

Household Archaeology

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In the early years of American archaeology, whole cultures and phases were the minimal unit of description and analysis. Following the research direction begun by Gordon Willey (1953, 1956) and others, we have since moved into an era where we attempt to test our models and hypotheses at the level of the settlement and variability between settlements (see Adams, 1965; Gibson, 1972; and Johnson, 1975 in the Near East and Millon, 1978; Blanton, 1979; and Sanders, Parsons, and Santley, 1979 in Mesoamerica). In this article we argue that the time has come to move downward in specificity, to the household unit.

There are many practical and theoretical reasons why the household is becoming a focus of archaeological analysis. At the most general, it is possible that a theory of change in household organization can bridge the existing "mid-level theory gap" in archaeology. We are all familiar with the distance between grand theories of culture change and evolution and the practical archaeology of potsherds and stone tools. Though we try to jump the gap between ceramic types and theories of the rise of the state, our leaps lack credibility because there are no connecting models or postulates.

Editors' Note: *This article and others in this volume (with the exception of Robert Netting's contribution) were originally presented in different forms in a symposium entitled "Towards an Archaeology*

AMERICAN BEHAVIORAL SCIENTIST, Vol 25 No. 6, July/August 1982 617-639
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Households are the level at which social groups articulate directly with economic and ecological processes. Therefore, households are a level at which adaptation can be directly studied. In fact, we can define the *household* as the most common social component of subsistence, the smallest and most abundant activity group. This household is composed of three elements: (1) *social*: the demographic unit, including the number and relationships of the members; (2) *material*: the dwelling, activity areas, and possessions; and (3) *behavioral*: the activities it performs. This total household is a product of a domestic strategy to meet the productive, distributive, and reproductive needs of its members (see Carter and Merrill, 1979). The nature of the household varies considerably from society to society. For example, in bands, the demographic units are often fragile and temporary aggregations of individuals. In chiefdoms and tribal societies, the demographic unit of the household is likely to be a more permanent extended family. In our society, the demographic unit of the household is most often a nuclear family or its fragments.

Happily for archaeologists, households live in and use material culture. In fact, material culture can be thought of as a shell whose form reflects the demographic shape and the activities of households. But archaeologists excavate the dwellings and domestic artifacts, not the social units. We have to infer dwelling units from the material record; then we must infer households from the dwelling units. Several archaeologists have recently begun these difficult tasks (Flannery

of the Household" at the 46th Annual Meeting of the Society for American Archaeology in 1981. We would like to thank all of the participants in the symposium and the many people who helped organize it. The ethnographic research among the Kekchi that is cited in this article was sponsored by the University of Arizona, the Wenner-Gren Foundation for Anthropological Research, and the National Science Foundation. Many of the ideas and concepts used in this article were developed during conversations with Robert Netting, though he is by no means responsible for the ways in which they are being used here.

and Winter, 1976; Sheets, 1979; Hill, 1970). Just as with demographic units, there is incredible variety in the material characteristics of dwellings, from bushman huts to African clan compounds, from modern mansions to trailers. This creates enormous difficulties in relating materials to activities and ultimately to demographic units. Ethnoarchaeologists are just beginning to compile a body of literature on the demography, activities, and material attributes of households (e.g., Watson, 1979; Kramer, 1979; Gould, 1978; Longacre, 1981).

We all recognize the difficulties in the interpretive steps between material remains and households. Several of the articles in this volume take up these steps, but we are only beginning to arrive at some general principles. Does this mean that we should give up on trying to reconstruct households until we have developed the necessary body of correlates and principles to go from a physical structure to its occupants? It would if we operated in a vacuum, if we knew absolutely nothing about the economy of the society with which we were concerned. But in present practice, we can use our knowledge of a society's economy and subsistence to *infer* the kinds of household units that were present. We can then use the material evidence to test these inferences.

COMPARATIVE SOURCES

Perhaps because households are so ubiquitous, cultural anthropologists have often used them as their basic units of analysis. Recently, some cultural anthropologists with an interest in economic and social adaptation have defined a few specific ways in which households respond to changing demographic, economic, and environmental conditions. The isolated ethnographic knowledge can be synthesized to define the more general ways household organization and size are linked to wider economic and subsistence spheres (see Wilk and Netting, 1981). This must be the source of inferences about causes of household variation in past societies. Useful infor-

mation has also been gathered by economic historians and historical demographers who have much the same problems as archaeologists in dealing with their data. What they have to work with are census records of *dwelling units*, not households, and they must make inferences to bridge the gap between lists of people living under a single roof and the economic relations between those people.

