caldwell *et al,* 1982; Morgan and Hirosima 1983). Shah (1974 pp. 148-151) argues that in India, higher caste families have been able to live up to the ideal joint family to a greater extent than lower caste families, and that the higher caste families tend to be *more* prevalent 1:1 urban than in rural areas. He thus explains numerous findings from different areas in India that joint households are actually more common in urban than in rural areas.

The issue is somewhat more complicated than this however, because India's cities have an ancient history, and newer sectors of an urban area could exhibit a greater prevalence of nuclear households compared to the 'older' sectors, especially if new sectors are built up through the migration of young people (see Shah 1974). This is an area much in need of empirical research.

An examination of urban-rural contrasts in headship rates between different states in India also suggests that there is no simple relationship between urban residence and household structure. The headship rates for males 30-49 years of age in urban and rural areas of five Indian states in 1971 are shown in Table

3. These figures could he, to sonic extent, artifacts of the Census questionnaire. There are likely to be many individuals who reside as a servant in someone's household but who may be enumerated as living in a different household, especially that of his or her own family.

3.4 The headship rates were higher (the household less complex) in urban areas than in rural areas in three of the five states (Andhra Pradesh, Mysore-Karnataka, and the Punjab). However, headship rates were *lower* in urban areas

TABLE 3—HOUSEHOLD HEADSHIP RATES FOR MALES 30-49 YEARS OF AGE IN URBAN AND RURAL AREAS Or FIVE 1NDIAN STATES, 1971

	Urban	*Rural*
Andhra Pradesh	.817	.799
Gujarat	.768	.793
West Bengal	.610	.778
Mysore	.735	.704
Punjab	.757	.692

SOURCE : Census of India 1971. Series 2, 5, 14, 17, 22. Part **II** C. **TABLE** C-l and **C-2.**

in Gujarat and West Bengal. The urban-rural differences between states do not appear related to differences in the overall levels of household complexity. The states with the highest and the lowest rates of overall complexity, the Punjab and Andhra Pradesh, both had lower household complexity in urban compared to rural areas.

A Closer Look at Household Complexity within Andhra Pradesh

The purpose of this section is to illustrate one potential avenue by which headship rates can be analysed, focusing on the state of Andhra Pradesh. Andhra Pradesh is India's fifth largest state, and India's 'rice bowl' of the South. However the state is far from homogenous. There arc three major regions: Coastal Andhra, Rayalaseema, and Telangana. The most productive agricultural land, graced by several major rivers, is in the coastal area. Somewhat less endowed is hillier Rayalaseema to the south. The northern region called Telangana is generally poorer, except for the region around the state capital, Hyderabad. The clearest distinction between regions was in the literacy rate. Nearly 28 percent of the population was literate in Coastal Andhra in 1971 compared to only 21 percent in Telangana. If Hyderabad District, containing the state capital were excluded from the calculations, only 11 percent of the population of Telangana reside in urban areas compared to 20 percent in

4. It **is** best to focus on the headship rates for males 30-49 years of age since there is little difference in female rates between urban and rural areas, and since differences in average age ; imarriage could influence the rates for males 20-29 years of age.

Coastal Andhra. Districts neighbouring Hyderabad such as Mahabubnagar District and Medak District had only 9 percent of their population residing in urban areas.

The regions had different household headship rates (see Table 4). Headship rates for Coastal Andhra tended to be higher than in the other two regions, indicating lower household complexity there. Since Coastal Andhra tends to be more developed than the other regions, the question naturally arises whether

TABLE 4—AGE-SEX SPECIFIC HOUSEHOLD HEADSHIP RATES FOR ANDHRA PRADESH AND ITS THREE MAJOR REGIONS, 1971

	20-29	***30-49***	***50 +***
Andhra Pradesh			
Males	.322	.799	*.888*
Females	.019	.10]	.195
Coastal Andhra			
Males	.345	.826	.901
Females	.022	.110	.215
Rayalasetna			
Males	.258	.773	.874
Females	.015	.104	.208
Telangana			
Males	.326	.789	.880
Females	.018	.087	.160

Note: The headship rates for the 20-29 year age groups have been calculated using the number of households reported to be headed by individuals "Under 30 years of age" as the numerator, and the population 20-29 years of age as the denominator.

