THE LATE PREHISTORIC *MAOHI FARE HAUPAPE*: AN EXAMINATION OF

HOUSEHOLD ORGANIZATION IN MO'OREA, FRENCH POLYNESIA

by

Nicole R. Oakes

B.A., Simon Fraser University

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF ARTS

in the Department

of

Archaeology

© Nicole R. Oakes 1994

SIMON FRASER UNIVERSITY

November 1994

APPROVAL

NAME   Nicole Rae Oakes

DEGREE   MA

TITLE   The Late Prehistoric Maohi Fare Haupape--An Examination
of Household Organization in Mo`orea, French Polynesia

EXAMINING COMMITTEE: .

Chair   Dr. J. Nance

_____

David Burley
Associate Professor
Archaeology

_____

Dr. R. Shutler, Jr.
Professor Emeritus
Archaeology

_____

Dr. Dana Lepofsky
Adjunct Professor, U.B.C.

_____

Dr. Roger Green, Professor, Archaeology Research
Facility, Dept. of Anthropology, University of
California, Berkley, California

Date Approved: Nov. 7, 1994

PARTIAL COPYRIGHT LICENSE

I hereby grant to Simon Fraser University the right to lend my thesis or dissertation (the title of which is shown below) to users of the Simon Fraser University Library, and to make partial or single copies only for such users or in response to a request from the library of any other university, or other educational institution, on its own behalf or for one of its users. I further agree that permission for multiple copying of this thesis for scholarly purposes may be granted by me or the Dean of Graduate Studies. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Title of Thesis/Dissertation:

The Late Prehistoric Maohi Fare Haupape--An Examination
of Household Organization in Mo`orea, French Polynesia

Author:

Signature

Nicole Rae Oakes

Name

Nov. 7, 1994

Date

Abstract

This thesis is a study of the late prehistoric residential *fare haupape* -- a reportedly non-elite house type of the Society Islands, French Polynesia. It combines an examination of early historic written documents with the analysis of archaeological material from the excavation of a household in the 'Opunohu Valley, Mo'orea. Ethnohistoric reconstruction establishes a physical model for archaeological testing and indicates several organizational principles involved in household design at the time of contact. Archaeological analysis considerably augments the ethnohistoric model, establishing a range of variation in household activities and form that is not well delineated in the written literature.

The conjunctive ethnohistoric and archaeological approach allows consideration of the household as a social entity. I suggest that, by its material form and associations, the *fare haupape* household shows hierarchical associations between residences within this type as well as information on social relations within the household. I also suggest the physical form of the household was actively used to convey and reinforce appropriate routes of interaction between individuals and groups.

I conclude that residential *fare haupape* are more socially and materially complex than hitherto considered. Continued excavation of this house type will show a range of variation that indicates it cannot unilaterally be associated with the lowest strata of late prehistoric *Maohi* society. Beyond attention to morphological type, it is the associated structures, features and artefacts of the household as well as its internal organization of space that are the significant criteria for assessing the social affiliations of this house type.

Acknowledgements

Many individuals and organizations aided in the inception and completion of this thesis. I thank my thesis supervisor, Dr. David Burley for taking me on as a student in spite of a heavy graduate student load, and for supporting the research -- especially in its beginning and final stages. Dr. Richard Shutler added enthusiam to the research and a long-standing love for work in the Pacific. I express my most sincere thanks to Dr. Dana Lepofsky for making the research possible by agreeing to include my project as part of her doctoral research into prehistoric agriculture in the Society Islands. Her practical and moral support has proved invaluable to this study and to my academic growth. Dr. Roger Green kindly sat as the external examiner for the thesis and not only provided extremely useful comments but a remarkable enthusiam for the research.

The ability to undertake archaeological research in Polynesia was supported by several funders. Monies for field research was generously provided by the Graduate Student Reseach Travel Award at Simon Fraser University, the Department of Archaeology Student Research Travel Support Grant, and the Dean of Arts Travel Funds Support. Several graduate fellowships and teaching assistanceships through the Department of Archaeology also provided financial support throught the analysis and writing stages of the thesis.

Dr. Lepofsky also included two of my radiocarbon samples from ScMo 171 in her grant of accelerator dates to The Center for Accelerator Mass Spectrometry at Lawrence Livermore National Laboratory. Dr. Erle Nelson at Simon Fraser University provided time and patience in teaching me to process the samples and interpret their results. Dr. Jack Nance was also helpful by entertaining several discussions on the use of statistical procedures and their results. T.J. Hammer is also to be commended for his identification and quantification of flake types from ScMo 171, undertaken as a project for his class in Archaeological Lab Techniques.

Table of Contents

List of Tables

List of Figures

CHAPTER ONE

INTRODUCTION

Since Green's (1961, 1967) introduction of a settlement pattern analysis to Polynesian archaeology in the early 1960's, the study of households in the material record has gained increasing import to archaeological interpretation. Household archaeology allows researchers to make detailed correlations between material items and the social, economic, demographic, and symbolic aspects of domestic life. These aspects of household settlement then generate insight into the larger cultural system of which they are a part. Thus, an ever-increasing number of studies examining the spatial and material organization of households are available throughout Polynesia (Jennings and Holmer 1980; Jennings, Holmer and Jackmond 1982; Kirch 1985; McCoy 1976; Sutton 1990a; Weisler and Kirch 1985).

In the Society Islands, French Polynesia, a detailed study of the archaeological household has yet to be undertaken. Previous excavations have focused on monumental architectural types, such as *marae* (centres of religious activity) (Eddowes 1991; Emory 1933, 1943; Garanger 1964, 1980, Gerard 1974; Green and Green 1968; Green et al. 1967; Verin 1964; Wallin 1993), or specialized, elite houses (Davidson 1967; Green and Green 1967). We have little comparable data on ordinary, non-elite residences.

The Society Islands do however provide an ideal context for a household study. A rich body of ethnohistoric literature supplies detailed information on various aspects of *Maohi*[1] culture at European contact. In addition, Green et al.'s (1967) pioneering settlement work in the 'Opunohu Valley, Mo'orea, provides a detailed account of surface structural remains in the valley and has established the broader context of late prehistoric

---

[1] *Maohi* are the indigenous inhabitants of the Society Islands (Oliver 1974). See Appendix one for a glossary of Tahitian terms used in this thesis.

intensification by Lepofsky (1994) further expands understanding of prehistoric settlement and sociopolitical development in the 'Opunohu. Excavations performed during these projects establish good material data on larger architectural structures associated with the elite (Green et al. 1967) as well as the more mundane and economic features associated with prehistoric agriculture (Lepofsky 1994). A gap exists, however, in the material record covering ordinary households.

The primary objective of this thesis, therefore is to undertake a detailed archaeological examination of the *fare haupape*, a small rectangular house type, which in combination with other structures and features is reported to be the common *Maohi* household form. Data gathered from a 1992 field season in the 'Opunohu Valley, Mo'orea provides the archaeological basis for the study. This data is combined with an ethnohistoric reconstruction of the household to more fully recover the social and historic context of *Maohi* household settlement at European contact.

Given that the *fare haupape* residence has not yet been the focus of previous research in the 'Opunohu Valley, or the Society Islands in general, we have little physical evidence on this household type. A few houses have been excavated as part of larger projects, but these provide little useful information due to sampling problems or specialized contexts (Davidson 1967; Green and Green 1967; Sinoto and Komori 1988; see also Eddowes 1991:180-181). Thus, no material data is available on the role of the household in craft or agricultural production or social organization at the *micro* level (Green 1984). Further, much is made in the ethnohistoric and more current archaeological literature on Society Island prehistory of the social differentiation between chiefly and non-chiefly households. It is commonly generalized that *fare haupape* were the "common" house type not only in number, but also in sociological status (Ellis 1967(I):175; Handy 1932:35; Orliac 1982: 282).

While settlement analyses in the windward Society Islands confirm *fare haupape* are the dominant household type (Descantes 1990; Garanger 1964; Green et al. 1967; Sinoto and Komori 1988; Verin 1962a, 1962b, 1962c, 1964), there is no archaeological evidence to either support or challenge the view that *fare haupape* were uniformly associated with a particular strata of *Maohi* social life. Rather, the most detailed information on the Society Island household comes from ethnohistoric literature. Although this is a rich and informative data base, it tends to present a rather normative view of the household, its occupants and activities. Archaeological investigation is necessary to understand the material variability within and among households, synchronically and through time.

The Society Islands

The Society Islands (fig.1.1) are one of five archipelagos of French Polynesia, located approximately 17° latitude south and 148° to 155° longitude west in the South Pacific Ocean. The islands are typically divided into the windward islands of Tahiti, Mo'orea, Meetia and Maiao; and the leeward islands of Huahine, Raiatea, Taha, Borabora and Maupiti. Several small atolls complete the island chain.

The 'Opunohu Valley

The 'Opunohu Valley, located on the north side of the island of Mo'orea, is a vast bowl-shaped valley which covers over 1,500 h. It extends from the mouth of the deep-water 'Opunohu Bay to the back of a remnant caldera wall, which peaks over 1,200 m above sea level. A broad, flat coastal plain characterizes the lower 'Opunohu Valley. This lower valley extends for about 1.2 km inland, after which the upper valley terrain ascends more steeply to the base of the caldera wall, about 700 m above sea level. Numerous rivulets and streams run throughout the upper valley and coalesce in the lower valley to form the 'Opunohu river. Fluvial and wind erosion has formed a complex topography of steep, narrow radial valleys and plains throughout the upper valley.

The Society Archipelago
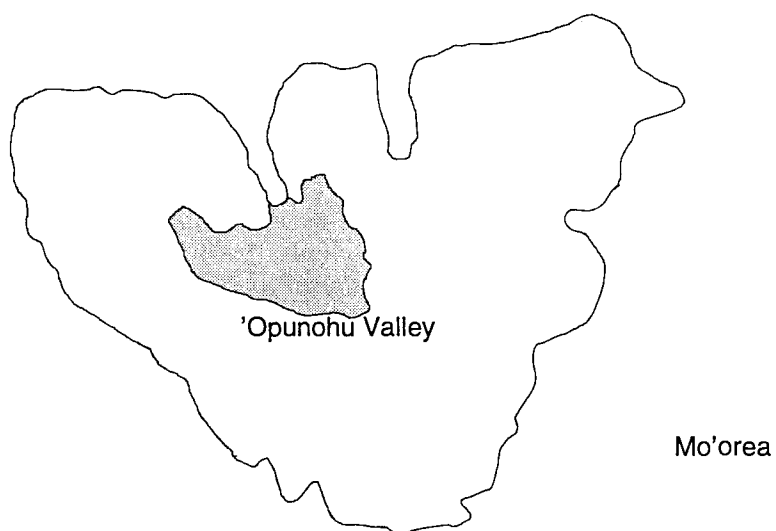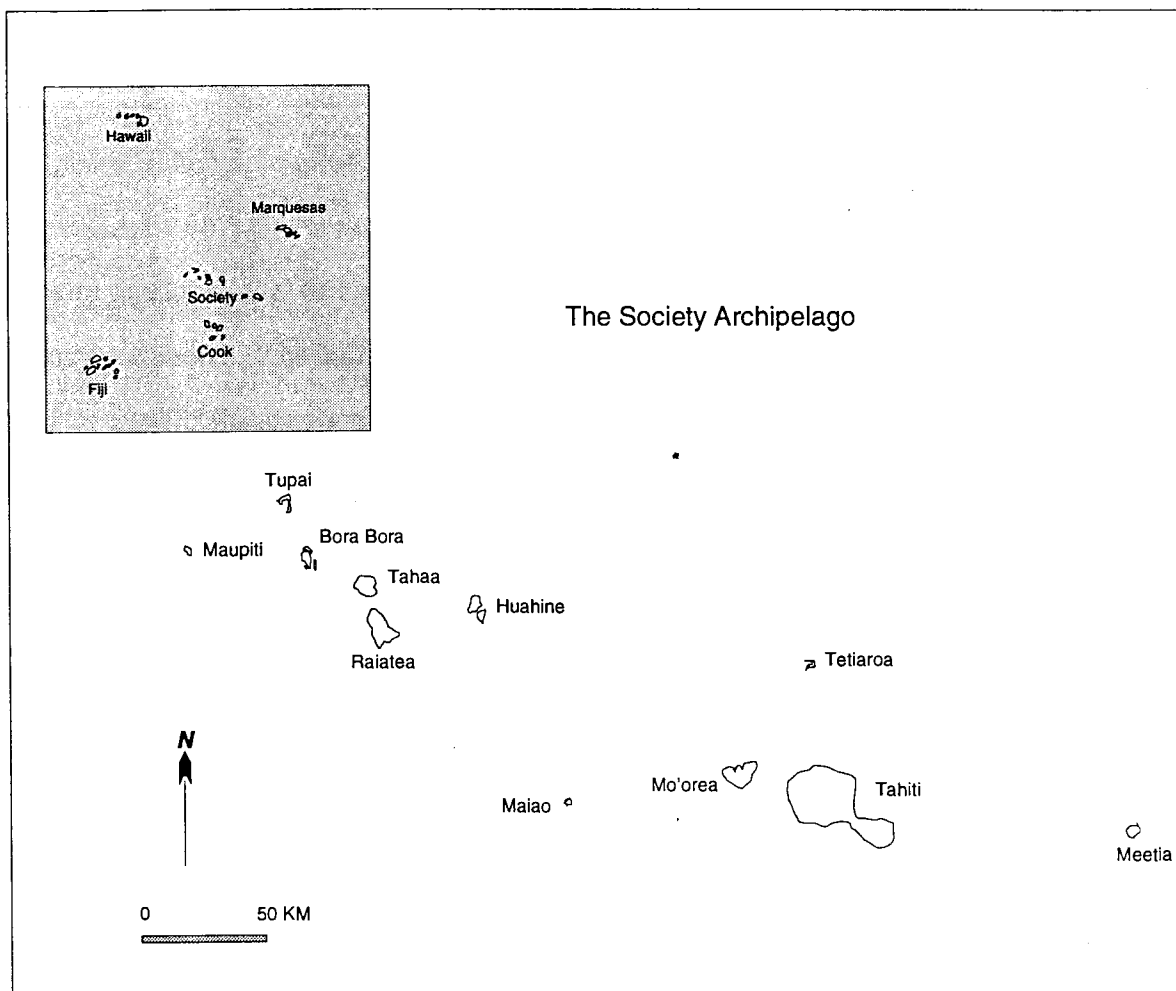
Figure 1.1 The Society Archipelago and Mo'orea

Surface stone remains show prehistoric occupation extended throughout the 'Opunohu, although in greatly varying densities and with certain areas of high concentration (Green et al. 1967; Green and Descantes 1989). The lower valley shows few surface remains due to alluvial forces (Lepofsky 1994; Lepofsky et al. n.d.) and perhaps as result of historic settlement. The bulk of remains are found in the upper valley and these are the structures which have comprised the data for most archaeological work (Descantes 1990; Green et al. 1967; Green and Descantes 1989; Lepofsky 1994). As is typical throughout the Societies and much of Polynesia, this type of geographic valley system, including both coastal and inland portions, made up the primary territorial unit into which the prehistoric sociopolitical system was organized (Green 1967b).

The Social Context at European Contact

The Society Islands were, at European contact, one of the most highly developed and complex of the Polynesian ranked chiefdoms (Oliver 1974; Goldman 1970; Sahlins 1958). I provide a brief overview of the historically recorded social class system to set the context for the household analysis which follows throughout the thesis. The discussion draws mostly from Oliver (1974) and it illuminates only those elements required as background for this study.

The stratified class hierarchy can be glossed as a three-tiered system, consisting of a chiefly (*ari'i*) class, lesser chiefs and landholders (*ra'atira*) and commoners (*manahune*) (Oliver 1974:749). These social divisions were maintained by barriers against intermarriage and organized by primogeniture descent. *Ari'i* were the heads, or chiefs, of certain ranking kin-congregations and constituted the ceremonial and secular elite. They usually held privileged hereditary offices or titles and governed over large land divisions, called districts (Oliver 1974:760). Several levels of *ari'i* appear to have existed at the time of European contact (Oliver 1974:762). Certain prestigious individuals (*ari'i rahi)* had achieved paramount status and commanded authority over several districts or an entire

island. A*ri'i ri'i* were the more common district chiefs who maintained authority over land and produce within their maximal ramage. Some members of the *ari'i* family, or close associates, were regarded as under chiefs or *to'ofa* (Oliver 1974:762). They reportedly governed territorial divisions within the maximal ramage, as did *ra'atira*, although in larger units.

Ra'atira are typically defined in the ethnohistoric literature in relation to land holdings or by their role as landowners (Oliver 1974:769). They reportedly governed variable sized land tracts within the maximal ramage and had considerable economic rights over produce under their jurisdiction. Land area and extent was accorded to *ra'atira* (as was their title) on a hereditary basis. *Ra'atira* did not warrant the class based rights and privileges associated with *ari'i*, but they were regarded as part of the status elite, and most social and ritual privileges began at this class level (see Oliver 1988:85).