In this article we place some of the conclusions drawn from household studies into a very general theoretical framework of the nature and evolution of household organization. The purpose is to add to the discussions that are now weaving together the disparate pieces of household-level research into a theory of household organization. Using such a theory, it may eventually be possible for archaeologists to use the material remains of past settlements to reconstruct both subsistence activities and household organization.

DEFINITION

At one time ethnology defined the household as a group of people living under a single roof and cooperating economically on a daily basis. But this definition did not work on a cross-cultural basis. Goody (1972) and Bender (1967) pointed out that there are many societies where the groups living under a single roof (the dwelling unit) actually constitute separate households because their membership never cooperates in any kind of economic activity. Conversely, there are cases where the household occupies several adjacent buildings, but in all other activities acts as a single economic and social unit. If we are interested in economic and ecological relations and groups, we must separate the concepts of coresidence and economic cooperation into *dwelling units* on one hand and households on the other. Archaeologists do not excavate households; they find the material remains of dwellings. The household itself is a unit of economic and social cooperation that does not

necessarily live under a single roof, though it often does. Coresidence is just one of many possible, but not necessary, functions that the household performs.

FUNCTIONS

There are many structural typologies that categorize households by the kinship relations between their members (for example, Harter and Bertrand, 1977). These alone are relatively useless in specifying the ways in which households respond to changing social and economic circumstances. Rather than focus exclusively on the *morphology* of households, we find it necessary to explicitly classify and discuss the *functions* of households, since it is the functions of the household that mediate between the wider socioeconomic realm and the nuts and bolts of household size and composition.

Looking at households cross-culturally, we find that the many activities they perform can be classified into four categories of function: production, distribution, transmission, and reproduction. In each society the organizing principle of household groups is found in different combinations of one or more of these functions. At different stages of cultural evolution, in different kinds of environments, and in different social strata, households perform different functions, and therefore differ in their size, organization, and developmental cycle. Other social groups, such as lineages, task groups, corporations, neighborhoods, and villages, often have functions that complement, replace, or even compete with the household. A major part of an investigator's task can be seen as defining the *sphere of household function* and mapping its relationship to the functional spheres of other social groups within the society. A hunting and gathering band, for example, has only reproduction entirely within the sphere of household function, while the band itself, or task groups within the band,

are the major organizations for production and transmission. Before this gets too obscure, let us proceed to define each of the functions mentioned, and give examples of the ways households structure themselves in response to functional variation.

PRODUCTION

In its most general sense, production is human activity that procures resources or increases their value. Some basic forms of production, food processing for example, are almost always performed within the context of the household unit, but otherwise the range and scale of the productive activities within households varies enormously.

In defining how households adapt to variation in production, the most important kind of variability is the *scheduling* of productive labor. This scheduling can be scaled between the extremes of *linear* and *simultaneous*. Linear tasks can be done by a single person performing a sequence of operations, as in simple lithic reduction. Simultaneous tasks must be performed by a number of people acting at the same time, as in moving large building stones. Many tasks can be accomplished in either a linear or simultaneous fashion; a single craftsperson can dig clay, make pots, and fire them, or a group could break the work down and operate simultaneously to turn out the same product. We can, in addition, specify two kinds of simultaneous tasks: *complex* and *simple*, each of which has very different social consequences and solutions. A simple simultaneous task requires many people doing the same task at the same time, as in a planting group of twenty farmers, each planting a row at a time. Complex simultaneous tasks involve specialization; all work at the same time, but do different parts of the job.

Some tasks, mainly agricultural or architectural, must be finished in a short period of time; here simple simultaneity is more efficient than linear labor. In many other kinds of tasks,

economies of scale and *task specialization* make complex simultaneity more efficient, though organization becomes an increasingly formidable problem.

The relative efficiency of different size groups is based on these characteristics. They determine if the household is an efficient producing unit, and what size of household will be the optimum.

An example of how task simultaneity produces large household groups is given by the Japanese swidden agriculturalists studied by Harumi Benu (1968). There, extreme microenvironmental diversity required that each farming unit cultivate many widely scattered fields at the same time. A large labor force was necessary to carry out many tasks in different places at the same time (complex simultaneity), and households tried to add as many productive hands as possible to achieve this end. The area consequently had very large and complex households. Modern Kekchi Maya swidden farmers studied by Wilk (1981a), on the other hand, only cultivate a single large plot in the course of the year because there is little microenvironmental variability. The Kekchi only need a large labor force one or two times in the year (simple simultaneity), and the rest of the year production can be accomplished on a linear schedule. They therefore form small, nuclear family households, and come together in community labor groups on the few occasions when simultaneous labor is needed for clearing land or planting corn. Hunter-gatherers often follow a similar pattern of doing only linear tasks within the household and forming larger groups within the band for simultaneous labor such as group hunting.