SOURCE : Census of Indiu 1971. Series 2. Part II. C. Tables C-l and C-2.

household complexity is related to sociocconomic development. The theory in this regard is not well developed, especially for non-Western countries. Cross-national comparisons of headship rates among males have found them to be somewhat higher in the more developed regions than in the less developed ones, with the exception perhaps of Africa (U.N, 1981 p. 4). However, there may be a cultural as *well* as socioecnomic explanation for these differences since most

developed country also tend to be either Western or highly Westernized. Household complexity could be positively related to socioeconomic status under some conditions but not others (sec Skah 1974 pp. 14S-151; Segalen 1977).

The issue is further confounded here because then; is no single indicator of overall household complexity which can summarize the information contained in the dilferent headship mtes. One possible summary indicator could be the sum of the various headship rates, but this assumes that the different rates are positively correlated. In certain situation could be expected that the headship rates of tha young and old, and the male and the female are inversely correlated and should not he added together For instance, if the young and the old tend to co-reside, the header p rates of young people depend on whether or not the older person is considered ths head of the household.

Correlations between the various headship rates, and the sums of the male and female headship rates among the 21 district; in Andhra Pradcsh, are shown m Table 5. Fortunately we find that, within the sex categories at least, headship rates are not negatively correlated. Rather, the headship rate among males 30-49 is positively related to the other male headship rates, although there appears to be little correlation between the headship rates of younger and older men. When the various males rates are summed (TOTM), the sum is found to be moderately to highly correlated with the individual rates (Table 5). Similarly,

TABLE 5-CORRELAIION MATRIX OK AGE-SEX SPECIFIC HEADSHIP RATES AND THEIR SUMS FOR 21 DISTRICTS IN ANDHRA PRADESH 1971

	M 20-29	M 30-49	M 50+	F 20-29	F 30-49	F 50 +	TOTM	TOTF	TOTH
Male 20-29	—	—	—	—		—	—	—	—
Male 30-49	.69*	—	—	-—	—	-•	—	—	—
Male 50 +	.03	.43*	- -	—		_	_	_	_
Female 20-29	.10	.18	--.02	-	—	—	—	.	_.	—
Female 30-49	—.45*	—.07	.04	.61*	.	_	_	_	_	_	·	_	_
Female 50 +	—.39*	.06	.16	.31*	.87*	_	_	_	—	_	-	.
Total Male	.88*	.92*	.44*	.13	—29	——.						
Total Female	—.39*	.03	.11	.51*	.96*	.97*	—.19*	—	—	•		
Total household	.56*	.86*	.48*	.43*	. 33*	.44*	.80*	.	44*	–		

*Significant at probability of .05

the different female headship rates are positively correlated (r = .31 to .87). The sum of these female rates *(TOTF)* again is moderately to highly correlated with the age-specific rates. The two summary measures, *TOTM* and *TOTF* are *not* positively correlated, however, and summing them would tend to dampen the variation found in either. We thus propose that there are two summary indicators of household complexity in Andhra Pradesh,and we have standardized these for age, but not for sex. When the two summary measures arc added together into a "total headship'' figure *(TOTH)*, the measure is found to be positively related to both the summary male measure and the summary female measure, but it is definitely dominated by the male measure.

Burch (1980) suggests several measures of "overall headship" which can be used for broad comparative studies. However, these are based on even less information than is available here, for instance where no age or sex specific information exists. We suggest that our measures are reasonable, given our information.

Our question is whether the headship rates, especially the summary ones, arc related to social indicators of development. The Census provides two with theoretically relevant indicators on the district level : literacy and urbanisation. We also use a composite index of development.[5] These indicators should be interpreted broadly. For instance, literacy goes beyond merely being able to read or sign a name. It may indicate some familiarity with a world outside one's own environment, greater accessibility to new ideas. and affluence. Similarly, level of urbanization may be related to the nature of an area's economic infrastructure. However, this is complicated by the fact that a city's hinterland may cross district boundaries in complex ways. The composite index of development measures elements of the agricultural and manufacturing sectors, but also general elements of the economic infrastructure. The range between districts in the levels of literacy, urbanisation and development is significant. For instance, 40 percent of the population in Hyderabad District, were literate compared to only 14 percent in Adilabad District. The development index ranged from 13.9 in Mahabubnagur District to 20.4 in Hyderabad District (see Appendix).

Unsurprisingly, these indicators are strongly correlated with one another *(r* >.7), and their effects on variation in household complexity overlap. Hence in a multiple regression with only 21 cases, it is only necessary to use one of the indicators. We choose to report findings for the literacy rate because literacy tended to have a closer relationship with variation in household complexity than the proportion of a district which was urban, or than the development scale. The statistical efleets of the literacy rale should, however, be

5. The index was derived from six variables from the agricultural sector, four from the manufacturing sector, and nine concerning economic infrastructure. From D. Haranatha Babu. *Regional Disparities in Andhra Pradesh. An Empirical Study.* Unpublished Ph.D. Thesis submitted to Andhra University, Waltair, May 198O.

interpreted broadly to include many different facets of development.