Manahune make up the commoner class of *Maohi* society. They are differentially referred to in the ethnohistoric literature as landless servants (Handy 1930) or hereditary property holders (Henry 1928:230; Forster 1969:115). In his review of the literature, Oliver (1974:765-769) concludes that while some *manahune* may have held occupational roles as servants, most had hereditary rights and access to household land within the maximal ramage. The quality and size of lands was likely less favorable than that held by the *ra'atira* and the rights of the household to its produce was always subject to the demands of their superiors in the status hierarchy.

Territorial heads at the *ari'i* and *ra'atira* level held considerable power over household activities and resources. This authority was exercised through *rahui*, the restriction of certain goods or land to garner surplus for special times of feasting or war, and the use of both regular and special levies on household production. *Ari'i* depended on such taxation, by some reports, for basic sustenance (Moerenhout 1837(II):11) but more importantly for special occasion feasting and building longer term food stores (Morrison

1935:215). In this way, and through the exclusive rights to certain valued foods and lands, chiefs maintained control over land, resources and surplus production within their districts.

In addition to the vertical segmentation of class and territorial groups, a fundamental ritual distinction existed between those who were sacred and those who were not sanctified for godly activities. Chiefly power and control was based in a notion of inherent sacredness (*mana* or *ra'a*). Those of ranking lineages were in closer genealogical proximity to the gods and thus of greater *ra'a*. Given the overwhelming power of godly influence, that which was sacred was subject to restriction (*tapu*) from that which was common (*no'a*). Although most individuals could move between states of *ra'a* and *no'a*, this condition always separated *ari'i* and other status elite from commoners. For instance, chiefly residences were *tapu* for commoners, who, even if close by were required to show appropriate deferential behavior such as stripping to the waist and removing objects from the head. Similarly, it is reported that if a chief entered the house of a commoner, it was afterwards abandoned, having been imbued with excessive *mana* (Varela in Corney 1915(II):25-65). Thus, religious beliefs which sanctified the social order, had extensive influence over and were reified by ongoing, daily, secular behavior.

The Society Island Household

Ethnohistoric data provides a fairly consistent characterization of the protohistoric *Maohi* household. Oliver supplies the quintessential description based on this literature:

> ... households typically consisted of a single sleeping house along with a separate cookhouse, although a few also included an extra shelter or two for sleeping, working, or entertaining. In addition, in many if not most cases the structures making up a household unit included a marae, a place set aside and specially constructed for worship. Nearly all these households were separated from one another by gardens and orchards. Some in fact, stood hundreds of yards distant from all other dwellings; but most were clustered, spatially and socially, into "neighborhoods" each consisting of from two to ten or so households (1974:44).

Two house types are documented in the historical records as constituting the permanent forms of primary residences (Ellis 1967(I):175). A large round ended house, *fare pote'e* is ethnohistorically associated exclusively with the status elite, either for residential use or for ritual and community activities under chiefly jurisdiction. The smaller, rectangular *fare haupape* is described as ordinary house form for those "not of the favorable social class" (Orliac 1982:282).

Settlement data confirms the archaeological presence of these two house forms and their close association with a common set of residential surface features (Descantes 1990; Green et al. 1967; Sinoto and Komori 1988). Residential surface features include: constructed terraces made of boulder retaining walls (in areas of gradual slope) to provide for a level habitation surface; rectangular and round ended alignments of basalt curbstones; and, in most cases, a living flat or leveled area adjacent to the house to accommodate domestic activities. Household *marae* (a simple constructional form of *marae* associated with family worship) are frequently found in close association to these features (Descantes 1990).

Drawing from ethnohistoric and settlement data, households in the Society Islands can be physically identified by a certain number of invariant features, noted in the presence of a primary residential structure, surrounded by a variable number of other structures and features, such as a food preparation area, or perhaps a craft locale. These features are all located within a close physical group and may lie in close association with religious structures and/or gardens.

Several archaeological excavations of *fare pote'e* confirm their function as chiefly, either for residences, community houses or specialized uses (Davidson 1967; Green and Green 1967; Orliac 1982:284). What remains is the detailed archaeological examination of the *fare haupape* household to determine its physical and social attributes.

Research Objectives

Two specific objectives guide the study. First, given that no comprehensive or detailed archaeological excavation of the ordinary household has occurred in the Society Islands, I investigate and present data on the material form of the *fare haupape* residence. Excavation undertaken on a single *fare haupape* and its associated habitational terrace in May-June 1992 in the 'Opunohu Valley, Mo'orea provides the archaeological data for the study. These data have implications for the interpretation of households in general, and provide a comparative base from which other household studies may be measured.

The second objective addresses the social nature of household settlement. That is, I examine the archaeological correlates of the household under the premise that settlement space and organization at this level exhibit spatial relationships which are essential to, and informative upon, *Maohi* socio-political organization. Kirch (1989:40) defines social-settlement studies as the attempt "to recognize and to reconstruct patterns of social groupings in the spatial arrangement of sites and features". At the household, or *micro-*settlement level, patterns of social groups within the household and/or the social status of the household itself, are evident in the number and arrangement of structural components, features and artefacts of the household as well as by its settlement context. I suggest that through the spatial arrangement of structures, features and artefacts, the household exhibits ordering concurrent with social and symbolic hierarchies inherent to protohistoric *Maohi* culture.

That architectural features transmit social order is not an innovative idea in Polynesian settlement studies (see Eddowes 1991; Green et al. 1967; Green and Green 1968; Jennings, Holmer and Jackmond 1982; Sutton 1990a; Weisler and Kirch 1985). The notion that architectural remains and material culture are actively used as context and media in negotiations of hierarchy and dominance is also gaining ground. Certainly formal differences existed between households of the elite and households of commoners.

However, determining where and how these differences existed requires inquiry. The discernment of social groupings within architectural forms has been tested within Society Island *marae* types (Eddowes 1991), and Green (1967) has correlated the physical pattern of surface settlement with the maximal ramages reported at the time of European contact. It is anticipated that arrangements within and between households were also meaningfully applied.

Thesis Progression

Having outlined the thesis objectives, I present the theoretical and research background for the study in Chapter two. This chapter includes a brief discussion of the theoretical tenets of household archaeology and general applications of this form of study in Polynesia. The foundations of archaeological research into the Society Island household are also presented.

In Chapter three I examine the household as recorded in ethnohistoric and traditional literature. Archaeological correlates for households and their associated elements and activities are documented. Written sources provide critical information on the social factors involved in household design and the social use of house space. This, in addition to recorded knowledge on protohistoric sociopolitical arrangements, allows a more interpretative framework within which to study the role of the household in precontact *Maohi* society.

Archaeological data from excavation of the *fare haupape* household are presented in the following two chapters. In Chapter four I present a descriptive account of the site and its features. Chapter five includes a discussion and spatial analysis of the portable artefact assemblage. In the concluding chapter I synthesize the previous discussions and present an interpretation of the late prehistoric *fare haupape* household. Here, I consider both the physical and the social implications of household settlement.

CHAPTER TWO
RESEARCH AND THEORETICAL BACKGROUND

In this chapter, I establish the theoretical and research background for a study of the prehistoric *Maohi* household. As an introduction, I provide a brief review of the various approaches to household analysis in Polynesia, and the theoretical precepts and background of household archaeology are outlined. I then summarize the research foundations of Society Island archaeology, as relevant to this study. Particular attention is paid to the settlement history of the 'Opunohu Valley and the history of archaeological and ethnohistoric research into houses. Through this review, I set the context for the household analysis presented in chapters three, four and five.

The Household as a Unit of Analysis

The basic premise of household archaeology is that the human organization of space, while necessarily incorporating environmental and demographic needs, also offers valuable insight into prehistoric social relations, adaptation or behavior. This approach derives from settlement pattern analysis (Willey 1953) in which *micro* level settlement is identified as one of three levels of analysis that can access prehistoric political and social organization (Chang 1972; Clarke 1977; Trigger 1967).

In Polynesia, settlement pattern analysis has comprised a dominant form of archaeological study (Green 1984; Kirch 1989). Most investigations into the organization and interrelationships of settlement have been applied at the regional level (Bellwood 1971, 1972, 1978; Cordy 1981; Green et al. 1967; Irwin 1985; Kellum-Ottino 1971; Kirch 1985; Suggs 1961 as selected regional examples). Microscale or household analysis is less well developed (Green 1984:63), although it has, over the past decade, become increasingly explored as a fundamental component of settlement analysis.

In Polynesia, two main approaches characterize household archaeology. First, there are studies which examine the spatial arrangements, form, size and distribution of households as a way to reconstruct social groupings within villages or aggregates of households (Cordy 1981; Jennings and Holmer 1980; Jennings, Holmer and Jackmond 1982; Kirch 1985; McCoy 1976; Sutton 1990a; Weisler and Kirch 1985). The second approach focuses on the symbolic or cosmological associations of household form or space (Orliac and Orliac 1980; Prickett 1979, 1982; Sutton 1990a;1990b ; Weisler and Kirch 1985:153-155; Kirch and Yen 1982:131) For instance, Sutton (1990a:201) suggests late prehistoric *Maori* habitations were symbolically ordered according to cultural principles of *tapu* and *noa*, enacted in the arrangement of activity areas and between houses of different status. Further, household arrangements or aggregates of households (*kainga*) provide in their form the ancestral symbolic structure for the *marae* complex in New Zealand. Weisler and Kirch (1985) also examine the semiotic value of household space. In their view, space "is viewed as a system of meaningful signs, reflecting a visual code analogous to the linguistic codes underlying verbal behavior" (1985:153). Thus, recurrent structural or activity arrangements within the house are taken to reflect certain culturally significant values of spatial ordering such as front/back, male/female, sacred/secular. These latter studies rely heavily upon good ethnographic or historic contexts, and reflect an endpoint of social organization which may have limited applications in prehistory.

There are indications that household archaeology and household arrangements are durable analytic features in the archaeological record. Jennings, Holmer and Jackmond (1982:100) demonstrate that Samoan households show consistant arrangements from the late prehistoric into the contemporary village, a period of time over 500 years in length. They find that "the use of space, the importance of HHU [household unit] boundaries, the importances of rank in the disposition of households along the paths and other organizing priniciples..." are the consistant features in settlement arrangements. Green (1986) is also

optimistic that the basic household unit, including the dwelling, cookhouse and canoe shed may hold material evidence of early Polynesian social group organization and development. Recent data from Lapita activity sites suggests finding such units in the early archaeological record is attainable (Godson et al. 1989; Sheppard and Green 1991).

Theoretical Foundations of Household Archaeology

The roots of household archaeology lie within settlement pattern studies (Clarke 1977; Trigger 1967; Willey 1953). However, with the rise of systems theory and the New Archaeology, the household gained increasing analytic importance. This level of analysis promised to provide a behaviorally meaningful unit of analysis which could address processual questions of culture (Trigger 1989:188). The household provided, in this sense, an opportunity "to examine social adaptation with direct reference to the empirical details of the archaeological record" (Flannery and Winter 1976). Small scale theories of household organization and change could be used to "bridge the mid-level theory gap in archaeology" (Wilk and Rathje 1982:617). In other words, the household provided an analytical unit that could empirically access the broader questions of population size, social stratification and urban development.

In the processual definition of the household, clear distinctions are made between the form/function of the domestic area and the social unit that occupied it (Flannery and Winters 1974; Stanish 1989; Wilk and Ashmore 1988; Wilk and Rathje 1982). The social aspect of the household is narrowly defined as the demographic unit, or "family", and is considered archaeologically problematic (Stanish 1989:11). This definition draws from anthropological discourse which cautions against any *a priori* definition of the household given the cross-cultural diversity in household membership, residence rules, kin/family types, domestic boundaries, and the range of economic and political roles associated with this sphere (Bender 1967; Hammel and Laslett 1974; Wilk and Netting 1984; Yanagisako 1979). Attention is directed to what households do (e.g. its activities and material functions) in

order to access models of past adaptive social behavior and organization (Bawden 1982; Flannery 1976; Kent 1990; Wilk and Ashmore 1988; Wilk and Rathje 1982).

More recently, many have abandoned the "middle-level theory" role of household study, and argue that the construction, form and activity of the household is itself imbued with active social meaning and is contextually significant (Bailey 1990; Moore 1988; Tringham 1991). Post-processual critics argue that the processual approach overemphasizes the functional/activity roles of the household at expense of its social form (Tringham 1991:100; Saunders 1990). In the former, social relations are accessible in material forms only insofar as those relations are passively reflected through socially adaptive and homogenous behaviors (Tringham 1991:100). Contextual archaeology in particular, rejects this view and interprets all material forms as socially and historically contingent (Hodder 1982, 1985, 1986, 1987). Moreover, material culture is viewed as an active component in the mediation, negotiation and definition of social and economic life. This means that while material culture is constrained by environment and function, it also articulates with the social structure or ideological rules of a cultural group. This occurs because material culture is used by different groups to promote and ensure their own interests and ideologies. Material culture, therefore is an active component in individual and group social relations, and in culture change. By this view, the household reflects and is manipulated to communicate (and usually reinforce) social conditions and ideology. (Bourdieu 1973; Donley 1982, 1987; Douglas 1972; Hodder 1986; Moore 1986)

This active interpretation of material culture means that the social nature of the household is not defined solely by who lives within it. Familial/kin relationships within the household are intriguing archaeological challenges, but it is the social rules and order invoked in household form that make social relations archaeologically accessible and interesting.

Post-processual approaches to the household are in fact more varied than this

summation implies. For example, symbolic and structuralist studies attempt to examine the cultural meaning in house space and design according to an underlying, inherent order or ideology (Cunningham 1964; Prickett 1982; Glassie 1975; Yates 1989). Architectural studies on the other hand examine the formal morphological characteristics of the built environment to derive social insight as to how groups negotiate space and organize human contact (Hillier and Hanson 1984; Foster 1989; Fairclough 1992; Chapman 1990). Both approaches are criticized by contextual studies as ideologically static and at times ahistorical (Moore 1986).

Theoretical Application in the 'Opunohu Case

In this thesis, a primary premise is that material correlates of the household exhibit spatial and component relationships which are informative of, and essential to, various social and symbolic aspects of *Maohi* culture in the late prehistoric period. Following contextual studies, I assume the physical form of the household is socially derived; that is, the form and design are "loaded" with cultural meaning which acts to reflect and define social relations and ideologies between individuals and groups. For instance, regulating access to resources and information was practically and ideologically enforced in protohistoric[1] *Maohi* society. Only status men could participate in public ritual, and commoners were barred from many foods, locales and high status people. In fact, most aspects of daily and ritual life required appropriate types of social interaction. Physical structures were often erected or constructed to "remind" people of these social and ritual observances. I suggest that an interpretive approach to the material form of the household will show it too was part of the ongoing negotiation between individual and social groups.

I use the term household to refer to the material correlates of a bounded residential space and the social group that occupied it. No axiomatic correlation is made regarding the

---

[1]The protohistoric period encompasses a period from about 1650 (the beginning of recorded tradition) to the arrival of Protestant missionaries at the turn of the 19th century

specific nature of the social unit (i.e. family), full-time occupancy or activities associated with the household. Instead, I imply a historically and socially ordered group and its associated residential locale. Beyond this theoretical consideration of the term, I present a working definition of the late prehistoric *Maohi* household in Chapter three.

Settlement and Social History of the Society Islands

Despite a long history of archaeological research in the Society Islands, Green's (1967b:216) observation in 1967 that there was not yet sufficient data to outline a cultural sequence for the islands, based on material culture traits, continues to hold true. The settlement chronology for specific locales, such as the 'Opunohu valley, have been put forward based on archaeological and ethnohistoric evidence (Green 1967b:216-227; Descantes 1990:90-97; Lepofsky 1994:264-298), but no formal island wide sequence is available. A range of archaeological evidence, however, allows the following general summary of Society Island settlement and social development.

Earliest evidence for occupation of the Societies dates to the 7th or 8th century A.D. (Lepofsky et al. 1992; Lepofsky et al. n.d.; Sinoto and McCoy 1975; Spriggs and Anderson 1993). Excavations by Sinoto at the wet site of Vaio'otia, Huahine suggest that a well-developed culture was flourishing in coastal contexts at this time (Sinoto 1988; Sinoto and McCoy 1975). Data from this site included a partial house of *fare pote'e* form, raised storage houses, specialized craft production in canoe, adze and fishhook forms, and artefacts with ornamentation and ritual properties; all features indicating an established social and cultural hierarchy. Clearly, this settlement was not one of the earliest colonizers and earlier cultural dates are to be expected.