In the course of cultural evolution, the kinds of tasks that a household must perform change radically. As agriculture intensifies, for example, each unit of labor applied to production gives less return; a small household produces more per worker from a given unit of land than a large household. Netting found small households predominated among Kofyar intensive hoe farmers; such households are well suited for the linear tasks

required. The terracing and land modification involved can be handled in a linear schedule by the same small group (Netting, 1969). Larger land modification tasks, such as irrigation systems, on the other hand, require a much larger simultaneous labor group that would be beyond the capabilities of a single household.

An extreme example of just how large households can get in order to accommodate many diverse tasks that require complex simultaneity are the medieval Genoese merchant households studied by Hughes (1975). Very large households within walled compounds were able to manage and perform many different trading, manufacture, and financial enterprises in different parts of Europe at the same time. These household units were on the edge of transition into recognizably modern corporations.

The relationship between large household units and complex simultaneous tasks has been tested cross-culturally by Paternack, Ember, and Ember (1976), and found to hold. They, and others, make the point that diversity of tasks within the household requires a coordinator to keep things running smoothly. Sahlins's (1957) study of households on Moala gives a good example of how the power of the household head is based on his role in scheduling tasks and apportioning labor. Household workers were sent out to many parts of the island to do different kinds of labor, at the order of the household head, who then distributed the products among all the members.

DISTRIBUTION

Distribution is the process of moving resources from producers to consumers, and for this discussion includes consumption of those resources. It is useful to divide distribution into *pooling*, the process of distribution within the household unit, and *exchange*, distribution among households or between larger corporate units. In some societies, distribution

consists almost entirely of pooling consumption within the household, while in many other societies there is both pooling and exchange. The distribution functions of the household vary systematically with the mode of subsistence and production.

In general, large households are an adaptation to situations in which production is diversified, and the quantity of goods produced is highly variable over time. The large unit (through pooling) increases an individual's access to a wider variety of goods at any one time and decreases the variability of supply. The mode of distribution is often very closely linked to the mode of production, and for this reason it is often hard, in ethnographic cases, to divide production and distribution functions from each other. Diverse production within the household, by its nature, requires extensive pooling of products for redistribution to household members.

An example are Kekchi Maya households involved in cash-crop production of rice. The large household group provides the labor pool necessary to grow both subsistence crops and cash crops at the same time, and by the same token each individual gets the benefit of both kinds of crops, a task the smaller nuclear family finds difficult to perform effectively.

Small households are often found when production within a society is uniform among members, meaning there is no advantage to pooling products, or when production between individuals is so diverse and differs so widely that pooling would benefit only some household members, while it would be a detriment to others. The Caribbean households described by Rubenstein (1975) are a good illustration of the latter principle. The poor rural landless people he studied have such rare and diverse opportunities of wage labor or other production that they are reluctant to form large households. There are no incentives for a working person to pool because there is little likelihood that anyone else in the group would be able to reciprocate. This may explain the demise of the extended household group among the landless class when wage labor is introduced into a subsistence-oriented agricultural system.

The pooling of goods within the household operates on a long-term basis as well. Individual nuclear family units go through a developmental cycle where the ratio of producers to consumers varies widely as the proportion of nonproducing children to adult workers increases and then declines. As Reyna (1976) recorded among the Barma, large households that include nuclear families at various stages of the developmental cycle serve to even out this variation in the dependency ratio. Those families with many children benefit from pooling with those families who have few or no children to support. Lewis (1981) has recently documented some of the strategies household heads use to keep producers in the household in the face of their desire to withdraw their contribution to the support of others.

A general rule that ties production and distribution together seems evident in cross-cultural data. Large households that pool in production *and* in distribution tend to be stable and have generational continuity. Households that only cooperate in scheduling labor *or* in pooling for distribution tend to be less stable and fission often. The fragility of the urban Javanese extended households studied by Hildred Geertz (1961) results because there is little or no cooperation in scheduling labor, only pooling of products with all the attendant arguments, and resentments engendered by inequities.

If pooling of a *limited range* of goods among a large group is necessary, organizations other than households are likely to emerge to fill this function. Redistribution of meat from game in a hunting and gathering band is a good example. In a case from Borneo, fishing households can each motivate necessary labor within their small household group, but the fish are very clustered and only a few households catch fish on a particular day. For this reason related households form themselves into tight "neighborhood clusters" of up to seven households that pool their catch every day, thus assuring that each individual household has a daily supply (Sather, 1976).