In assessing the relationship between social characteristics and the various headship rates of districts, it is important to control for the marital status of the various age and sex groups since an individual's marital status is commonly thought to affect his/her probability of being a household head. There are in fact significant correlations between the proportion married and the headship rate for males under 30, and for females 30-49 and 50-|- years (Table 6). In

TABLE 6—CORRELATIONS OF AGE-SEX **SPECIFIC HEADSHIP RATES WITH PROPORTIONS MARRIED—2] DISTRICTS OR ANDHRA PKADESH** 1971

Headship Rates	*Proportions Married*					
	M. 20-29	Af *30-49*	*M SO -!-*	*1-20-29*	*F 30-49*	*F50 +*
Males 20-29	.69*	.42*	—.05	.01	.22	.45*
Males 30-49	.29*	.13	—.10	—.11	.06	.23
Males 50 +	—.21	.06	.22	-.04	.13	.09
Females 20-29	.17	—.19	—.18	.16	—.18	—.23
Females 30-49	—.31*	-.37*	—.19	.01	—.57*	—.69*
Females 50 +	—.33*	—.27	-.19	-.05	—.52*	—.60*

*Significant at probability less than .05.

the case of younger males, marriage appear?, positively associated with heading one's own household *(r = .69).* Other males appear as likely to head their own households whether they are married or unmarried. Perhaps unmarried males still have their own children or other relatives to look after. Obversely, in the case of middle-aged and older female, marriage appears negatively associated with heading one's own household. Again this seems intuitively reasonable. Since most women in India marry, being unmarried results from some form of marital disruption.

It is also important to control for the proportion of the population in scheduled tribes. This proportion may influence household structure because tribal groups may have different family and/or work patterns (especially migratory work) which may impinge on household complexity. The range in the proportion of the population in scheduled tribes between districts in Andhra Pradesh is significant—from .01 percent in Medak District to 15 percent in Khammam District. Actually, only five of the 21 districts have more than 5 percent of their population listed as belonging to a scheduled group.

Our approach to investigating the importance of social development on household complexity in Andhra Pradesh, then, is a simple one. Treating each of the headship rates separately and in sum, we regress household headship on literacy, controlling for proportion married and the proportion in scheduled tribes. Literacy is used as a general indicator of" social development. We use the 21 districts of Andhra Pradesh. Results arc shown in Table 7.

TABLE 7-REGRESSION EQUATIONS OK AGE-SEX SPECIFIC AND SUMMARY HOUSEHOLD HEADSHIP RATES ON LITERACY, PROPORTION OF THE POPULATION IN SCHEDULED CASTES OR TRIBES, AND PROPORTION MARRIED (IN SPECIFIC GROUP)—21 DISTRICTS OF ANDHRA PRADESH 1971

Headship Rate of Group	*Constant*	*Literacy*	*% Scheduled*	*% Married*	*R**	*Degrees of Freedom*
1. Males 20-29	—0.381*	0.0027*	0-0062*	0.714*	79.0	17
2. Males 30-49	0.211	0-0016@	0.0039*	0.573	29.1	17
3. Males 50 +	0.644*	0.0013*	0.0019*	0-245	31.4	17
4. *Total Males*	*0.942**	*0.0068**	0.1196*	7.000*	*70.7*	77
5. Females 20-29	—0.006	--0-0001	0.00004	0-030	5.6	17
6. Females 30-49	0.639*	—0.0004	-0.0022*	—0-638*	51.8	17
7. Females 50 +	0.400*	O.C023*	—0.0014	-0.742*	58-7	17
8. *Total Females*	*0.669**	*0.0024**	*0.0025*	*-1.168**	55.2	*17*

@ ----- Probability is less than .10.
*Probability is less than .05.

The literacy rates had significant positive effects on household headship rates for males of different ages after controlling for tho proportion in that group who were married, tmd the proportion of the district population in scheduled tribes (Eqs. 1-3 Table 7). The three independent variables were most effective in explaining the variance in headship among men 20-29 years old (Eq. 1). There, the R^2 was 79.0 percent.