The 1200 years following this occupation are characterized by increasing populations and social stratification. By at least the 13th century populations had dispersed inland (Lepofsky 1994:296) and elite structures first appear in interior valleys (Green and Green 1967). Evidence for human-induced landscape change and agricultural intensification

confirm increasing economic and social activities at this time period (Lepofsky 1994). By the 16th century, evidence for complex sociopolitical arrangements proliferate (Lepofsky 1994:310). Monumental architectural types such large *fare pote'e*, archery platforms, chiefly stone platforms and *marae* are evident and suggest the presence of a stratified class structure (Green 1967b). Ethnohistoric documentation from the protohistoric period also confirms the presence of a ranked and segmented class system. By the time of European arrival, the Societies were one of the most highly stratified and complex of the Polynesian chiefdoms (Goldman 1970; Oliver 1974; Sahlins 1958)

The 'Opunohu Settlement Context

The settlement history of the 'Opunohu was established by Green (1967b) based on a survey of surface remains, selected excavations and historically recorded events. Recent reevaluation by several researchers (Descantes 1990; Eddowes 1991; Lepofsky 1994) has altered portions of the settlement model, but much of the original scenario holds true. I present a brief summary of this literature to set the context for archaeological data on the household presented in Chapters four and five.

The original model of 'Opunohu valley settlement established occupation at least to the 13th century based on a radiocarbon date from a sub-surface *fare pote'e* which underlay a surface house of the same type (Green and Green 1967:167). Several other dates (Davidson 1967:139; Rappaport and Rappaport 1967:180) suggested continued use of the valley but non-intensive settlement throughout the 15th and 16th centuries (Green 1967a:162). Dates associated with surface features indicated "a late 18th century peak of development in the valley" (Davidson 1967:139) and Green posited that intensive and sustained use of the valley occurred between the 17th and early 19th centuries (Green 1967:220).

A last, late occupation of the valley was undated but archaeologically represented by the presence of several rectangular curbstone house foundations inside larger round ended

houses, also still delimited by curbstones (Green and Green 1967; Davidson 1967).
Davidson (1967:139) infers these *fare haupape* to relate to an early 19th century settlement.
Thus, after the historic effects of depopulation in the valley in the early 19th century, a
remnant population remained.

Based on the distribution and type of surface sites, Green (1967b) identified two
distinct areas of settlement; an eastern and a western district refered to as Tupauruuru and
Amehiti, repectively. The western area showed sparse settlement, with fewer specialized or
elite associated structures. Of the twenty-one *fare pote'e* recorded in the valley, only five
were located on the western side (Green and Green 1967:174). The eastern district
exhibited denser and more complex structural types, such as archery platforms, complex
marae, fare pote'e and assembly platforms. The presence of these complex forms and their
density suggested that the population of the eastern district supported higher-ranking
individuals and was a maximal ramage at a more advanced stage of segmentation (Green
1967b:225). Historic documents and traditional evidence reported by Green (1967b)
supported this general picture of settlement.

Building upon Green's model, Descantes (1990, 1993) recently considered the effect
of historically recorded events on the settlement pattern in the 'Opunohu. Following Green,
he viewed settlement in the valley as non-intensive until the mid-18th century when
ethnohistoric records indicate increased activity. Descantes (1993:193) argues that
increased warfare between Tahiti and Mo'orea reported by Cook in 1774, and the Tahitian
clan's alliance with the Europeans, led the inhabitants of the 'Opunohu to take refuge at the
valley interior. Thus all "surface...settlements in the 'Opunohu belong to the...late 18th and
early 19th century" (Descantes 1993:192). The appearance and proliferation of structures at
this time represents, for Descantes, the necessity for "elite refugees to maintain their
ancestral political prestige, [as] representing their interests as those of their retinue would
have been of major importance in order to keep a viable functioning society" (Descantes

1990: 148-149). Thus, the florescence of intense and elite settlement seen in the surface structural types, especially in the Tupauruuru, represents an attempt to maintain status in the face of impending political change.

Descantes draws evidence for this settlement scenario mainly from *marae* types. In particular, he considers the existance of appended *marae* -- where simple *marae* types are physically attached to more complex religious structures -- represent junior lineage fissioning in a limited spatial environment. Since high-ranking families had isolated themselves from the coast, the pattern of junior lineage fissioning to new household lands could not be maintained. Therefore, *marae* were elaborated and annexed to display solidarity and in "attempt to conserve threatened institutionalized *Ma'ohi* practices" (Descantes 1993:187).

The idea that sustained settlement of the 'Opunohu valley was late has been recently challenged (Eddowes 1991; Lepofsky 1994). Eddowes (1991: 155) notes that the presence of the subsurface *fare pote'e* at Amehiti in the 13th century implies that early on the valley had enough cultural and economic significance to warrant and support a structure associated with assembly or chiefly residence functions. Further, the continuous use of the site until the 18th century implies a long-standing and well-functioning elite.

Lepofsky (1994) also challenges the notion that the majority of surface remains in the valley can be assigned to the early historic era. In a reexamination of Green et al.'s (1967) 'Opunohu valley radiocarbon dates, she questions the four dates used to establish the majority of surface remains as a late 18th century phenomena. Utilizing contemporary radiocarbon standards, these sites are better interpreted as relating "to some time between 1650 - 1950" (Lepofsky 1994:136). The three subsurface dates from Green's excavations, including the early Amehiti date and two other determinations from Tupauruuru dating to between 1430 - 1650 are accepted (Lepofsky 1994:136).

Thus the assignment of all surface features as contemporaneous and late is unwarranted. Even if this could be assumed, Descantes' assertion that settlement in

Tupauruuru was essentially a late phenomena and one related to resisting external European influence is suspect. Descantes (1993:211) states that *sometime before...1774...high-ranking people began taking refuge in the Tupauruuru section*" (emphasis added). This means, complex settlement in the valley had to develop "sometime before" 1774 and 1805 (when populations in the valley were essentially decimated [Lepofsky 1994:38]). This provides a time span of between 31 and, at best, 100 years for the development of the elite and dense surface structural remains -- including the appended *marae* representative of generational fissioning. Given the density and complexity of architectural types, this time span does not seem sufficient -- especially considering this was a remnant refugee population existing during a time period of significant population reduction and warfare. Historic evidence is convincing that there was a very late population in the 'Opunohu which resisted European influence (see Green 1967b:222). This may account for some of the appended *marae*. However, that this phenomena was responsible for and is manifest in the full range of surface remains in the upper Tupauruuru is unlikely.

New data introduced by Lepofsky (1994) further establishes early settlement in the valley. Human-induced landscape change and agricultural activities indicate interior valley settlement from the 13th century onward. Dated elite structures in the valley document complex settlement at least by A.D. 1500 (Lepofsky 1994:305). Further, Eddowes (1991:157) suggests that while m*arae* structures in the valley show status characteristics, there are none of the most elite structural types that are associated with the highest kin-title holders usually found in coastal contexts. This suggests that the occupants of the valley were likely the junior lines of the maximal ramage, whose more elite members lived on the coast.

Based on the preceding, sustained occupation of the valley should be viewed as substantially earlier than originally assumed. In this regard, Lepofsky (1994:138) rightly cautions against the acceptance of all surface remains as contemporaneous. There are not

yet enough reliable age determinations from sites to assume contiguous relations across broad areas (see also Orliac 1982:238). Although the history of settlement in the valley has been altered, the generalities of Green's sociopolitical interpretation holds true. The majority of the dated surface remains are late (16th - 19th century), although one can no longer assume all are of the same age. The increased complexity, segmentation, and rank differences between valley districts also demonstrates Tupauruuru's undoubtable political dominance over Amehiti as argued by Green (1967b) although when this occurred is an unanswered question. Descantes's refuge model may be applicable only to the very late stages of settlement just prior to valley abandonment but cannot explain the totality of remains in the 'Opunohu. Instead, a sustained and complex process of social development in the valley is characterized by the surface remains, the details of which remain to be fully explored.

Ethnohistorical and Archaeological Research on the Society Island Household

Ethnohistoric research into contact period houses, and the household, has been previously undertaken by Oliver (1974) and Orliac (1982). Oliver (1974) provides documentation on residences as one part of his impressive synthesis of the historic literature on the Society Islands, Ancient Tahitian Society. Orliac (1982) gives a more detailed review in a work specifically devoted to the reconstruction of house types and functions recorded at the time of European contact. She documents over 30 different functions for the two historically known house types (*fare pote'e* and *fare haupape*) and provides archaeological correlates for each house type and many of their functions. Orliac's goal, to test utility of historic data towards archaeological interpretation (1982:1), is limited by a paucity of archaeological data on houses from which to compare with written literature, and particularly rectangular houses.

Archaeological research on house types in the Society Islands began in the 1920s under the commission of the Bernice P. Bishop Museum of Hawaii. Emory (1933)

published the first descriptive classification of surface stone remains in the archipelago, including house alignments, although the survey is limited by the almost exclusive attention to *marae* types. Handy (1932) provided more detailed descriptions of house types and their construction techniques as recorded in the early 20th century. His interpretation of prehistoric houses is constrained by a theoretical prediliction to the question of early Polynesian racial origins and migrations routes. He (1930:3,9; 1932:36-37) interprets *fare haupape*, for example, to be an ancient house form which belonged to a first migration wave of people to the Society Islands. These people were later subjugated by the more recent *ari'i* lineage, represented by the *fare pote'e* house type. Emory (1933:44) quickly disputed the notion that *fare haupape* were an earlier house type, noting the antiquity of round ended houses in the Society Islands and elsewhere.

Continued archaeological survey throughout the 1930's and 1940's focused largely on *marae* (Emory 1933, 1943, 1947). Attempts to develop a spatial/temporal chronology for the Societies focused attention largely upon material culture types. Fish hook forms, adze types and *marae* were examined as distinctive material markers of *Maohi* culture with the aim to generate a culture historical chronology for the islands (Emory and Sinoto 1964, 1965; Sinoto 1979; Sinoto and McCoy 1975). Thus, typically large or early sites, or those thought to contain rich deposits were sought for excavation or survey. Within the context of discovering ever earlier diagnostic cultural traits, the examination of houses and other more mundane aspects of prehistoric life were thought to offer little reward.

It was not until the introduction of a settlement pattern approach in Polynesia (Green 1961; Green et al. 1967) that the house or the household became a significant component in archaeological analysis. In a systematic survey of the 'Opunohu valley, Mo'orea, Green et al. (1967) examined the full range of surface remains (spectacular and mundane) and their spatial arrangements as a contextual unit. Green (1961) posited that settlement in the valley was part of an overall territorial unit and not distinguished between coastal (*ari'i*) and inland

(*manahune*) settlements, as previously suggested by Handy (1930:3). The examination of settlement as a functioning network allowed variability or patterning to be explained by historical, internal cultural dynamics rather than by external factors such as diffusion or migration. A more complex picture of prehistoric life emerged. Green's survey demonstrated that valley settlement patterning could be correlated with the differential status groups reported at the time of contact (Green 1967b:224). Although the detailed archaeological analysis of households was not the goal of Green's study, it moved this unit from purely a descriptive type, or an end in itself, to a unit of interpretive potential.

Numerous areal surveys of other localities in the Society Islands have continued to identify houses and potential habitation areas. These studies have not included a substantial excavation program and mainly provide documentation on the range of surface site types found throughout the archipelago (Garanger 1964, 1980; Sinoto and Komori 1988; Verin 1962a, 1962b, 1962c, 1964).

Excavation of Houses

The few excavations which have occurred on houses have focused largely on structures with elite associations, namely *fare pote'e*. Even fewer excavations on non-elite house types have been undertaken. Of these, most *fare haupape* have been excavated as a result of their association with elite structures, often making their functions as ordinary residences unlikely (Davidson 1967; Green and Green 1967; Orliac 1982). Other excavation programs have tested various *fare haupape*, but these are so restrictively sampled that they provide little useful contextual information (Gerard 1978; Sinoto and Komori 1988). A recent settlement study of the Papeno'o Valley, Tahiti, included the excavation of several *fare haupape* (see Eddowes 1991:180-181), however the results of this research are pending and await publication.

Green et al.'s (1967) Mo'orean excavations provide the most comprehensive physical data on house forms. Here, the objective was to determine the function and social role of

fare pote'e (Green 1967b:220). The excavations focused on three of the largest structures found in the valley (ScMo 103, ScMo 158, ScMo 4)[2]. Based on their size and associated material culture, these structures were interpreted as community assembly houses (Green and Green 1967:175). Using ethnohistoric evidence, Orliac (1982: 237) further refined the functional interpretation of the *fare pote'e*. In addition to their size, she argues that the associated structures and features of the houses allows interpretation of one structure (ScMo 103) as a house for the keeping of sacred objects, another (ScMo 158) as a house of assembly, and the third (ScMo 4) as the house of a high-ranking chief.

Several *fare haupape* were excavated as part of this project as a result of their proximity to the *fare pote'e*. Two were situated inside the curbing of round ended houses (ScMo 158 and ScMo 103) and excavations showed the *haupape* were built after the *fare pote'e* had been abandoned (Davidson's 1967:127,134). A hearth was associated with one house, but no other features or material remains were attributed to these structures (barring post holes). Both were interpreted by Davidson (1967:134,139) as ordinary residences. Two further f*are haupape,* associated with the same occupation period of *fare pote'e* at ScMo 103 and ScMo 4, were also excavated. Material evidence associated with these latter two households was scant. Their direct association with the *fare pote'e* makes their interpretation as ordinary residences suspect (Green and Green 1967:175; Orliac 1982).

In addition to ethnohistoric and archaeological examinations of houses, Descantes (1990, 1993) has recently attempted to discern household units in the spatial arrangements surface remains in the 'Opunohu Valley. Utilizing Green's settlement data (Green and Descantes 1989), he identifies recurrent domestic features to be house curbstones (round and rectangular), terraces, and in some cases, pavements (Descantes 1990:136). These features tend to concentrate around simple *marae,* leading Descantes (1990:136) to

---

[2]Site designations based on Green's standardized recording system for French Polynesia. Sc (Society Islands), M (Mo'orea), O (Opunohu valley) - site number.

conclude that household *marae* or shrines are the best surface indicators of households. House curbstones are not presented as the primary household indicator presumably because not all houses had residential functions. Numerous "empty" terraces throughout the valley also indicate that not all houses were represented by stone curbing or that there has been significant disturbance to some curbstones (Lepofsky 1994:213).

While the relationship between households and simple *marae* is unquestioned, the spatial-settlement approach used by Descantes has drawbacks. First, there is not yet enough empirical data from the 'Opunohu to establish which surface structures in the valley are contemporaneous. Also, as houses had numerous functions, so did the simple *marae* and shrines that Descantes identifies as familial. Henry (1928:145) indicates, for instance, that specialist's *marae* may also have been of this simple type. Following Gerard (1974:71) one must also question whether there were corresponding numbers of land titles and *marae*. In fact, Descantes's numbers indicate that domestic features do not equal the number of *marae* complexes in Tupauruuru (see Descantes 1990: figure 5.12). These factors caution against the use of simple *marae* as the solitary indicator of households.

Chapter Summary

What emerges from this overview of research on the Society Island household is the necessity for empirical and physical data on the *fare haupape* residence. Historically, attention to such houses has been largely descriptive. The introduction of settlement pattern analysis encouraged the integration of all structures, elite and mundane, within broader scale regional interpretations. However, most archaeological excavations as part of settlement analyses have focused on the documentation and interpretation of elite house types. Social and material patterning within ordinary household settlement is still largely unknown. Several important ethnohistoric examinations of the household are available but these are limited by a lack of corresponding material studies. Establishing the actual range and kind of

variation in the archaeological household is a necessary activity in order to further assess the

utility of ethnohistoric documentation.

The examination of the *fare haupape* household presented in this thesis serves to fill

a substantial gap in the archaeological record of the Society Islands. In addition to initiating

a material data base on this house type, the study stands to provide important information on

the social implications of household settlement. The study of the household

has been increasingly used throughout Polynesia to access the social relations of settlement

at the micro level. Household arrangements in the landscape and the symbolic meaning of

household form both offer valuable avenues to exploring prehistoric sociocultural

relationships. The theoretical approach to the household used in this thesis anticipates that

the material form of the household correlates with various social and symbolic aspects of

Maohi culture. The use of recorded literature is essential to drawing out this argument.

Thus an ethnohistoric reconstruction of the household follows in the next chapter.

CHAPTER THREE

ETHNOHISTORY: THE PROTOHISTORIC *MAOHI* HOUSEHOLD

In this chapter I utilize the ethnohistoric record to assess the contact period

Maohi household. The use of the ethnohistoric record to reconstruct contact period,

and earlier, lifeways is a well-established practice throughout Polynesia, precisely

because of the rich and detailed body of early literature that exists for much of the area

(Green and Green 1968; Oliver 1974; Kirch and Sahlins 1992; Sahlins 1985). In the

Society Islands, a rapid history of European contact provides an extensive

documentary data base, from the end of the 18th century through French colonization

in the mid-19th century. Several aspects of the contact period household have been

previously detailed by Oliver (1974) and Orliac (1982). Here, I summarize their

findings[1] and attempt a broader reconstruction of the sociological associations, spatial

and symbolic aspects of household design.