The degree to which resources are spatially clustered or temporally variable will determine whether pooling is effective on the household level, or whether it must be taken up by a larger group such as a lineage, a hamlet, a *Calpulli*, or a fishing cooperative. In general, band and urban, state-level societies stress *exchange* between households and groups, while predominantly agricultural societies and those with mixed economies pool within the household.

TRANSMISSION

Transmission is a special form of distribution that involves transferring rights, roles, land, and property between generations. The entire concept of transmission rests on the social definition of property. In many societies there are different concepts of ownership applied to different kinds of property. Transmission varies according to the level of the unit in which property rights are vested (i.e., bands, lineages, households, nuclear units, or individuals).

As proposed by Murdock (1949), and documented by Goody (1972), Meggitt (1965), and others, when land and goods are plentiful, rights are transmitted by group affiliations such as village residence or descent group membership. As property becomes more difficult to gain access to, the group that controls the resources becomes more and more strictly defined, eventually being reduced to the household itself, or to the individual. A good illustration is offered by the Philipinos studied by Drucker (1977). Where swidden farming land is plentiful and under little population pressure, it is managed and owned by patrilineages; lineage membership carries the right to use the land. Rice paddies, on the other hand, represent a large investment in labor and capital and are limited in area; these are owned and managed by households and the only way to obtain one is to buy or inherit it. In an evolutionary perspective, certain kinds of property are the first to become scarce and, therefore, the first to become subject to

household control and transmission. Livestock and economic wild trees are good examples. But households do not become the most important means of transmission within a society until land tenure is vested in individual households or their members.

Netting (1969) makes the point that agricultural intensification is a process of transition from a system where labor is a scarce resource (as in swidden agriculture) to a system where land is the scarce resource. As a consequence, the function of the household tends to change from scheduling various kinds of labor to the transmission of rights to land from generation to generation.

Large households held together by the married children's desire to inherit land have been frequently observed by ethnographers. Goldschmidt and Kunkel (1971) demonstrate a strong cross-cultural relationship between land scarcity and extended household structures. Collier's work among the Tzotzil in Chiapas (1975) demonstrates in more detail the way in which extended patrilocal household clusters form as land comes under increasing population pressure. Sons must stay within or close to their natal household in order to assert a claim to their father's land. Only when land is too scarce to support the whole cluster, as in Chamula, does the extended unit break up.

Goody (1969, 1972) has discussed at length the two basic modes of transmitting land and major property between generations: partible and impartible. As long as land is plentiful enough for households to divide between heirs, partible inheritance is practiced; the household will fission after the death of the head if it has no function in pooling distribution or scheduling production. As population pressure on land resources or capital investment in productive resources increases, there is an increasing tendency for impartible inheritance to be the rule. Only one heir in each generation inherits the bulk of the household patrimony. Further subdivision would result in less than sufficient land being transmitted.

Other household members who do not inherit must either stay in the household remaining unmarried and work for the heir, or depart and find some kind of other economic base. Marriage, as Lofgren (1974) convincingly demonstrates, becomes a strategy for transmitting and accumulating property and comes under the control of parental authority. Stratified marriage emerges, as heirs have much better prospects than those who have no chance of inheriting. Lofgren also demonstrates that the advent of impartible inheritance coincides with the beginnings of a landless class, a rural proletariat; this is a possible avenue toward social stratification. Such detached persons can also form the base of urban society and a ready labor pool for craft specialization or armies.

Households that own land often add client ("branch" in Japan) households in order to obtain additional labor without giving up rights to land. European landowning households often took in servants for this purpose. Landless households, on the other hand, have no resources to distribute and no use for extra labor. Their children have no reason to stay, and go out as servants or emigrate. This leads to the often observed phenomenon among agricultural societies of differences in household sizes that correspond to social status and land ownership (see Netting, this volume). Laslett's work on seventeenth-century English village households showed average household sizes of 9.3 persons for gentry and 5.8 persons for yeomen, but only 3.9 for tradesmen, 3.2 for landless laborers, and 2.1 for "poor men" who had no resources at all (1965: 61). The average household of the Lords Temporal of the Realm at the time was 48 persons (Flandrin, 1979: 61).

Land is not the only resource that can attract the personnel to compose a large household. The members of an elite often take into their households the people they need to manage the affairs of high office and to expand their influence. The Mexican *caciques* studied by Hunt (1965) kept their large households composed of sons and their families together by offering the prospect of access to privileges and political

power, and the eventual inheritance of a part of the family enterprises. The same process was reported by Hughes (1975) for the households of medieval Genoese merchants.