The regression of the sum of the male headship rates *(TOTM)* on the social characteristics is shown in Equation 4 (Table 7)[6]. Similar to the situation

6. The proporiion of males 20-29 who are married is used to control for marital status because the marital status of this group is found to be correlated with the headship rate for males *30-49* as well as for the headship rate for males 20-29 (see Table 5).

found separately for each age group, literacy was a significant predictor of the headship rate. However, the estimated effect was much stronger. Whereas the effect of literacy is estimated to have been highest for males 20-30 at .0027, it Js nearly three times that much for *TOTM.* (Likewise, whereas the effect of proportion in scheduled groups was *ai* most .006 *for* the age-specific rates, it was 0.1 for the summary rate.)

Literacy was not as important in explaining the variance among female headship rates. For instance, it, was only important for variance in the headship rate among female 50 years and older. However. similar to the case for males, it is found to have had a positive effect. Also worth notice, the proportion of the population in scheduled tribes is only important for the headship rate among females 30-4S years of age. Its effect is negative. Perhaps scheduled tribes have somewhat higher coresidence of unmarried women with male kin.

There is little predictive value in any of the independent variables, including the proportion married, on the headship rate of females 20-29 years of age. This is not too surprising given that headship rates for women of this age were extremely low. and there was little variation between districts. Furthermore, the proportion married would seem less likely to have an effect since most women who were not married had not yet left their parental home.

Regressing the summary female headship rate- (Eq. 8) on the literacy rate, the proportion of the population in scheduled groups, and the proportion of women 50-f years who are married[7] appears to combine the effects of the independent variables found in the separate regressions for females 30-49 and 50+. The effect of variations in the literacy ratc was positive significant at $p = .05$, and was about the same as that for females 50+ years (Eq. 7). The effect of variations in [lie proportion of the population *in scheduled* tribes was not significant but was in the same direction, and about the same size as the estimate females 30-49 (in Eq. 6).

Discussion and Conclusion

The purpose of this paper has been to explore the potential for household studies in India using Census data. Family sociologists have been concerned with the distribution of nuclear and joint households in India for quite some time. However, information on the distribution of households by type, whether they are single person, nuclear, extended or composite, has not been available from the Census. Smaller studies aimed at examining the distribution of households by type usually use non-comparable typologies.

The 1971 Census tabulated the number of household heads by sex and by a broad age categorization (under 30, 30-49, 50+). This information, further

7. The proportion of women 50+ years who arc married **is** used here to control for marital status because it was found to l.avc a stronger correlation with the total female headship rate *(TOTl')* than the married proportions for females 20-29 or 30-49 years of age.

been broken down by urban and rural residence, can be used along with general population counts to calculate age and sex - specific household headship rates. These rates indicate household complexity and, indirectly, the life course of household headship.

Comparing headship rates between five Indian states in 1971 and the United States in 1970, we found the rates to be lower in India among all the age and sex groups, thus indicating greater household complexity there. The proportion of the population living in single-person households or who are unrelated to the household head were other important households indicators available in the Indian Census. These indicators displayed a much lower level of single-person households or unrelated individuals in India compared to the United States.

A comparison of male headship rates for urban and rural areas of the same five Indian states disclosed a seemingly random pattern between type of residence and degree of household complexity. Male headship rates were higher in the urban areas of three slates and lower in two states.

The paper then discussed a simple exercise which examined the importance of literacy, urbanization and development in explaining variation in the age and sex specific headship rates of the 21 districts of AndhraPradesh. In each case, the proportion of the population married in each age and sex group, and the proportion of the district population in scheduled tribes, was controlled. Urbanization, literacy and a composite index of development were highly correlated. Hence their effects on variations in household complexity overlapped, and it was only necessary to use one of the social indicators in a multiple regression. We chose to report the findings for literacy because it had the strongest effect on variation in household complexity. Despite the control for marital stauts and the proportion of the population in scheduled tribes, and despite the small number of cases, literacy was found to iiave a significant effect on variation in all the male headship rates, and the female headship rates for persons 50 years and over.

It is also important to note that the proportion married in each age and sex group, and the proportion of the district population in scheduled tribes, had significant effects on age and sex-specific headship rates, particularly the male headship rates. The first finding is expected to the extent that marriage involves a greater probability of household headship among males, and a lower probability among females. The effect of proportion of scheduled tribes may be due to marital and family customs among these groups which differ from those of the dominant society, or to different employment patterns and demands on household structure.

To conclude, there is much more research to be done on the household in India. Although there is need for better Census data on the household, data do exist at present which could be used more than they have been in the past. Information presently exists which allows for the computation of headship rates or broad age-sex groups, and these for urban and rural areas.