Method

I evaluate both written and pictorial sources from earliest European contact

through the mid-nineteenth century. This includes early explorers journals and notes,

missionary documentation and early ethnographic studies of the islands. In addition to

European reports, documentation by Tahitian narrators (in Adams 1968; Henry 1928)

in the form of oral traditions and chants are explored. Although these provide little

direct information on houses or households they do supply intriguing glimpses into

cosmological and territorial predicates related to this sphere.

Primary attention is paid to recordings from the early contact period (1767-

1797). Although impact to the islands was immediate, especially in terms of

---

[1] I rely on Orliac (1982), in particular, for the physical reconstruction of houses

introduced disease, this time period reflects cultural practices least affected by European presence. Later sources are used with caution, and notes are included if the antiquity of a practice is in question.

History of European Contact

The history of European exploration to the Society Islands is often divided into two periods of contact, the early contact period (1767-1797) and the late contact period (1797-mid 18th century) (Eddowes 1991; Lepofsky 1994; Oliver 1974). The early contact period is marked by the arrival of Captain Samuel Wallis to Tahiti in June 1767. Following Wallis's initial contact, there was a rapid succession of other European ships to the islands including Captain James Cook in 1769, 1773, 1774 and 1777, Louis de Bougainville in 1768, Don Domingo Boenechea in 1774 and 1775 and William Bligh in 1788 and 1789, among others (see Oliver 1974:3-4 for a complete history of initial contact). These earliest visits typically lasted only a few weeks, resulting in very localized descriptions. A few occupations of longer duration such as those by James Morrison, a forced participant of the Bounty mutiny who stayed two years at Tahiti, and a Spanish mission group present between November 1774 and October 1775 result in a richer and more detailed source of documentation.

Typically, these early recordings reflect 18th century European social and scientific standards. The *Maohi* people and lifeways are favorably documented and presented as the true embodiment of the human spirit, following the tenets of Rousseauian idealism (Dening 1966:38). And, following methodological standards of the day, recorders noted a uniform, if limited, range of cultural, geographical and botanical characteristics of the newly encountered lands. These early documents do not occur as part of an ideological system to intentionally effect change, in contrast to later missionary recordings, but they are limited by an explorers point of view, short visits, and at times an over enthusiastic representation of an "idealic" island life.

The late contact period is marked by the arrival of The Duff in 1797 and the
bringing with it a group of Protestant missionaries. Missionary arrival and protracted
periods of contact to the islands by a number of different European cultures exacted
swift and monumental changes to the social, political and religious structures of *Maohi*
society.

As early as the first decade after contact, depopulation as result of European
introduced disease had significantly affected the social balance of *Maohi* society
(Lepofsky 1994: 32-35; Rallu 1989). Oliver (1974:35-39) estimates that by 1800, the
populations of Tahiti and Mo'orea were radically reduced from the observations first
made by Wallis and Cook; from approximately 35,000 to 9,000 persons. Extensive
and increasingly destructive inter-tribal warfare due to chiefly efforts at
aggrandizement in the late 1700s also exacted disasterous tolls on populations
(Newbury 1967). As a result, by 1797, missionary arrival coincided with a
demographically and structurally weakened society. As eloquently argued by
Newbury (1967), early missionary success in Tahiti was more due to native interests
to maximize the new Christian *atua* (god) within a traditional system of multiple
deities, than the blanket acceptance of the new Christian ideology. However, with the
corresponding reduction in population, a society heavily based on ritualized power
structures was without the mechanisms to ensure the reproduction of ritual practices,
class based duties and privileges, and traditional knowledge. Thus, the transformation
of protohistoric social, cultural, and religious practices was swift. By 1829 Ellis
writes:

> All their usages of antiquity having been so entirely superseded by the new
> order of things that has followed the subversion of their former system, the
> knowledge of but few of them is retained by the majority of the inhabitants,

while the rising generation is growing up in total ignorance of all that distinguished their ancestors from themselves (1967(I):vi-vii).[2]

The historic record of the late contact, largely the work of Protestant missionaries, has a decidedly different flavor than the previous romanticized view of native life. Changing European moral doctrine and increasing contact with diverse world cultures led to increasingly conservative views of "native" society, from that of the noble to the hedonistic savage. Traditional practices are denigrated and the records document considerable attempts by the missionaries to alter pre-Christian practices. Houses were among the first priorities singled out for change. Missioner Ellis, describing his reaction to large numbers of people sleeping in community houses states: "The evil necessarily resulting from these habits were too palpable to allow us to delay attempting at least an alteration" (Ellis 1967(II):68). He thus discouraged the practise of communal sleeping and lobbied for the implementation of room partitians in houses, lime plastering for walls and floors, and European style furniture. As quickly as 1822 the new design had taken on social value. As Ellis reports "...we stopped occasionally to speak to some of the natives standing near their huts...They said they were ashamed to invite us into their huts, but that their other house was building [of English style] and then they would be happy to see us there (1967(II):78). For Ellis:

> The erection of a house upon the improved plan...became a kind of test of sincerity...; for to embrace Christianity, with the precepts which it inculcated, nothing could be more at variance than the habits of indolence and unsightly filthiness of former habitations (1967(II):72).

Use of Ethnohistoric Sources

The biases and limitations inherent in using ethnohistoric literature to document precontact lifeways in Tahiti are well described elsewhere (see Dening

---

[2]All historic text is reproduced here as in the original, including spelling and punctuation.

1966, 1986; Gunson 1963). In the following discussion, I specify only those aspects of the record that require caution in relation to a household analysis.

Because of the European incentive to establish good trade networks, early European interactions were almost exclusively with chiefs (Newbury 1980). With missionary arrival this relationship continued, motivated in part by the chiefly attempt to use European association as an adjunct to traditional methods of authority. This forms a primary bias in the current view of households in the ethnohistoric record. That is, the perspective of households is one very much influenced by chiefly residences and informants, or those Europeans believed to be *ari'i*. Very little attention was paid to the residential life or precincts of *Maohi* of lesser status and influence. Moreover, because of the European expectation that chiefly households were elaborate ones, very large public houses of reunion (*fare manahini*) or entertainment (*fare Ariori*) were often mistakenly referred to as "households" due to their size and grandeur (e.g. Wallis in Hawksworth 1773; Cook in Beaglehole 1955). These houses were certainly commissioned by *ari'i* and part of their visual status repertoire, but they were not residential households.

As is true for most aspects of *Maohi* life and culture, Europeans were most impressed by the spectacular, and to their eye, the bizarre. Their attention was grabbed by structures of spectacular size or function. Thus, written accounts and pictorial sources do not often rest on the mundane, but rather on the extraordinary, the grotesque or provocative. With respect to households this meant the expressed amazement at curiosities rather than the comprehensive description of behavior related to this sphere. For example, the social prohibitions against men and women eating together generated much comment by the Europeans. However, we know little about the restrictions related to age which also regulated behavior between individuals within households, or the sociological variations of such behavior. The cursory treatment of

such topics also makes it difficult to confirm the validity of documentation between sources and localities.

Last, despite extensive commentary on the religious practices, status hierarchy and social customs of the islanders, Europeans understood little about the complexities and nuances of *Maohi* religious and daily practice. While fascinated with the extent of social protocol surrounding *ari'i* and even domestic relations, such as eating prohibitions, they certainly did not understand the cultural reasons behind such behavior. The most basic limitation to these documents is the lack of understanding of the multiplicity of meaning associated with even the most basic aspects of life. As a result, our view of much of *Maohi* behavior and material culture is very oversimplified.

Ethnohistoric Reconstruction of the Household: Terminology and Settlement Structure

The early European observers did not undertake a detailed study of households and thereby allow us to understand the range of terms related to this sphere. We are left with a fairly basic account of terms implying general functional types, such as sleeping house, eating house, *tapa* making house and so on (see Handy 1932:3-5). It can be confidently assumed that an entire dimension of terms denoting spatial areas within and about the household are lost. It is also likely that terms which had both a temporal and cosmological meaning or association are now only unidimensional in their interpretation.

Two house forms constituted the usual forms of permanent habitations, the *fare pote'e* and the *fare haupape*. The former is identified as the usual form of chief's houses and the latter as the common residential type (Ellis 1967(I):175; Handy 1932:3). Temporary living structures, such as portable sheds or tents, are also described in the literature although the material remains of these will be difficult to

determine archaeologically. Regardless of type, the primary living structure in the household was referred to as the *fare ta'oto*. This house in combination with a number of other structures, features and activity areas makes up the household unit.

Oliver uses the term *'utaufare* to encompass the social and physical precincts of a residential household. He (1974:966, 1988:42) defines the social household as a group of between five and twenty-five persons with interrelated family ties who dwelt within a common physical area and cooperated in the production of the household. Other definitions of *'utaufare* are less precise, the LMS (London Missionary Society) dictionary for example defines the term as a person's home or house; the family or household of a person (in Oliver 1974:1156).

In close association with the household unit also stood a *marae*, gardens, and if located near the coast, possibly a canoe house. Family or ancestral *marae* were erected for familial worship and "for the sanctification of household activities" (Descantes 1993:187). The *marae* also symbolically represent the kin-group and bond the social and territorial rights of the household.

> The family or ancestral temple, called *marae tupuna*, the god of which was always a family secret, was erected upon every portion of land that a person owned. To the *marae* were attached the hereditary names of the family, without which they could give no proof of their ownership of the land...(Henry 1928:141).

Household lands varied in size and were divided from the larger kin holding. As Henry (1928:142) notes, "Whenever it was necessary for the land of a household to be divided into shares, each portion was nicely measured off by the *etaeta* (fathom) and the boundaries marked with stones". Social rank and class membership determined land extent and the proximity of the household to valued resources (Ellis 1967(II):343-344; Wilson 1799:323; Morrison 1935:167). Every household, according to Oliver (1974:254), was ensured enough land to sustain its basic biological needs.

The *Maohi* household constituted the basic unit of food and craft production. This was true regardless of class standing, although lower classes were entirely responsible for their own sustenance and augmented considerably the resources of the elite. This was done through the exactment of regular and special levies by chiefs (Oliver 1974:1002). Morrison observed:

> ...if a chief wants a Supply [of breadfruit] for the purpose of Making Mahee he sends a Bit of Cocoa Nutt leaf to all, or as Many of the Inhabitants of his district as he shall think proper...The people bring it in such a Manner as bespeaks at once their regard for thier Chiefs & fear of displeasing them...(Morrison 1935:215-216).

Consequences for displeasing chiefs could indeed be severe, as is documented by Gayangos: "On this day we learnt that the *ari'i* of the district had banished the Indians who lived up the gully, because they had not got ready a contribution of provisions he had levied on them" (Gayangos in Corney 1915(II):137).

Although some households stood singly, most were situated in small groups of two to ten households, referred to here as household clusters[3]. Residences were not arranged in formal settings, but in dispersed clusters, with no linear or perceivable order to the European eye. "They do not observe any regularity or method of alignment with their houses, for they are dotted about as if at haphazard all through the habitable tract of the island..." (Boenechea in Corney 1913(I):336). Each cluster represents a related kin group, or segment of a nonunilineal descent group, who shared hereditary title at a common "neighbourhood" *marae* (*marae mata'eina'a*) and likely held land and resources in common. The size of each cluster seems to have been affected by the kin-group's relative status within the district (Banks in Beaglehole 1962:329; Wilson 1799:186), which in turn affected its proximity to economic resources and desirable lands (Oliver 1974:254).

---

[3]Oliver refers to such clusters as neighbourhoods. I refrain from using this term, given the Western connotation of standardized planning associated with the word.

Unfortunately, there are no visual and few verbal accounts of household clusters, making them difficult to physically describe. Orsmond refers to settlement on Tahaa as follows: "The people of the Islands are dispersed about 4 or 5 families in one place, 2 in another 1 only in another 6 or 7 perhaps just where the King resides" (in Oliver 1974:967). Similarly vague:

> They saw two clusters of huts, one of five and the other of seven huts, constructed of palm leaves...and farther on a stone enclosure of 10 or 25 varas [16.5 to 21 meters], decorated round in posts carved as if with characters, which the Indians would not approach; for by the look of it, it is their burial place [*marae*], which they hold in great respect (Bonascorsi in Corney 1915(II):40).

That the clusters or households were haphazardly placed as suggested by Boenechea is unlikely. Size and locale of clusters was influenced by class, kin and socio-political standing of the group, and household arrangement within clusters was likewise similarly ordered by socio-cultural factors, as outlined below.

The *Maohi* word *mata'eina'a* seems to reference household clusters and an analysis of its meaning may add to our knowledge of settlement at the cluster level. William Wilson, a missionary of the Duff, most clearly defines the term. In an attempt to formulate a method for surveying the population of Tahiti, he drew upon a local informant's description of district settlement organization. It was stated that each district was composed of a number of *matteynas* (*mata'eina'a*) and *tees* (*ti'i*).

> I desired him to explain what a *matteyna* was and what was a *tee*. The former, he said, was a principal house, distinguished either by a degree of rank in its ancient or present owner, or by a portion of land being attached to it; and sometimes on account of its central situation to a few other houses: that the *matteyna* sets up a *tee* (or image) at the *morai* [*marae*], which entitles it to the liberty of worshipping there; and the other houses in the department of the *matteyna* claim a part in the same privilege, and are thence called *tees*: that in some *matteynas* there are eight or nine persons in the family, in others but two or three; and that it frequently happens, that *matteyna* or *tee* is totally deserted (Wilson 1799:186).

According to Wilson, a *mata'eina'a* references a cluster of households consisting of one principle household and a number of others (*ti'i*) connected by worship at a common *marae*, and presumably by other communal rights and activities.

Although Wilson's use of the term *mata'eina'a* seems clearly to correspond to minimal ramages within a district, others' use of the term is more expansive. LMS dictionary defines the term as the subjects of a chief; a certain tribe, clan, or sub-division of the inhabitants (in Oliver 1974:626). Likewise Handy (1930:45) states the "people as a whole, including all classes, and the district in which they lived, constituted a *mataiena'a*. This was applied to subdistricts as well as the large districts ...of Tahiti". Even Morrison (1935) and Bligh (1969:167) in the 1790's used the terms *mata'eina'a* and *manahune* (commoners) interchangeably, presumably to refer to the subjects of a chief.

Alternatively, Henry (1928:70) records that entire districts are appropriately called *va'a mata'eina'a* or literally 'the crew of a canoe'. Such subtleties in terminology may explain some of the confusion in the definition of the word. Or, as argued by Newbury (1961:xxxiii), early recorders were often confounded by political districts. This was particularly true after the turn of the century when "the extinction of many of the older ruling families through warfare and disease, and the amalgamation of small clans with their neighbours under one ari'i titleholder added to this confusion" (Newbury 1961:xxxiii).

Following Green (1967b:226), I accept Wilson's use of the term *mata'eina'a* to conote minimal ramages, noting that at certain points of kin group subdivision or amalgamation it is possible for the *mata'eina'a* to also correspond to an entire district. Of particular interest in Wilson's definition of the settlement cluster is the reference to a principal house that is "distinguished either by a degree of rank in its ancient or present owner, or by a portion of land being attached to it; and sometimes on account

of its central situation to a few other houses...". Thus, the cluster is arranged according to a central household or a ranking member of the kin-congregation. By implication therefore, while clusters are expected to vary between one another in terms of number of households, desirable locales and extent of associated lands, we may also expect to find some level of differentiation between households within the congregation.

Ethnohistoric Reconstruction of the Household: Physical and Social Evidence

Houses are often described in the ethnohistoric literature, although there is little precise information on residential habitations. Attention tends to focus either on the formal characteristics of houses (i.e., size, construction techniques, and materials) or on houses of spectacular function, such as large specialized *fare pote'e,* or the oft described *fare tupapa'u* (mortuary house). Despite these limitations, the anecdotal style of historic documents allows a broader glimpse into residential life. Though not systematically presented, and often couched in incidental or cursory reports, we are provided with both clear and oblique views of the sociological differences between households, principles of spatial design, and social relations within the residential unit. Thus, it is possible to reconstruct both the physical components of the household, as well many of the social and symbolic aspects of its form.

The Physical Elements

The ethnohistoric record provides fairly good documentation on house sizes, construction techniques and the materials used in house building. Only a brief description of these aspects of houses are presented here. Handy (1932) describes building processes and Orliac (1982) provides an excellent synthesis of the ethnohistoric documentation on formal aspects of buildings, building techniques and materials. I concentrate on describing the associated structures and features of

households, which I refer to as household elements, in order to define material

correlates for the household.