In evolutionary terms, we have noted above that as population pressure increases, the roles of households in production and distribution tend to decline. At the same time, the role of the household in transmitting goods and land increases, and often the two effects cancel each other out and large households continue to exist, though the structure and organization of the "inheritance" household is very different from that of the "production-distribution" household. As resources become more scarce in relation to population, however, "inheritance" households can no longer stay together because goods inherited are no longer sufficient to support a large household, except in a few wealthy households. The bulk of households fragment into nuclear family units. Craft production, wage labor, migratory labor, soldiering, marketing, and trading are a few of the niches that can be occupied by the propertyless household; some of these may offer the opportunity to gather a large productive or distributive unit together once more, and a three-tier system may emerge where only the very poor and the very rich have large households (Medick, 1976).

REPRODUCTION

Reproduction is one of the least flexible of household functions. It consists of the rearing and socializing of children. As most of us well know, child care demands constant time and effort, and households can be organized to provide this constant care in different ways. Pooling of labor is a frequent solution to the problem,

The general principle seems to be that when women's labor is important in subsistence, a larger cooperative group of women frees female labor by distributing child care duties. There are, as Brown (1970) points out, various alternatives to pooling child care duties that do not involve large household units, namely, fosterage, child sharing, and adoption. Murdock argues in *Social Structure* (1949) that women's labor in

agriculture is most important in the early stages of the introduction of agriculture to a hunting and gathering economy, when agriculture plays only a small part of overall subsistence production.

As the labor intensity of production increases, a large household to pool child care duties frees women to continue to play a major productive role. In state-level societies, where nuclear family households tend to predominate, schools and other government and social welfare institutions take over part of the burden of child care, again freeing women's labor. In summary, it appears rare to find large households constituted solely to enable pooling of child care duties, if there is no other reason grounded in labor pooling for production or distribution. Alternative solutions can be found. On the other hand, pooling of reproductive labor is an important benefit that accrues to larger household units constituted mainly for another purpose.

SUMMARY OF HOUSEHOLD ORGANIZATION

Household size and form vary widely in time and space, and the differences relate systematically to the kinds of functions the household performs. These functions are, in turn, a product of a society's mode of production and distribution. We should stress, however, that in every society the household is a product of a strategy for meeting diverse functional requirements, and this strategy is always a compromise. The household is an instrument for adaptation, what Adams (1981) calls a "survival vehicle." Different environments and economies present different sets of functional problems that are met, sometimes well and often imperfectly, by this vehicle.

From this discussion of household functions we can review a few preliminary propositions about household organization:

- (1) Under production, it is clear that the need for task simultaneity produces large households.

- (2) Under distribution, the more spatially clustered and the more temporally varied the resources, the larger the households that manage them. This seems true except for the very extremes of variability (hunter-gatherers and agrarian states) where larger organizations or institutions take over pooling functions.
- (3) Households that tie together both production and distribution in pooling are more stable than those that do not.
- (4) Under transmission, where resources are plentiful, household functions seem to concentrate on scheduling labor. However, where resources become more restricted, transmission of property rights shifts from larger organizations to the household. There are further changes if resources become even more scarce. Partible inheritance leads to small households as the inheritors go their separate ways. Impartible inheritance tends to create large numbers of small landless households that may then be drawn into association with the few large households of the elite, or into large craft households or other such organizations.

In general, if we only look at the *size* of the household unit, we can define a range of economic circumstances for which different size groups are the most effective survival vehicles. Large households have a potential for great flexibility in dealing with very diverse or scattered economic opportunities that require simultaneous labor. They have greater political potential for forming a power base and for taking advantage of new opportunities that require capital investment.

Small households have the advantage of mobility, and are well adapted to make intensive use of limited resources through linear scheduling of labor. Small units seem more effective vehicles for social mobility strategies, especially when their ratio of producers to consumers is high. They are the most effective means of transmitting resources intact between generations.

Ultimately, there is no one household type or household cycle in any society and there is no simple relationship between stages of evolution and household size. Every household is

the product of a mix of strategies, some of which are more effective than others. However, given the various factors involved, it is clear that through time the mix of household sizes has become more varied and accentuated. In fact, the whole process of social stratification is linked with the creation of extreme households, those of the landless and those of the landed.

ARCHAEOLOGICAL IMPLICATIONS

Can this model of household behavior be applied usefully to archaeological problems? We believe so and will briefly outline an application to Maya archaeology.

In recent years, Norman Hammond (1980) and others have argued that Maya farmers were living in the lowlands as early as the middle of the third millenium B.C. (the Swasey phase, c. 1000-2000 B.C.). Based on careful stratigraphic excavations and a long series of C¹⁴ dates, many Maya archaeologists have accepted this proposition, but they are still plagued by the question: Why, if people were living in the lowlands almost 2000 more years than supposed, has it taken so long to find any trace of them?