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APPENDIX

DISTRICT-LEVEL DATA FOR 21 DISTRICTS IN ANDHRA PRADESH 1971

District	*Males*			*Females*		
	20-29	*30-49*	*50+*	20-29	*30-49*	*50 +*
			Headship Rales			
Srikakulam	.315	.834	.912	.028	.126	.228
Visakhapatnam	.321	.802	.895	.020	.124	.226
East Godavari	.357	.827	.910	.022	.106	.246
West Godavari	.394	.850	.899	.016	.101	.215
Krishna	.378	.836	.888	.015	.082	.185
Guntur	.346	.837	.892	.024	.103	.195
(Prakasam)	.309	.785	-909	.027	.115	.193
Nellore	.324	.834	.911	.029	.1)7	.225
Chittoor	.253	.742	.869	.016	.094	.170
Cuddapah	.302	.82	.889	.015	.099	.194
Anantapur	.230	.773	.876	.015	.111	.215
Kurnool	.257	.769	.866	.013	.116	.260
Mahabubnagar	.268	.773	.876	.025	.126	.219
Hyderabad	.273	.772	507	.012	.082	.172
Medak	.265	.709	.878	.015	.090	.167
Nizamabad	.380	.781	.834	.028	.103	.174
Adilabad	.414	.811	.891	.014	.062	.121
Karimnagar	.355	.806	.859	.030	.094	.154
Warangal	.345	.828	.925	.013	.067	.121
Khamniam	.396	.823	.870	.013	.071	.134
Nalgonda	.336	.802	.861	.014	.082	.152
			Proportion Married			
Srikakulam	.847	.928	.829	.911	.809	.312
Visakhapatnam	.823	.925	.835	.909	.797	.291
East Godavari	.890	.939	.839	.930	.826	.347
West Godavari	.918	.950	.837	.944	.843	.370
Krishna	.911	-947	.831	.937	.857	.415
Guntur	.907	.939	.823	.936	.836	.376
Ongole (Prakasarn)	.838	.935	.829	.952	.833	.353
Nellore	.809	.918	.816	.926	.818	.315
Chiltoor	.746	.911	.799	.930	.830	.335

Appendix *(Contd. on page* 69)

Appendix *(Contd. from page* 68)

Cuddapah	.789	.912	.783	.942	.823	•309
Anantapur	.762	.919	.860	.891	.793	.307
Kurnool	.851	.933	.807	.947	.822	.321
Mahabubnagar	.896	.945	.850	.959	.831	.322
Hyderabad	.755	.945	.876	.898	.857	.371
Medak	.908	.944	.843	.955	.843	.363
Nizamabad	.942	.940	.828	.940	.817	.322
Adilabad	.922	.933	.826	.951	.849	.344
Karimnagar	.940	.930	.826	.954	.867	.405
Warangal	.928	.950	.861	.961	.881	.416
Khammam	.894	.945	.833	.843	.795	.388
Nalgonda	.904	.942	.847	.967	,866	.366

District	*Social Indicators*		*Development Index*	*% Sched. % Sched. Tribe*
	Literacy Rate	*% Urban*		
Srikakulam	.185	10.7	15.599	8.2
Visakhapatnam	.212	22.3	18.323	10.7
East Godavary	.306	19.2	18.712	3.9
West Godavary	.344	17.7	18.935	2.2
Krishna	.352	27.3	18.603	2.0
Guntur	.307	25.0	18.941	3.7
Ongole (Prakasam)	.232	11.1	15.865	2.9
Nellore	.268	15.8	16.859	8.1
Chittoor	.254	13.5	17.265	2.9
Cuddapah	.247	14.2	16.242	1.7
Anantapur	.238	17.8	15.335	3.1
Kurnool	.236	20.3	17.201	1.6
Mahabubnagar	.156	9.0	13.928	0.3
Hyderabad	.404	65.9	20.377	0.2
Medak	.161	8.5	15.376	0.01
Nizamabad	.172	15.9	17.237	0.04
Adilabad	.141	15.9	35.085	13.1
Karimnagar	.153	10.7	14.835	0.8
Warangal	.181	13.4	I4.835	2.3
Khammam	.185	13.6	14.217	14.7
Nalgonda	.171	6.7	14.925	0.03

Note: The headship rates for the 20-29 year age groups have been calculated using the number of households reported to be headed by individuals "under 30 *years of age"* as the numerator, and (he population 20-29 years *of* age as the denominator.

SOURCE: Census of India 1971. Series 2. Part II. C. Tables C-l and C-2.

D- Haranatha Babu. *Regional Disparities in Andhra Pradesh: An Empirical Study,* Unpublished Ph. D. Thesis submitted to Andhra University, Waltair, May 1980.