<u>Sleeping House (*Fare Ta'oto*)</u>

Houses varied between two forms -- the *fare pote'e* and *fare haupape* -- either

of which could constitute the *fare ta'oto*. By the 1920s, Handy (1932) recorded a

wider range of roof and house styles; however, this variation occurred only after a

period of intense acculturation and that proliferation of form is not considered here.

Cook provides a typical description of the size and form of the *fare haupape*:

> They are typically built in form of an Oblong square the roofs are supported by
> three rows of pillars or posts and neatly cover'd with thatch made of palm
> leaves, a middle sized house is about 24 feet [7.3m] by 12 [3.65m] extreme
> height 8 or 9 [~2.5m] and height of the eves 3 to 4 [~1m] (in Beaglehole
> 1955(I):128).

Forster (1969:92) describes another form of *fare haupape* with slightly smaller

dimensions but without the centre line posts down the middle of the house (see also

Handy 1932:11, 23). From all ethnohistoric accounts of residential *fare haupape*, the

average size ranged from 5 - 8.5 m in length, 3.5 - 4.5 m in breadth and had a height

not exceeding 3 m (Cook in Beaglehole 1955(II):128; Forster 1777:456-457;

Boenechea in Corney 1913 (I):294-295). Among the 42 such structures surveyed in

the archaeological context of the 'Opunohu, none exceeded these limits in length and

breadth (Green and Green 1967:171).

Fare pote'e on the other hand, show a much greater size variation than *fare*

haupape. They range from between 6 -18 m in width and 15 - 100 m in length (see

Green and Green 1967:172; Orliac 1982:285 for dimensions of *fare pote'e* as

described in ethnohistoric literature). Only the smaller size range of *fare pote'e*

constituted *fare ta'oto* -- generally those less than 30-40 m in length (Green and Green

1967:173; Orliac 1982:285). Again, these structures are of pole and thatch

construction and are typically described as being of better quality than the *fare haupape* (Ellis 1967(I):175).

House building and construction practices were well known to all *Maohi*, and particularly men and boys who were schooled in these skills (Forster 1778:439-441). Simple house structures intended for those of lesser status were likely raised by the collective labour of family members. Larger houses, and especially those of specialized function, were erected under the supervision of a *tahu'a fare* (creator of houses). In this case, the building was commissioned by an *ari'i* and erected by corvee labour or by the promise of food and feasting (Morrison 1935:165). As was the case with most specialists, the *tahu'a fare* formed a social clan with special prerogatives and possessed their own specialized *marae* (Henry 1928:119, 154).

House duration was extremely variable and seemed to have been affected primarily by the quality and type of material used in construction (Orliac 1982:41). Ellis describes roof thatching as critical to the duration of the structure, and that a well made roof would last up to five to seven years. It was also not uncommon for two to three roofs to be applied to a structure during its lifetime (Ellis:1967(I):388). House posts were similarly replaced when damaged by rot or parasites, with new poles erected in place of the old (Orliac 1982:42).

In general, houses are described as not having walls (Banks in Beaglehole 1962:340; Forester 1969:164; Morrison 1935:197; Varela in Corney 1915(II):277). However, several individuals have noted the placement of mats which served as temporary walls during inclement weather.

> It is only when a heavy rain squall with much wind happens to incommode
> them that they rig up a screen of mats, made from palm leaves on the spur of
> the moment, and these they take down again as soon as the weather clears up.
> *One meets now and then with a house walled in with small thin canes; but
> they are few* (Varela in Corney 1915(II):277-278; see also Morrison 1935:197;
> emphasis mine).

This last statement by Varela indicates another type of wall occasionally mentioned by the early explorers. In this case a full or half wall was constructed of closely spaced reeds. Drawings from the voyages of Cook illustrate this feature (Joppien and Smith 1988).

> We saw a few dwellings constructed for greater privacy, which were entirely enclosed in walls of reeds, connected together by transverse pieces of wood, so as to give us the idea of large bird-cages (Forster 1968:164; see also Cook in Beaglehole 1955(I):128).

Ellis describes the construction of a house with walls such as this and notes that a trench was dug around the perimeter of the house to accommodate and support the reeds (1967(I):387).

Whether walls were present or not, houses seemed to have had marked entrances. In structures with permanent walls, doorways were cut as narrow gaps in the siding which "could be closed up with a board" (Forester 1968:164). Morrison (1935:208) notes that houses could have one or more entrances, implying that these would be located separately about the structure. Written description (Handy 1932:30) and pictorial representations indicate that doorways could be located either on the long or the short walls of structures, regardless of type (see figs.3.1, 3.3, 3.4). This indicates that entrances were likely placed according to the topographic and proxemic placement of particular houses, rather than according to a standardized design. In houses without walls, it is likely that entrances were also specially marked. Ethnohistoric description does not incorporate information on how this was achieved, although Orliac (1982:66) speculates that stone pavements outside structures may indicate entranceways (see also Green and Green1967).

At the base of houses, walled or not, a border of curbing ran along the outside perimeter of the structure. The purpose of this feature is not exactly clear but, it likely provided a point at which to secure wall mats and to contain grass flooring. More

importantly it could also divert rain water from house interiors. All borders described in ethnohistoric accounts are made of short beams of hibiscus (*Hibiscus tillecus*) or bamboo (*Schizostachyum glaucifolium*); there are no descriptions of stone curbing as is commonly seen throughout the present day archaeological landscape of the Societies.

Terrace or Living Flat

All households were situated on a defined area of living space. In some cases this area was simply marked by a tract of cleared and leveled ground (Cook in Beaglehole 1955(I):128), in other households, terrace walls mark the household boundaries and still again, some habitations were enclosed by wood, stone or earth fencing (Parkinson 1984:23; Morrison 1935:197). This latter type of formal boundary is usually associated with the status elite.

Cook House (*Fare Tutu*)

As is customary for all of Polynesia, all forms of cookery in the Societies took place outside the primary living house, and often a separate structure was constructed for this purpose. *Fare tutu* were small structures situated close to the *fare ta'oto* in which food preparation and cooking occurred. In some households, this area is marked only by the presence of hearths and earth ovens and in others a separate cookhouse was erected. Cookhouses are little described in the literature, making their size and form difficult to ascertain. The clearest pictorial representation of a *fare tutu* is shown by Parkinson as a lean-to type structure (fig.3.1). Morrison (1935:197) describes them as sheds or small houses. Handy (1932:23) provides more detailed ethnographic documentation of the various building styles of the *fare tutu*, although this documentation occurred in the early 1920's, after a significant time period of transformation to traditional house structures. The range of styles suggested by him may not be applicable to the protohistoric household. It may not be the case that *fare*
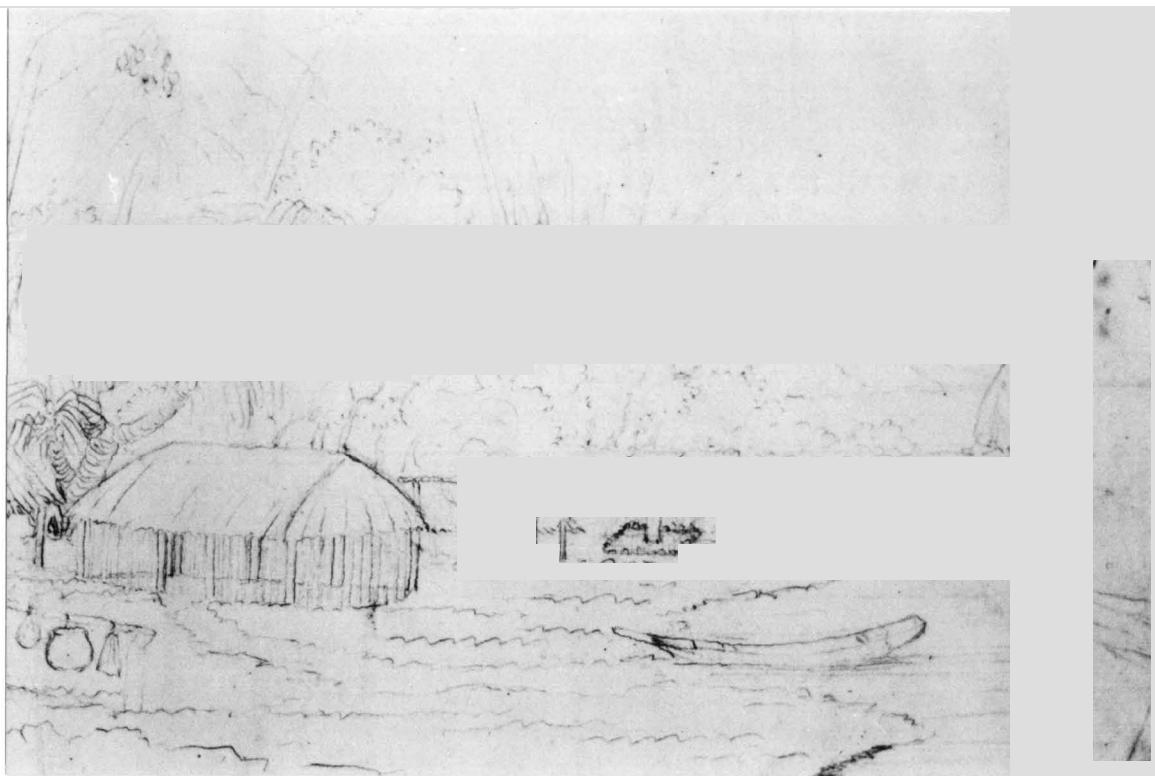
Figure 3.1 "Huts and a Canoe by a Shore" by Sydney Parkinson (in Joppien and
Smith 1988, Plate 1.37)

Figure 3.2 "A View in Vaitepiha Bay" by William Ellis (in Joppien and Smith
1988, Plate 3.84)

tutu were as common to households as assumed by prehistorians. Varela (in Corney 1915(II):279) notes for example in 1774, "Their kitchens are nothing more than pits dug in the ground outside the house...without any sort of roof over them . Ellis's drawing also shows such an arrangement, as shown in figure 3.2. The fact that roofs were so little described may indicate their only occasional representation.

The archaeological presence of a *fare tutu* would be represented by small rectangular structures (post hole alignments) with no central posts so as to accommodate earth ovens. *Fare tutu* were in close association with the *fare ta'oto* yet are differentiated from a dwelling house by the presence of earth ovens or hearths, and perhaps cooking utensils and midden refuse. An open cooking area would include only these latter aspects..

Earth Ovens *(Hima'a/Umu)*

The cooking practices of *Maohi* were of considerable interest to the early visitors to the islands, and there are many descriptions of earth oven construction and process of cooking in earth ovens *(hima'a/umu)*. The process is as follows:

> A hole is dug in depth and size according to what is to be prepard seldom exceeding a foot in depth, in this a heap is made of wood and stones alternately laid; fire is then put to it....The heap is then divided; half is left in the hole the bottom of which is pavd with them, on them any kind of provisions are laid always neatly wrappd up in leaves, the whole is then coverd with leaves on which are laid the remaining hot stones then leaves again 3 or 4 inches thick and over them any ashes rubbish or dirt that lays at hand (Banks in Beaglehole 1962:344).

The size of ovens reported in the literature ranges considerably. Some ovens constructed for special occasions could be extremely large. Seasonal breadfruit feasts *(opi'o)*, for example, meant the preparation of large quantities of breadfruit; these baking ovens could extend between 6-9 m in circumference and about 2.5 m deep (Ellis 1967(I):355; Wilson 1799:374). Also, ethnohistoric literature indicates oven size varied according to the type of food being prepared (Orliac 1982:275; Orliac and

Orliac 1980). Despite this variation, average sizes for residential use are given by Oliver, based on compilations of ethnohistoric reports, to be between 1.5 - 2 m length and 0.3 - 0.6 m in depth (1974:228).

The archaeological presence of earth ovens is marked by basin shaped pits containing substantial amounts of charcoal, ash and small to large stones, which may be located either in the pit or close by it.

<u>Hearths</u>

Hearths were also used for cooking purposes, to braise food or to remove skin and hair from animal flesh (Banks in Beaglehole 1962:344). Hearths are also recorded as located inside houses to provide warmth and lighting at night or during foul weather (Ellis 1967(I):487). When related to cooking, hearths would be located within the food preparation area outside of the main living house. Internal house hearths would not have a cooking function. Unlike earth ovens, hearths are relatively small and shallow with no use of heating stones or evidence of intensive burning.

<u>Pavements</u>

In close proximity to the primary house structure a pavement of broad, flat stones provided an eating area and locale from which to entertain guests. Its function may be due to the fact that rains often make "the ground about many of the houses..a mere puddle" (King in Beaglehole 1967(III):1373). Numerous accounts describe outdoor pavements. For example:

> ...we proceeded a little farther up in a narrow valley, where a well-looking man invited us to sit down in a shade before his house. There was a little area paved with broadish stones, on which he spread banana leaves for us, and brought out a little stool made of the bread-tree-wood, cut out of one piece, on which he desired one of us to sit down...(Forester 1968:168).

Pavements are also an important component of most religious structures (Descantes 1990:530) and in Green's archaeological survey (Green et al 1967; Green and Descantes 1989) pavements seem to associate more closely with elite structures.

Pavements are usually described to the front of houses under the shade of large trees. Pavements have high archaeological visibility, seen through the close spatial arrangement of broad, flat stones covering a fairly level ground surface.

Storage Pole (Fata)

The *fata* was a pole erected for the short term storage of food and provisions. *Fata* were located either inside the house (Ellis 1833(I):155xx) or close by outside:

> Close by their dwellings they stick up certain straight posts terminating in four forks or branchlets from which they suspend their eatables in baskets or small frails, to be safe from rats, for which they employ the artifice of a shield or guard fixed below round the middle of the post...(Forester 1968:336).

Each household could have one or more *fata* (Morrison 1935:197) of which some were constructed for specialized use. For example, Moerenhout describes a pillar for the keeping of combat chickens, or posts for the keeping of *fehi* (mountain plantain) (1959(II):147, (I):286).

Archaeological evidence for *fata* will be evident only in the appearance of post holes which would have served to anchor the pole. These may be located inside or outside the house, and several may be represented. Assigning a definitive storage function to such features will be difficult.

Pits

There are several accounts which allude to the presence of pits inside houses and around the household area, although we have no detailed descriptions of their sizes or range of functions. In specialized houses, such as those located on or by a *marae*, pits may be related to priestly functions (see Henry 1928:206). In residential structures the prevalent function assigned to the presence of pits is for food storage. Although some general food storage pits were located in houses for short term storage and safekeeping from hogs (Orliac 1982:69), pits are most commonly described in the

ethnohistoric literature for the production and keeping of *mahi*, or fermented
breadfruit paste (Rodriguez in Corney 1919(III):56).

Breadfruit was a predominant food staple throughout the archipelago.
Although eaten in a variety of manners, a method of preserving the fruit between
fruitings and through times of scarcity was by the production of *mahi*. In this process
the fruit was allowed to ferment over several months, and in its final form would last a
considerable length of time.

> ...the fruit is gather'd when upon the point of ripening, after the rinde is scraped
> off it is laid in heaps and cover'd close with leaves where it undergoes a
> fermentation and becomes soft and disagreably sweet, the core is then taken
> out and the rest of the fruit thrown *in a hole dug for that purpose the side and*
> *bottom of which are neatly laid with grass, the whole is cover'd with leaves*
> *and heavy stones laid upon them*, here it under goes a second fermentation and
> becomes sourish in which condition they say it will keep a good 10 or 12
> Months, as they want to use it they make it into balls which they wrap in leaves
> and bake in the same manner as they do the fruit from the tree...(Cook in
> Beaglehole 1955(I):122; emphasis mine).

Morrison describes a slightly different process in which the fruit in transferred between
pits during production:

> ...the bread being gathered in they scrape off the rind with shells ground sharp
> for this purpose and lay it in heaps to grow Mellow, where it lays for 3 or 4
> days - pits are then made in their Houses or Near them, and being well lined
> with grass and leaves the Bread is thrown in, being first split in pieces with a
> Wooden Adze made for that Use, and with it a few of the ripe Fruit which
> have fallen from the Tree to hasten the fermentation and the pits being filld and
> heaped up are Covered with leaves & Grass & large stones put on the top to
> press it into the pits; in this Manner it ferments and *when it settles they shift the*
> *leaves that are bad and taking the Core or harts out fill one pit out of another*
> *and Cover it up for Use* (Morrison 1935:214; emphasis mine).

No more precise accounts of *mahi* pit locale are given beyond the above reference by
Morrison that "pits are then made in their Houses or Near them..." and a statement by
Banks (in Beaglehole 1962:344) that pits were located "generaly in their houses".
Archaeological examples of *mahi* pits may be expected either inside and outside the

house. No reference to *mahi* pit size or the average numbers per household could be found in the literature. Pits were probably basin-shaped. Morrison's description implies that several pits were involved in the production of *mahi*, and clusters of pits may be expected.