Part of the answer comes from a reconstruction of Swasey household organization. As stated earlier, we can use our knowledge of society's economy of subsistence to infer what kinds of households were present and what kinds of material evidence they should leave behind. The first step is to build a model of a Swasey community based on ethnoarchaeological studies of a comparable ecological situation. We used the modern Kekchi Maya of southern Belize (see Wilk, 1981b).

We can structure our view of the Kekchi in terms of household function:

Production. In the Kekchi case labor rather than land is the limiting factor in production. Kekchi men move their

families from place to place in response to the local shortage or availability of well-fallowed land. A man moves from one set of relatives to another, trying to strike the best cooperative bargain. Stable groups of kin that last more than a single generation are unknown except where the production of cash crops or where trade has encouraged them to form. The scheduling of production is linear and does not require complex labor arrangements to exploit diverse resources simultaneously.

Distribution. In terms of resource distribution in a redundant economy, small households are efficient and, in the absence of a wide variety of specialized products, pooling would have few advantages.

Transmission. Where land is plentiful, primary forest cultivators do not as a rule own their land; they use it and abandon it. Land ownership and inheritance is not an organizing principle for Kekchi domestic groups.

Reproduction. Labor-sharing needs in family rearing are met in the mobile and flexible Kekchi system by the same temporary pooling of kinsmen's labor that organizes slash-and-burn agriculture.

We argue that similar ecological and cultural conditions applied in the early Formative in the Maya lowlands (see Wilk, Wilhite, and Reynolds, 1980). What are the archaeological manifestations of this Kekchi mobility? The Kekchi, like other highly mobile populations, do not invest very much labor in their houses (perhaps 65 person-days all told); why should they bother? The lack of stable lineages or compounds, the impermanence of labor groups, and perishable construction mean that no single locale is the focus of continuous intensive habitation. Stable, long-term lineal clusters of households like the waterhole groups of the Tzotzil, or the *plazuela* groups of the Classic Maya, do not occur because there is no shared

possession of land to hold the group together. Thus masses of masonry, refuse, and burials do not accumulate in a single spot. The Kekchi do tend to reuse old house sites over and over, but there is no social continuity between the successive occupants and therefore no permanent improvement of the site.

The archaeological ramifications of this model are clear. Swasey society must have been ecologically and socially distinct from Late Formative and Classic Maya cultures, and its archaeological traces must be different. Swasey habitations were archaeologically much less visible than later houses, and they probably occur in different areas if not in different sites. This is why Swasey remained unrecognized after almost a century of Maya archaeology. Even if encountered accidentally, most mound-digging Mayanists probably would not recognize a Swasey house for what it was. Swasey houses archaeologically would be more recognizable to an archaeologist working in the American northeast or the Pacific northwest, except that the destructive lowland environment may have eradicated traces of postholes, hearths, and wall-lines. It is possible that a sherd scatter and bits of floor would be the only remaining traces.

Given this model, how can we explain the thick stratified deposits of Swasey platforms, hearths, burials and plaster floors that underlie the Platform 34 group at Cuello (Hammond, 1980)? Surely they could not be the flimsy houses we just described.

The Kekchi once again provide a useful analogy. The most outstanding element of Kekchi adaptation is extreme personal mobility; the average Kekchi adult moves to a new village every 9.7 years of his life. This is not to say that the villages themselves are moving from place to place; rather, there is a constant movement back and forth between villages, which leads to fluctuations in village size. Thus, village sites are permanent, while the individual house sites that compose them are constantly being abandoned and reoccupied. At the

heart of every shifting village of temporary structures lies a complex of much more substantial structures, sometimes with stone or concrete floors and walls, comprising the *cabildo*, church, and school with associated cemetery.

Ultimately, what we argue is that many archaeological dilemmas such as the invisibility of Swasey occupations have their roots in the organizational structure of household groups. Their solution relates to archaeological method and sampling techniques such as those devised to identify the areal extent of Swasey occupation. But more important is the relation of the household to the core of the socioeconomic structure of society.

Thus, we see in the debate over differences in the investments made in household dwelling units, indications of possible differences in community socioeconomic structure between ancient Maya society in the northern and southern lowlands. The smaller, less permanent, single dwellings typical of Dzibilchaltun (Kurjack, 1974), for example, have far different implications from the large plazuela household groups surrounding Tikal (Haviland, 1963).

The same type of contrast solves the problem of the invisibility of Postclassic settlements on the Usumacinta River, in Belize, and elsewhere. We know from ethnohistoric reports that these areas were populated with villages, but archaeology has found few of their traces. Some of the reasons must lie in the organization of production, distribution, transmission, and reproduction in households, which left very different traces from those of the Classic Maya (see for example, Harrison's Lobil Phase in Southern Quintana Roo, 1979).

Such contrasts may even be made at any point of time between nearby areas. Compare the small range structures at Altun Ha with the imposing Central and South Acropolis of Tikal, or the scattered, but permanent single housemounds of Barton Ramie with the multistructure plazuela housemound groups at Copan. These tell different stories of the structure of the societies who built them, but they are stories which have yet to be decoded.

As we said at the outset, we cannot directly interpret household organization from dwellings or other material remains in a simple manner. However, we do believe that environment, household demography, organization, and activities are systematically linked together with material culture. As we learn more about these links in modern settings from cultural anthropology and ethnoarchaeology, we can apply them to studying the past. Then, working in archaeology, economic history and historical demography, we will be able to build more complete models of variety and long-term evolutionary change. Together, the present and the past will help us to understand society's most basic unit—the household.

REFERENCES

- ADAMS, R. McC. (1965) *Land Behind Baghdad*. Chicago: Univ. of Chicago Press.
- ADAMS, R. N. (1981) "The dynamics of societal diversity: notes from Nicaragua for a sociology of survival." *Amer. Ethnologist* 8, 1: 1-20.
- BEFU, H. (1968) "Ecology, residence and authority: the corporate household in central Japan." *Ethnology* 7: 25-42.
- BENDER, D. (1967) "A redefinition of the concept of household: families co-residence and domestic functions." *Amer. Anthropologist* 69, 5: 493-504.
- BLANTON, R. E. (1979) *Monte Alban: Settlement Patterns at the Ancient Zapotec Capital*. New York: Academic.
- BROWN, J. K. (1970) "A note of the division of labor by sex." *Amer. Anthropologist* 72, 5: 1073-1078.
- CARTER, A. and R. MERRILL (1979) *Household Institutions and Population Dynamics*. Washington, DC: Agency for International Development.
- COLLIER, G. A. (1975) *Fields of the Tzotzil*. Austin: Univ. of Texas Press.
- DRUCKER, C. B. (1977) "To inherit the land: descent and decision in northern Luzon." *Ethnology* 16, 1: 1-20.
- FLANDRIN, J.-L. (1979) *Families in Former Times: Kinship, Household and Sexuality*. London: Cambridge Univ. Press.
- FLANNERY, K. V. and M. C. WINTER (1976) "Analysing household activities," pp. 34-44 in K. V. Flannery (ed.) *The Early Mesoamerican Village*. New York: Academic.
- GEERTZ, H. (1961) *The Javanese Family*. Glencoe, IL: Free Press.
- GIBSON, McG. (1972) *The City and the Area of Kish*. Field Research Project. Miami.
- GOLDSCHMIDT, W. and E. KUNKEL (1971) "The structure of the peasant family." *Amer. Anthropologist* 73, 5: 1058-1076.
- GOODY, J. (1973) "Strategies of heirship." *Comparative Studies in Society and History* 15: 3-30.