<u>House Interiors and Furnishings</u>

House interiors were remarkably plain to the European eye. The structures contained no room partitions and in general little internal ornamentation. Floors were covered with layers of grass and furniture was sparse.

> ...the floor was coverd some inches deep with soft hay upon which here and there were laid matts for the convenience of setting down; this is almost the only furniture as few houses have more than one stool which is the property of the master of the family and constantly usd by him, and most are intirely without....The matts which serve them to set upon in the day time are also their beds at night; the Cloth which they wear in the day serves for covering, and a little wooden stool, block of wood or a bundle of cloth for a pillow (Banks in Beaglehole 1962:340).

Principal houses of chiefs contained more decoration. "The inside rafters of chiefs houses, or public buildings, is frequently ornamented with braided cords of various colours, or finely-fringed white or chequered matting" (Ellis 1967(I):386). Even in chiefly houses, the simple and open design of internal house space remains similar.

Furnishings within houses consisted of sleeping mats which were rolled and stored in the rafters during the day, storage baskets hung from the rafters, coconut shells fashioned into cups and bowls, bamboo canes for storing liquids, cooking utensils made of shell or bamboo, one or two stools for sitting or for pillows, stone bowls and pestles, and wooden trays and bowls (Cook in Beaglehole 1955(I):129; Ellis 1967(II):181-184; Morrison 1935:198; Robertson 1955:191). Most of these items were made from organic materials and thus would be rare in the archaeological

record. The exception here are stone pestles and bowls or mortises which could be recovered archaeologically.

Household paraphernalia also included skewers of candlenuts used to light the houses at night. "Their candles are made of kernels of a kind of oily nut, which they stick one over another upon a skewer that is thrust through the middle of them; the upper one being lighted, burns down to the second, at the same time consuming that part of the skewer that goes through it...(Wallis in Hawksworth 1773(II):206). Oliver (1974:170) states "most houses would have contained a special place for standing the wooden sticks on which candlenuts were skewered and lighted for illumination".

A few accounts describe jaw bones or skulls of enemies kept in houses (Banks in Beaglehole 1962:321) as well as other more spectacular items such as "a great many bundles of cloth, and cases for targets suspended from the roof" (Forster 1968:172), wooden god images erected in the house (Wilson 1799:166) and weapons, drums and musical instruments (Ellis 1967(II):182).

Boundary Markers

They Have Carved Wooden Images of Men which they call Etee [*ti'i*] set up as boundaries of the Estates, not to pay devotion to but to remind passengers below & of equal rank to the Possessor and owner of that land, to strip the Cloths off their shoulders & heads, as they pass by in Compliment to the Owner - All ranks of People must pay this Homage as they Pass the land belonging to the Earee [*ari'i*] or King - The Etee or Image denoting the Kings land is remarkably larger than the Common size, and the Towhas or Ratirras land is known by a Number of little White Flags being fixed in different parts beside the Etee...(Morrison 1935:192)

Boundary markers were erected along district borders, land divisions associated with household clusters, and perhaps between households. These markers included natural referents in the landscape, such as river courses or large boulders, as well as artifically constructed stone cairns, or carved images of stone, wood or coral called *ti'i* (Ellis 1967(II):362). As indicated by Morrison (1935), land boundaries of

the elite contained more elaborate markings, such as white flags to warn persons of

their proximity to sacred lands -- an act which necessitated appropriate deferential

behavior (see also Henry 1928:209; Wilson 1799:335).

Although most accounts imply the use of markers to demarcate broad land

divisions, a statement by Henry suggests individual household units were also signified

in this way. "Whenever it was necessary for the land of a household to be divided into

shares, each portion was nicely marked off by the *etaeta* (fathom), and the boundaries

marked with stones..." (Henry 1928:142). Robertson also confirms this assertion:

"Here I saw several Images of Men and Women *set up closs by their Houses*, rudely

carved out of a large tree, on one of those trees their was five human figurs cut

out..."(1955:191; emphasis mine).

The extent to which boundaries of households were demarcated probably

corresponds to their associated social or political status. But, Morrison's reference to

"Common size" *ti'i* as distinct from those of *ari'i* or *ra'atira* suggest most households

were marked in some way.

Midden/Trash

I have found few references related to the disposal methods of household trash

or forms of household midden deposits. Handy (1932:24) notes that the floor space

within the *fare tutu* often accumulated abundant refuse. And, Bligh more descriptively

states:

> They have as little neatness about their Dwellings...[it]is the dirtyest place
> imaginable, every thing is thrown before and around the House, even if they fix
> their Sheds upon the Sea side they will not take the trouble to throw the filth
> into the Sea, if they have ten yards to carry it -- yet no People in the World are
> cleaner in their Persons. So much sloth and indolence may be attributed to the
> vast support that all bountifull nature has given to them...(Bligh 1969:157).

It is likely that beyond general scatter, organic wastes were used to either feed

domestic pigs or to compost gardens to enrich soils.

<u>Auxiliary Structures</u>

Several other structures are described as part of the household unit. In most cases elaboration in the form of specialized structures marks a household of elite status. These structures included houses built for the purposes of keeping pigs (Forester 1968:173; King in Beaglehole 1967(III):1391; Henry 1928:77), separate eating houses for men and women (*fare tama'ara'a*) (Morrison 1935:208), houses for tapa making (Morenhout 1959(II):115), canoe houses (*fare va'a*), sauna structures (*farau*) (Morrison 1935:207) and schools (Henry 1928:161).

Aside from tapa and canoe making houses (see Orliac 1982:88-110), there is little documentation on these specialized structures. Documenting the function of auxiliary structures from the archaeological record will in large part depend upon the nature of the material remains retained within structures.

The Social and Sociological Aspects

In the following section, I focus attention on the social use of settlement space at the household level. I am interested specifically in the impact of social and sociological groups on household form and how we might interpret archaeological households by these criteria.

Sociological differences played a significant role in determining the extent and organization of the household. House form, household design and household content were all features highly influenced by the social rank of the inhabitants. The previous discussion on physical aspects of the household focused on those characteristics common to all households. Here, ethnohistoric data is reviewed for indication of those contrastive elements which introduce variation between households.

Because the literature is silent with reference to commoner households, I focus attention on the household characteristics of the status elite. Two cautionary points are required. First, because the early Europeans interacted more with *ari'i* (or those

they believed to be *ari'i*) aspects of their households are more frequently cited, especially in the pictorial record. It should be kept in mind however, that the picture derived from ethnohistoric recordings is not a systematic or comprehensive one. A main problem here is that the early recorders often referred to anyone who exhibited any kind of authority as an *ari'i* (Beaglehole 1961(II):394 fn3; Smith 1985). They did not understand the various levels of the status elite, making it very difficult to distinguish between those who were *ari'i*, *to'ofa* and *ra'atira*. We have, therefore, an extremely gross view of those household characteristics which differ between chiefs and *manahune*, but even less detail as to the differences between households of *ari'i* , secondary chiefs (*to'ofa*) and other high status persons who were not chiefs (*ra'atira*).

A second problem in the literature results from the European equation of large meeting or public houses with the habitations of chiefs. In every district two or three of the largest *fare pote'e* served for the lodging of guests, or for hosting public dances and entertainment by the *Arioi* sect (Beaglehole 1962:134). Whilst these structures were clearly part of the *ari'i* retinue, they were not their private residences. It was only smaller *fare pote'e* that served as principle habitations for chiefs. Based on sizes of *fare pote'e* recorded in the ethnohistoric literature, Orliac (1982:285) concludes that residential houses do not exceed about 40 m in length, while public buildings are reported up to 100 m long.

Characteristics of Chiefly Households

In accordance with the many rights and privileges associated with chiefs and their kin-group, *ari'i* had the ability to requisition superior craft specialists and material for house building. As a result, their principle houses were better constructed and more elaborately decorated than the common household (Corney 1913(I):337). Orliac (1982: 115) describes these principal residences as close to large public

reception buildings or *marae*, in assertion of their right to political and religious supremacy.

Based on the ethnohistoric evidence, several common characteristics of chiefly households are apparent, many of which have been noted in the previous discussion. For example, chiefly households: 1) are of greater size and better construction than commoner households; 2) have more clearly demarcated boundaries around their dwellings and associated lands; 3) show greater structural elaboration in terms of the number of auxiliary household structures, and ones more specialized in function; and 4) have primacy in terms of geographic locale, such as proximity to productive lands or to prominent features. Other material items that associate exclusively with the elite are features such as coral paving, worked stone and raised stone platforms (Handy 1932).

In addition to physical aspects, the ethnohistoric record indicates that certain behavioral patterns within elite households may have material correlates. For example, accessibility to certain food types was a central feature in the status hierarchy. Foods such as dog, shark or tortoise were always available only to *ari'i* (Bligh 1969:112). Bonascorsi and Bligh further elaborate on the sociological differentiation between food usage:

> The common people frequently suffer a dearth of food, and most of them support themselves on cockles, and some fish which they eat raw. The good and finer fish, of which there is great plenty in the sea are reserved for the ari'i and principal persons (Bonascorsi in Corney 1915(II):55).

> ...Animal food is so rarely made use of by the general run of the People here, that it may be said it is not eat by them at all, and I firmly believe that the greatest Cheifs do not touch it one day out of ten through out the Year. Fish however falls generally to the lot of the Cheifs every day, but it is here in very Small quantities, and among the inferior order very small indeed...(Bligh 1969(II):31).

Similarly a comment by Bougainville suggests that the use of wood differed along sociological lines. He states:

> Flesh and fish are reserved for the tables of the great; the commonalty live on mere fruits and pulse. Even the manner of being lighted at night, shews the difference in the ranks; *for the kind of wood, which is burnt for people of distinction is not the same with that which the common people are allowed to make use of* (Bougainville 1967:269; emphasis mine).

These comments indicate potential archaeological correlates which might identify status differences between households. Initial archaeobotanical analysis on wood charcoal from earth ovens by Orliac and Orliac (1982) suggests that measurable differences between contexts are apparent. Because food types, and food related behavior are so highly influenced by the social hierarchy, we might also examine the number and kind of food related features between households. For example, Morrison (1935:216) describes the use of levies by chiefs to augment their supply of breadfruit in order to make abundant quantities of *mahi* (see also Ellis 1967(II):362). One may anticipate differential representation in the numbers of such features within chiefly households. Last, the number of ovens per household site requires investigation. While Oliver (1974:228) notes that most households had "one or more" permanent ovens , Ellis states that "For the chiefs, [breadfruit] is usually dressed 2 or 3 times a day; but the peasantry &c. seldom prepare more than one oven during the same period, and frequently *tihana*, or bake it again on the second day" (1967(I):355). Similarly, Orliac (1982:275) suggests that households of the status elite are expected to contain more ovens and of particular forms. Larger ovens for feasting may also be a feature of status households.

Sanctity and the Chiefly Household

Everything associated with *ari'i* was considered sacred (*ra'a*). This included their habitations, land, and anything in physical contact with them. The principle of sanctity cannot be understated, for it constituted a primary factor in structuring the

material form and locale of chiefly households. For example, the principal household of the *ari'i* Tu stood at some distance from the edge of a river which acted as a barrier to those who wanted to pass or access his land. As observed by Bligh (1969:74) "The River separates their dwelling [the family of Tu] from the part we are at, and it would be considered as a great violation were we to cross it near their dwelling". This type of restricted access may in fact be typical of the highest chiefs to whom prohibitive behavior on the part of the population was imperative. Thus the placement of *ari'i* households in prominent locations or perhaps in topographic locales regulating access, is expected (Orliac 1982:286). It is for this same reason that chiefly lands were carefully identified by boundary markers and their households enclosed by fences (see fig.3.3).
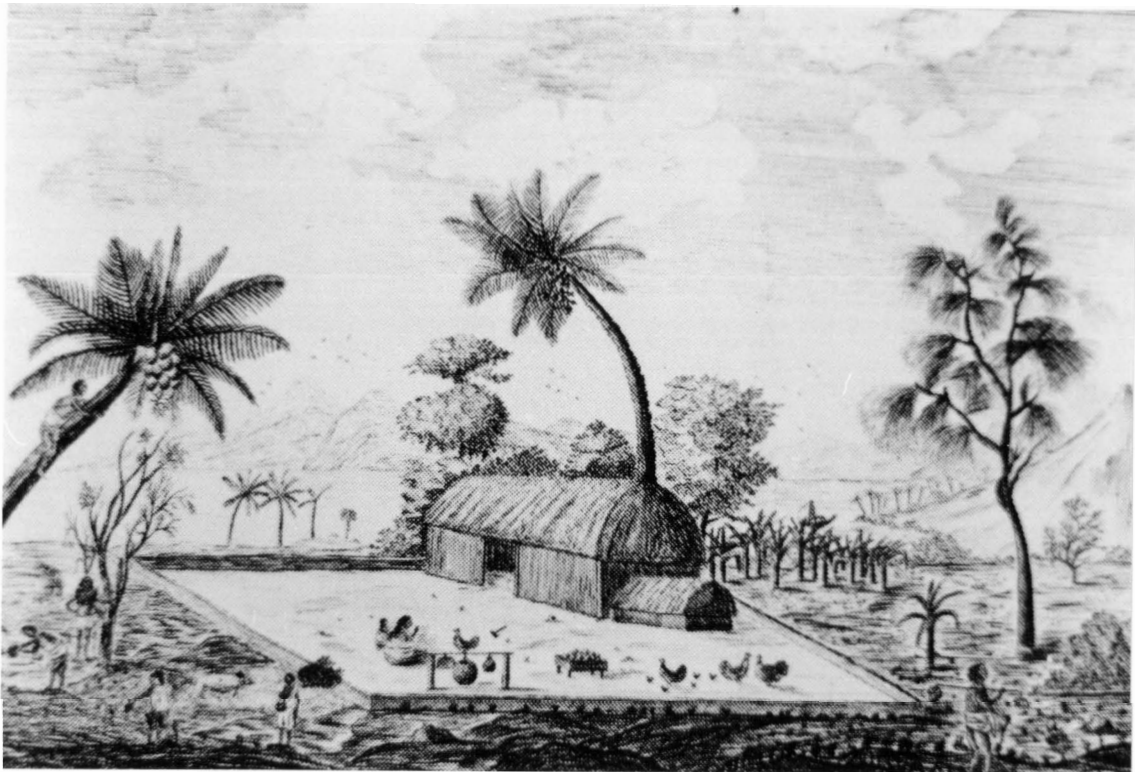
Figure 3.3 "A View Near Ohamaneno [Haamene] Harbour in Ulietea" by Charles Praval after Parkinson, S. (in Joppien and Smith 1988, Plate 1.40)

Every chief of rank, or person of what in Tahiti would be termed respectability, has an enclosure round his dwelling, leaving a space of ten or twenty feet width with-inside. This court is often kept clean, sometimes spread over with dry grass, but generally covered with black basaltic pebbles, or *anaana*, beautifully white fragments of coral. The *aumoa* is a neat and durable fence, about four feet high; the upright pieces are tuned into a polished rail along the top, or surmounted with the straight and peeled branches of the *purau* or *tamanu* (Ellis 1967(I):389; see also Moerenhout 1959(I):289; Morrison 1935:198).

In the locale and the erection of boundaries around households the material form of the household acted to symbolically define appropriate routes of interaction between individuals. This symbolic design was not merely a superficial one, but one which was dutifully reinforced within all aspects of ritual, social and daily life. Note Rodriguez's description of the following interaction upon providing a local fisherman with a net for which to procure fish:

> The fisherman came to announce that he could not keep the net in his house, because he was only a commoner, and his house was likewise efarenoa [*e fare no'a* - a common house], as they say; so it became necessary to look for a house adjoining his own and remove it thither. All this was merely because the net had arrived in the twin-hulled canoe given us by Vehiatua [*ari'i rahi*]; and when I asked him what could happen to him if he kept charge of the net in his own house, he answered that Vehiatua would banish him without the slightest doubt, since it is one of the strictest injunctions. I had therefore to search for a house, the next morning, in which to keep the net & the canoe that were given into his charge...(Rodriguez in Corney 1919(III):115).

At interest in this statement is the identification of a house as *e fare noa*, implying that the material structure itself was considered common and was held within the cosmological structure of hierarchy; it thus acted to define the appropriate social and economic relations which could occur there.

Principle and Secondary Chiefly Households

According to several accounts, it was not uncommon for chiefs to maintain more than one household throughout their district. Bligh (1969:130) observed this pattern: "I walked with Tinah towards the hills, to see his country residence, which

was at a very neat house, pleasantly situated and surrounded with plantations".
Wilson describes the purpose for multiple households as a way to ensure chiefly
authority:

> A house was built by Otoo in all his districts, where some of his servants
> constantly reside, and he, occasionally visits: they represent his sovereignty,
> and none dare to pass them without stripping, the same as to himself
> (1799:184).