- (1972) "The evolution of the family," pp. 103-124 in Peter Laslett and Richard Wall (eds.) *Household and Family in Past Time*. Cambridge: Cambridge Univ. Press.
- (1969) "Inheritance, property and marriage in Africa and Eurasia." *Sociology* 3: 55-76.
- GOULD, R. A. (1978) *Explorations in Ethnoarchaeology*. Albuquerque: Univ. of New Mexico Press.
- HAMMOND, N. (1980) "Early Maya ceremonial at Cuello, Belize." *Antiquity* 54: 176-190.
- HARRISON, P. (1979) "The Lobil postclassic phase in the southern interior of the Yucatan peninsula," in Norman Hammond and G. R. Willey (eds.) *Maya Archaeology and Ethnohistory*. Austin: Univ. of Texas Press.
- HARTER, C. L. and W. E. BERTRAND (1977) "A methodology for classifying household family structures." *J. of Comparative Family Studies* 8: 403-413.
- HAVILAND, W. A. (1963) "Excavation of small structures in the northeast quadrant of Tikal, Guatemala." Ph.D. dissertation, University of Pennsylvania.
- HILL, J. N. (1970) *Broken K Pueblo: Prehistoric Social Organization in the American Southwest*. Tucson: Univ. of Arizona Press.
- HUGHES, D. (1975) "Urban growth and family structure in medieval Genoa." *Past and Present* 66: 13-17.
- HUNT, R. (1965) "The developmental cycle of the family business in rural Mexico," pp. 54-80 in J. Helm (ed.) *Essays in Economic Anthropology*. Seattle: Univ. of Washington Press.
- JOHNSON, G. A. (1975) "Locational analysis and the investigation of Uruk local exchange systems," pp. 285-340 in C. C. Lamborg-Karlovsky and J. A. Sabloff (eds.) *Ancient Civilization and Trade*. Albuquerque: Univ. of New Mexico Press.
- KRAMER, C. (1979) *Ethnoarchaeology: Implications of Ethnography for Archaeology*. New York: Columbia Univ. Press.
- KURJACK, E. B. (1974) *Prehistoric Lowland Maya Community and Social Organization*. Publication 38, Middle American Research Institute.
- LASLETT, P. (1965) *The World We Have Lost*. London: Methuen.
- LEWIS, J.V.D. (1981) "Domestic labor intensity and the incorporation of Malian peasant farmers into localized descent groups." *Amer. Ethnologist* 9, 1: 53-73.
- LOFGREN, O. (1974) "Family and household among Scandinavian peasants: an exploratory essay." *Ethnologia Scandinavia* 74: 1-52.
- LONGACRE, W. A. (1981) "Kalinga pottery: an ethnoarchaeological study," pp. 49-66 in I. Hodder, G. Isaac, and N. Hammond (eds.) *Pattern of the Past: Studies in Honour of David Clarke*. Cambridge: Cambridge Univ. Press.
- LOUCKY, J. (1979) "Production and patterning of social relations and values in two Guatemalan villages." *Amer. Ethnologist* 6: 702-703.
- MEDICK, H. (1976) "The proto-industrial family economy: the structural function of the household during the transition from peasant society to industrial capitalism." *Social History* 3: 291-315.
- MEGGIT, M. J. (1965) *The Lineage System of the Mae Enga of New Guinea*. New York: Barnes & Noble.
- MILLON, R. (1978) *The Teotihuacan Map: Text. Urbanization of Teotihuacan Mexico, Vol. 1*. Austin: Univ. of Texas Press.

- MURDOCK, G. P. (1949) *Social Structure*. New York: Macmillan.
- NETTING, R. M. (1969) "Ecosystems in Process: A Comparative Study of Change in Two West African Societies. National Museum of Canada Bulletin No. 230.
- PASTERNAK, B., C. EMBER, and M. EMBER (1976) "On the conditions favoring extended family households." *J. of Anthropological Research* 32: 109-124.
- REYNA, S. (1976) "Extending strategy: regulation of household dependency ratio." *J. of Anthropological Research* 32, 2: 182-199.
- RUBENSTEIN, H. (1975) "The family as a non-group: domestic organization in an Eastern Caribbean village," pp. 311-323 in *Congress of the Canadian Ethnology Society II, Proceedings*. Oltona: National Museum of Canada.
- SAHLINS, M. (1957) "Land use and the extended family in Moala, Fiji." *Amer. Anthropologist*, 59: 449-462.
- SANDERS, W. T., J. R. PARSONS, and R. S. SANTLEY (1979) *The Basin of Mexico: Ecological processes in the Evolution of a Civilization*. New York: Academic.
- SATHER, C. (1976) "Kinship and continuity: variation in social alignments among the Semporna Bajau Laut, pp. 40-65 in G. D. Appell (ed.) *Special Publication of the American Anthropological Association No. 6*. Washington, DC: American Anthropological Association.
- SHEETS, P. D. (1979) "Maya recovery from volcanic disasters: Ilopango and Ceren." *Archaeology* 32, 3: 32-43.
- WATSON, P. J. (1979) *Archaeological Ethnography in Western Iran*. Viking Fund Publications in Anthropology No. 57. Tucson: Univ. of Arizona Press.
- WILK, R. (1981a) "Households in process: domestic organization, land pressure, and cash crops among the Kekchi Maya." Presented at the Wenner-Gren Symposium "Households: Changing Form and Function."
- (1981b) "Agriculture, ecology and domestic organization among the Kekchi Maya." Ph.D. dissertation, University of Arizona, Tucson.
- and R. M. NETTING (1981) "Households: changing forms and functions." Presented at the Wenner-Gren Symposium "Households: Changing Form and Function."
- WILK, R., H. WILHITE, and L. REYNOLDS (1980) "The settlement area sampling project at Cuello, Belize." Presented at the 46th Annual Meetings of the Society for American Archaeology, Philadelphia.
- WILLEY, G. R. (1956) *Prehistoric Settlement Patterns in the New World*. Viking Fund Publications in Anthropology No. 23. Tucson: Univ. of Arizona Press.
- (1953) *Prehistoric settlement patterns in the Viru Valley, Peru*. Washington, DC: Bulletin of the Bureau of American Ethnology No. 155.