Given the chiefly demand for resources throughout the district it is not surprising that
there was a political necessity to assert one's legitimacy here. One way this was
achieved was through the maintenance of a physical presence throughout the district,
in the form of multiple households.

Likely, only the highest ranking kin-titles required or could support multiple
households. Further, I expect that it was the principal households of *ari'i* that were
the most prominant and elaborate in terms of locale, size of *fare ta'oto*, and number of
auxiliary structures. This is implied in Banks's statement at Bora Bora: "his majesty's
chief residence, here the houses were very large and good and the Canoes also finer
than any the Gentlement had before seen" (Banks in Beaglehole 1962:327). Among
lesser status elite such as *ra'atira* or *to'ofa*, likely only a single household was typical.
In these cases, there may not have been the degree of elaboration in form or structures
that was seen in principal residences of *ari'i* and archaeological excavation may expose
a continuum of chiefly household types.

At the very least, we can expect all households of the status elite, whether *ari'i*
or not, to have been clearly distinguished, if not by size, then by prominance within the
household cluster, shown by geographic locale, number of associated elements,
material elaboration, fencing, and so on. The question of whether such elite
households always included a house of *fare pote'e* form or not must also be
considered. Limited information exists on the shape of chiefly houses, with most

Figure 3.4 "House and Plantation of a Chief of the Island of Otaheite" engraving by
R.B. Godfrey after Parkinson, S. (in Joppien and Smith 1988, Plate
1.40A)

description focusing on their size and contents. However, there are enough references

to *fare pote'e* as "chiefly" to accept this association. But, some comments raise the

possibility that this was not a rigid relationship. For example, Morrison remarks:

> The House of Chiefs are not remarkable for being better furnished than those
> of the Common people tho they are something larger; and like the Houses for
> the reception of Traveler are generally Open on the sides, having a low fence
> of Plank forming a square about them, and the part within the fence either
> spread out with small pebbles or laid with Grass - *but if they intend to reside
> long in one house or place, they have a Neat small house raild in for their
> use, but they frequently sleep in poor mean huts and eat in the Open Air,
> hanging their provisions in a tree* (Morrison 1935:198; emphasis mine).

Morrison's statement is unclear as to whether he is referring to a separate sleeping

house in association with a larger *fare pote'e*, or if in addition to the principal

household, chiefs maintained a smaller residence comprised of "poor mean huts" (*fare*

haupape?). Also enigmatically, the missionary Dupetit Thouars cites Queen Pomare living "in a hut of Indian form whose modest construction is not preferable to those of other Indians" (in Orliac 1982:117). The legitimacy of this question is furthered by several drawings based on an original by Parkinson that show a square-ended chief's house (figs.3.3 and 3.4). These figures, are identified as chiefly residences and show a large well-constructed rectangular structure situated on an area of leveled ground enclosed by a low wooden fence. The fencing, the size of the household and the presence of a substantial auxillary structure *(fare ta'oto)* are features which are consistant with status households.

Orliac (1982:117), in noting the above passages by Morrison and Thouars, suggests that the Europeans were seeing only the temporary travel dwellings of *ari'i*, or that the recorders had eurocentric expectations regarding the quality of 'royal' houses. I suggest that while some *ari'i* maintained multiple residences and their authority was publicly demonstrated through principal households, their secondary dwellings may have been less elaborate. Also, some status households may not be distinguished so much by the form of the *fare ta'oto,* but by the settlement context of the household and its associated elements. This statement confronts the oft made association of *fare pote'e* as exclusively chiefly and *fare haupape* as exclusively common. All evidence may point to the former as true, but I suspect the latter may show a greater range of social complexity.

Arrangement of Household Space

In addition to sociological differences between households, it appears that relations between individuals within the residence had a significant effect on the material form of the residence. There are no accounts of the explicit ordering of space within the *Maohi* house similar to that reported in other Oceanic ethnographic contexts (e.g. Cunningham 1964; Firth 1936:76; Prickett 1982). There are indications

that behavior within the household was regulated to a large degree by cultural

principles of hierarchy and *tapu*, which would have had a significant effect on the

physical form of the household and in particular on the arrangement of household

space. An example presents itself in text which describes the sleeping arrangements of

married and unmarried persons. Banks states that married persons slept separately

from others, occupying the middle of a structure with other married guests. Next to

them slept unmarried women, then unmarried men, with the servants out of doors

barring bad weather (Banks in Beaglehole 1962:340; see also Morrison 1935:198).

Wilson (1799:341-342) describes unmarried women and their parents at one end of

the house and the unmarried men at the other. Ellis provides similar detail in a larger

community house:

> The chief and his wife usually slept at one end of the house, without the least
> partition between them and the other inmates of their dwelling. Instead of a
> single mat, three or four, or even ten, were sometimes spread one upon the
> other, to give elevation and softness; and this, with the finer texture of the
> mats, was the only difference between the bed of the chief, and that on which
> the meanest of his dependents slept. Instead of being spread on the floor, the
> mats were sometimes spread on a low bedstead, raised nine or twelves inches
> above the floor. The sides and bottom of the bedstead were made with the
> boards of the breadfruit-tree. Next to the chief, the members of his own family
> spread their mats on the floor, and then the friends and attendants -- the
> females nearest the chief, the men towards the opposite end of the building
> (Ellis 1967:66-67).

Morrison (1935:198) also notes the importance of elevation in the sleeping locale of

the head residents. He describes the use of a wooden chest for a bedstead in this case.

The arrangement of sleeping locales seems not to have been regularized, but to have

varied within individual households, with the prime distinctions made between married

and unmarried persons and the head residents.

Further indication that house design and arranged space was organized in no

small part by cultural predicates of appropriate relations between individuals rests

largely on documentation related to eating and food protocol. The prohibition against

men and women eating together elicited much comment in the historic literature.
Morrison (1935:208) states, "The men and Weomen eat separate, and for this reason
each Family has two houses except when a Man Chooses to reside in his Wifes house
and then each take one end". Documentation further indicates many aspects of food
relations were spatially separated. For example, men and women maintained separate
eating utensils, prepared separate ovens, and stored their foods independently:

> I have said that they seldom eat together the better sort hardly ever, even two
> brothers or sisters have each their respective baskets one of which contains
> victuals and the other cocoa nut shells &c. for furniture of their seperate
> tables....The women carefully abstain from eating with the men or even any of
> the victuals that have been prepard for them. All their victuals are prepard
> seperately...and kept in a shed by themselves... (Banks in Beaglehole
> 1962:347).

Along similar lines, Varela (in Corney 1915(II):278) remarks that *fata* were
necessary household items not only to keep provisions from the rats but also "lest any
person should handle them; for in such case they would not eat them themselves" . Here, he
is referring to the cultural prohibitions on those of either gender, or inappropriate age, from
touching the food or cooking utensils of the other.

Segregation of food also extended to the production or procurement of resources.
Most ethnohistoric accounts state, for example, that certain food types were on principle
barred from all but the highest ranked females. Among these foods were turtle, shark, pork,
and dolphin (Oliver 1974:225). Morrison (1935:208) does state that women were able to
eat pork, as long as they raised their own stock and did not allow the pigs to wander on land
owned by men. Furthermore, he states that each sex maintained their own breadfruit trees
and *mahi* pits:

> The Men and Weomen having each their own trees have also their own Mahee
> and should a Man who is not the Servant of a Woman toutch even the
> Covering of the Womans Mahee it is rendered unfit for Her Use...(Morrison
> 1935:214).

Joseph Banks also describes pit ownership when he inadverantly touched a pile of breadfruit readying for fermentation that belonged to a woman: "The old directress told me from that circumstance it could most certainly fail and immediately pulld it down before my face..." In relation to this incident, Morrison (1935:215) comments that not only was the breadfruit "rendered of no use to the Woman but the place in which it was underwent the same fate and no woman Could ever use it afterwards".

This degree of rigidity around food and eating was undoubtedly correlated with class standing (Cook in Beaglehole 1955(I):123; Varela in Corney 1915 (II):258). Numerous references emphasize the foregoing practises amongst the "better sort" but few indicate the practices of the majority of the population. Tobin notes "the sexes among all classes at O'tahyety [O Tahiti] separate when at their meals" (in Oliver 1988:85). However, *manahune* were likely less held to such protocol given their general lack of ability to institute *tapu*. From information gleaned from other cultural practises, most restrictions related to protecting others from one's sanctity emerge with the middle class or *ra'atira*. For instance, in reference to restrictions placed on children of *ari'i* and district chiefs, Bligh (1969:61) notes that these never applied "with the Mana-hownes [manahune] or TowTows [teuteu, or servants]". If food was taken separately, it is likely that men and women ate separately within the same structure or outside (Forester 1968:171). Thus, poorer households should show less spatial differentiation or dual representation of features related to food preparation and eating and, in general, these residences would have less rigidity in the overall setup and use of space.

In addition to the segregation of food along gender lines, segregation along age lines was also reported: "Nor many sons eat in the presence of their fathers, nor even of their uncles and kinsmen senior to them in age; for they regard it as [an act of] irreverence" (Varela in Corney 1915(II):258). Age *tapus* had broader effects as well.

For example, Wilson notes: "If a woman has a child, the provisions for it must not come in at the same door with the mother's...(1799:366). Similarly, Morrison comments " The Children eat with the Mother till their restrictions are taken off, tho she cannot eat of the Food which is the Childs nor that it has toutchd nor must the Childs provisions enter the House by the same entrance at which the Mothers come in at... (1935:208). The restrictions noted by Morrison relate to the *Maohi* belief in a child's profound sanctity, which necessitated a number of behavioral restrictions that were removed at special age-related ceremonies (*amo'a*) (see Oliver 1974:437). As result of this age related *tapu*, it seems necessary to have had multiple entranceways into the house.

With regard to non-food related activities, there are no specific accounts of well defined household activity areas, although I suspect this may have been the case. Wilson obscurely records, "In this house was an epitome of their general employments: at one end women were pasting cloth together; some men were making sinnet and lines, while some slept, and others were drinking *ava* [*Piper methysticum*]..." (Wilson 1799:194).

In summary, it can be suggested that in addition to the impact of sociological groups on house design, social relations between groups within the household also had import in determining the structure and form of space. Three main dimensions can be distinguished -- gender, age, and class (i.e., servants) -- however, gender relations have the greatest potential for representation in the material record. Gender differences are recorded in the choice, preparation and cooking of foods, as well as in the separation of eating locales, food storage areas and in the dual usage of space. Separate eating structures within the household may also indicate gender differentiation, although determining function would be difficult; there may be few

diagnostic material remains and these houses likely served a number of purposes besides eating.

At a basic level, the extent to which household space exhibits complexity, measured by the number of structures and features, physical separation or dual representation of features, may itself indicate levels of social group differentiation as well as status affiliation since it appears, based on ethnohistoric information, that social group differentiation was not significant in *manahune* households.

The Symbolic Form of the Household

One last aspect of investigation is the symbolic or cosmological influence on household design. This association is not altogether unexpected given the degree of ritualization within the *Maohi* worldview. House building was at times a ritualized process which required specialists (*to'ofa fare*) or priests to officiate at building events, to call the appropriate gods and ensure success (Henry 1928:154). Further, most organic and inorganic elements used in house construction had practical as well as cosmological functions. For example, stones, trees, and animals invoked various aspects of godly power and influence (Henry 1928:302).

The household was similarly involved within the symbolic realm of the *Maohi* as noted in the following incantation, "Chant on Marae":

> The house of a great man became his *marae*; persons escaped being slain when they ran into his home, except those appointed for sacrifices. From this circumstance arose these words: Beware of the front door of my house; my house is my *marae*, the front door has the front step (Henry 1928:151)

In this representation, the house is equated with a *marae*, and the front door or step signifies the *ahu*[4] of the *marae*. The significance of the doorway in the chant is interesting given the practise noted earlier that children were at certain stages of

---

[4]*Ahu* were the centre points of activity upon *marae*; they were raised stone platforms or a fixed point located towards one end of the marae and which concentrated divine activity.

sanctity barred from entering the same doorway as their mother. Thus, superceding its functional role, the doorway seemed to contain a sacred quality. The implication here is that the door represents a portal for spiritual activity, not unlike the *ahu* of the *marae*.

The metaphor equating a house with a *marae* is not surprising given that household land tenure is symbolically validated through *marae* rights. Eddowes (1991:60) defines the symbolism of the family *marae* as displaying "[the family's] right to access resources of an economic kind. It also symbolises the duality of fertility and generative forces of the land and the group, the two being inseparable in Tahitian ideology". The "house as my *marae*" metaphor asserts the sanctity of the social, economic and reproductive rights of the household by linking it with the ritual and geneaological power of the *marae*. This link is further legitimated through the use of the term *ti'i* to mean household, boundary marker and anthropomorphic image that invokes the spirit world.

In addition to the doorway, other parts of the house are also equated with the spiritual realm. In the recording of the creation chant "Chaotic Period" the sky was set upon pillars likened to those within a house (see Henry 1928:361 fn):

> Ta'aroa fixed the dome of the sky, the shell Rumia, upon pillars...There stood Hotu-i-te-ra-i for a front pillar, Ana-feo for a back pillar; Ti'ama-Ta'ara (Perfect purity), the inner pillar; and there were the pillar to stand by, the pillar to sit by, the pillar to blacken [tattoo] by, the pillar to debate by, the elocution pillar, and the pillar of exit (Henry 1928:342-343).

The cosmological association of house parts is also noted in Henry's (1928:154) description of the priesthood: "When a body of priests near of kin to each other lived in one district they were called *pae-tau-aitu* (side-dwelling-with-the gods) or *pae-mua-fare* (front-part-of-the-house) of that district, which they were deemed to render most respectable". This is the only reference I have found that specifically implies value to spatial areas within the house. That spatial areas had ideological implications

in other contexts is clear nevertheless. For example, the spatial concepts seaward-landward (*tai-uta*) and front-back (*mua-muri*) connotated social value and were often linked with class or social relations (Oliver 1974:584). According to Oliver (1974:793), in formal situations men were always positioned *mua* of women and children, unless either was of higher rank (in which case rank would take precedence). Such considerations may be the cause of the ordered sleeping arrangements in the house by sex and status, noted earlier. Marau's chant on the *manahune* also establishes the value connoted to spatial areas and its effect of living locale:

> Go to the mountains where you belong, Far, far away up there; Far away where the red skys lie, Away to the road of separation, Far away to the clustering yellow bamboos, Torch-fisher of the *natuo* of *Motutu*, Picker of eels, Thou art the grandchild of the mountain, Thou slave of *ari'i*" (Marau in Handy 1930:7-8).

Such idealized ideological associations often do not reflect the actual facts of daily life and practise. I suspect that symbolic principles had varying effects on ordering residential life. Some households were affected in material form and organization by concepts of sacredness (*tapu/no'a* derived from cosmology. This was seen in the discussion on food/eating protocol and the sacred nature of chiefly households. This is also apparent in Gayangos comments on a chief's desire to spend the night in the Spanish Padre's house:

> When supper was over our people put the room in order for him, but he desired them to change the head of the bed round because it would be an act of irreverence for him to lie with his feet in the direction of the *marae* or temple which stood hard by. They arranged it for him as he wished, and he passed the night quite restfully...(in Corney 1915(II):142).

Whether such tenets had actual effect on the majority of households requires archaeological investigation and documentation. The placement of structures and features in relation to one another or patterning in the use of space may indicate recurrent relationships which have at their source social predicates of *tapu* or *no'a*.

Chapter Summary

Although use of the ethnohistoric record is mitigated by numerous biasing factors and omissions, this data source provides a useful starting point towards the reconstruction of the contact period *Maohi* household. The ethnohistoric model submits that a certain number of basic physical elements were common to all residences. These correlates serve to assist archaeological identification and analysis of the residential household.

In addition to documenting the physical nature of residential settlement, ethnohistoric documentation indicates that households, in their material form, have important social implications. Chiefly households maintained material characteristics different from lesser status residences, noted in the quality of the residence as well as in geographic and topographic locale, number of structures within the household unit, number of specialized activity locales, and the extent to which boundaries marked the household area (fencing and elaborate wooden *ti'i*). The documentation also points to several potential behavior patterns of the elite which may have archaeological correlates in food and wood charcoal remains.

In addition to extreme differences between *ari'i* and *manahune* households, I suggest that a continuum of household types related to the lesser elite on the one hand and *ari'i* on the other, should also be archaeologically discernible. Here, house form may not be the paramount factor, but rather features such as the residence's locale within the household cluster, and the use of "chiefly" household features such as fencing, topography, house size, and so on.

I also suggest, based on the literature, that social relations within the household were a primary factor in structuring the internal form and organization of *Maohi* household space, especially in households of the status elite. While the spatial separation of some household features was a common part of all households, such as

in a distinct food preparation area, higher status residences should show more sectioning or repetition in all spatial arrangements. Commoner residences should have only basic spatial separtions since social group differentiation was reportedly not significant in *manahune* households.

The emphasis on the social aspects of household settlement has allowed a more interpretive analysis of household form. Houses were integrated within the social and ritual hierarcy and expressed sociological and cosmological qualities in their internal and external form. The material expression of these qualities served to reflect and reinforce appropriate levels of behavior within the household.

CHAPTER FOUR

ScMo 171: ARCHAEOLOGICAL REPRESENTATION OF THE *FARE HAUPAPE* HOUSEHOLD

In the preceding chapter, historic literature was used to examine several aspects of household settlement, including formal aspects of houses, their sociological variations, elements of spatial design, and social relations within the Society Island household. In this chapter, I present archaeological data on the material form of a residential *fare haupape*. The site, excavation procedures, and household elements are described. The presentation and analysis of artefacts follows in Chapter five.

Site ScMo 171

ScMo 171 was selected for study due to its well preserved and distinctive surface remains. Based on Green's classification of 'Opunohu Valley surface stone features (Green 1961:171), the association of rectangular house curbs, living flats and terraces reliably identified the site, or its components, as residential. Thus the site provided an excellent opportunity to examine a *fare haupape* within a particular settlement context (see fig. 4.1) Excavation was limited to the upper area of the site, focusing on Structure A and its associated habitation terrace (fig. 4.2). This area was the least disturbed by present forest cover.

The Setting

ScMo 171 is located approximately 3.7 km inland from the mouth of 'Opunohu Bay, in the upper slopes of the eastern valley. At approximately 160 m above sea level, the site sits atop a narrow ridge flanked on either side by steep slopes and seasonal streams. Several surface features define the site cluster (fig. 4.1): three rectangular stone alignments (two with associated terraces), two empty terraces, and a "rectangular walled enclosure of indefinite type" (Green and Descantes 1989:126). These features are placed in a line along the ridge, for a distance of over 91 m. Directly upslope from the uppermost structure of
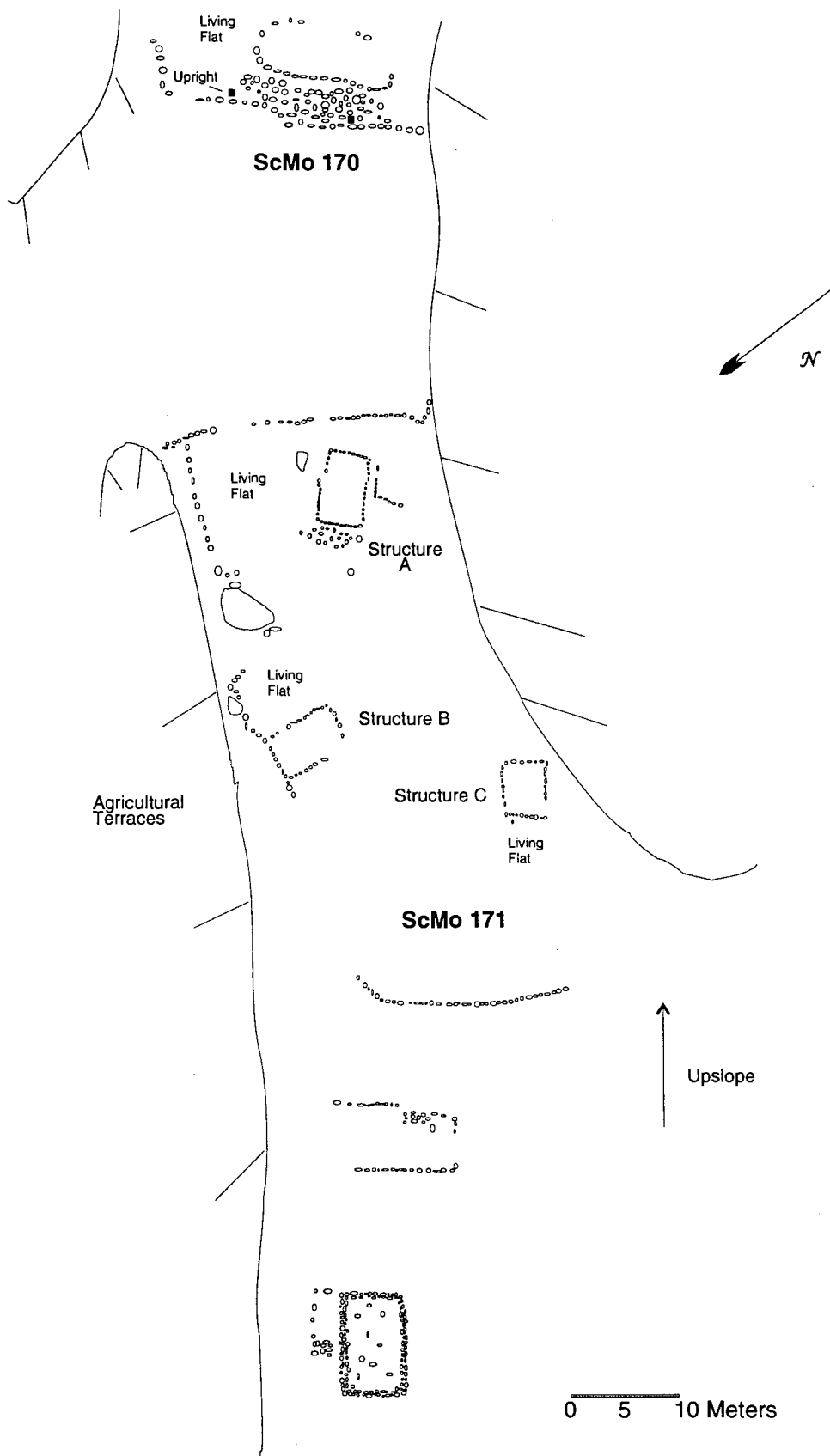
Figure 4.1 ScMo 171/170 Site Map
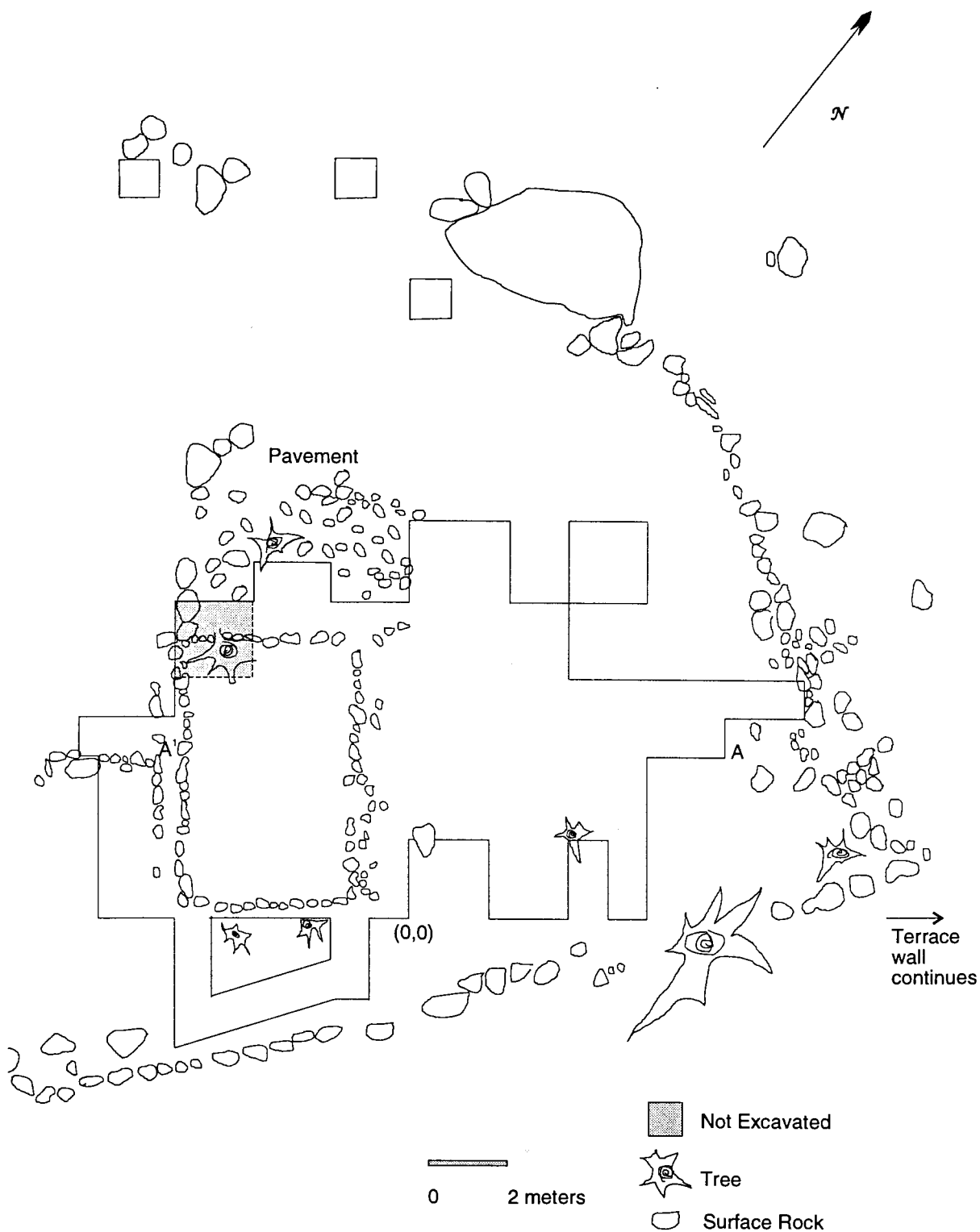
Figure 4.2 ScMo 171 - Structure A Plan Map of Excavation Area

ScMo 171 is ScMo 170 -- a medium sized round ended house interpreted by Green and Green (1967:175) as a high ranking residence. Although the density of settlement in this area of the valley is high, the close association of structures within ScMo 171 and ScMo 170, and their placement along the topography of the ridge, suggests that these sites should be considered as one related cluster. The *fare pote'e* sits at the highest point on the ridge backed by a steeply inclined slope. The rectangular houses and other structures of ScMo 171 are situated along the ridge in decreasing size and complexity, as measured by associated surface features.

ScMo 171 is situated approximately 4 m above the level of stream beds on either side of the ridge. The western edge of the ridge descends steeply to the alluvial bench below while the eastern slope is graduated by a series of agricultural terraces from the terrace edge to the stream bed and beyond. The vegetation on the site is characterized by a general wet forest cover. Predominant tree species are the aboriginally introduced *mape*, or Tahitian chestnut (*Inocarpus fagifer*), hibiscus (*Hibiscus tilleaceus*), with the occasional candlenut tree (*Aleurites moluccana)* and *Neonauciea forsteri*. Shrubby or herbaceous ground cover includes native ginger (*Zingiber zerumbet),* Malay apple (*Eugenia malaccensis*) and various fern species.

Research Design

The research design was oriented towards three main goals: 1) to identify and document the various elements that make up the household; 2) to determine the number, size, and function of structures, features, and activity locales; and 3) to assess the distributions and inter-relationships of each of these basic analytic units. These goals reflect an attempt to access the full range of features directly associated with the household. Gaining an extensive sample of residential feature types was essential, as was the definition of relationships between site features to assess synchronicity and site chronology. The excavation procedure, therefore, emphasized maximal areal exposure and precise spatial and

temporal control in order to allow for reliable statements about site occupation and associations.

Excavation Procedure

Following surface vegetation clearing, the upper ridge of the site was mapped at a scale of 1:20 with a plane table and telescopic alidade. ScMo 171 was originally mapped by Green during his settlement survey of the valley in the early 1960's (Green and Descantes 1989:232). However, once the upper ridge area was extensively cleared, several surface features were evident which were not recorded on the original site map. A second L-shaped structure of curbstones lay to the immediate west of Structure A, and a remnant pavement lay to the immediate north. The terrace walls on the south and east sides of the living flat actually joined in the southeast corner of the site, and a large unmodified rock, possibly used as a seat or anvil, was added to the cultural landscape (see fig. 4.1). A collection of surface artefacts yielded an adze preform and the only complete and finished adze found at the site.

A 2 m grid system was established over the excavation area, oriented along the long axis of the ridge. Ideally, excavation followed natural stratigraphic boundaries, although blurred edges often made this a challenging pursuit. Within strata, and where boundaries were not apparent, a combination of 5 cm and 10 cm arbitrary levels were used. Depth control was maintained by measurement below surface as well as an established datum. Where possible, all artefacts, features, and alignments were measured in three point provenience.

Excavation proceeded by shovel and trowel, and all units were taken to culturally sterile deposits. Structure A was almost completely excavated, barring a 1 x 2 m area in the NW corner of the house due to the presence of a large tree (fig.4.2). All sediments from inside the house were passed through 6 mm mesh screens. Initially 2 mm mesh was used to fraction and sort sediments, but the moist, clay-rich sediments slowed field work considerably. Alternatively, 2 l matrix samples were taken per unit level and wet screened through 2 mm mesh in the lab facility. Feature contents were bagged separately; and some

were floated for botanical remains. Charcoal samples taken for radiocarbon dating were provenienced and bagged separate from other remains.

External to the house structure, an $86m^2$ judgmental sample exposed ground space on all sides of the house and on the habitation terrace (fig.4.2). In order to expedite the excavation process a sampling strategy was developed for the screening process. Instead of complete screening as inside the house, a twenty-five percent random sample (one in four buckets) of excavated matrix was selected for screening. This sampling strategy allowed a large spatial area outside the house to be exposed without obscuring the recovery of household elements such as features or artefact clusters. The sample proved sufficient for determining spatial relationships among elements.

In addition to the excavated units on the habitation terrace, three test units were placed outside of the main excavation area on the slope between structures A and B (see fig. 4.2). These were excavated to compare and document stratigraphy away from the habitation terrace. A total of $122 \ m^2$ was excavated at the site.

Stratigraphic Context

The cultural stratigraphy at ScMo 171 is illustrated in figure 4.3 and summarized in table 4.1. Evident is a single period of cultural occupation with earlier evidence of site clearing by burning and modification to the natural slope to create a level habitation terrace. A profile, which cut across the width of the terrace shows that all stratigraphic layers were continuous across the excavated area except for that related to terrace leveling (Layer 3). Terrace leveling was evident on the lateral edges of the terrace only.

The basal stratum at ScMo 171, Layer 4, is a compact clay interspersed with numerous degrading basaltic rocks. Although culturally sterile, the surface of Layer 4 contained numerous thin diffuse burnt lenses, characterized by large charcoal pieces (1-3 cm diameter), fire reddened rocks, ash and compact, burnt pockets of clay. These lenses document initial human activity at the site and likely represent the charred remains left by burning to clear the area of vegetative cover. Although there is evidence for burning

A

Mahi
Pit

Earth
Oven

House
Curb

Sill
Stone

House
Curb

A'

0   2 meters
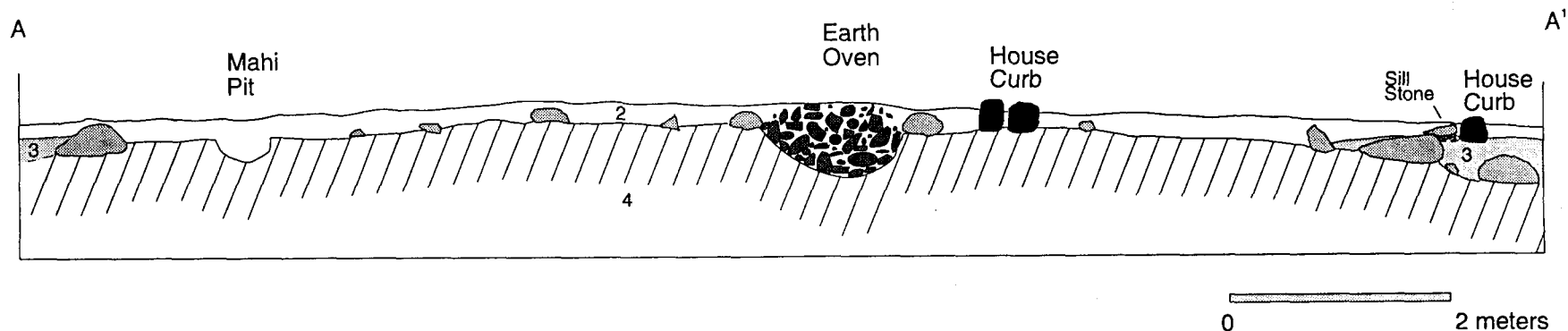
Layer 1	Post-occupational humic layer. Boundary to cultural deposit distinct. Layer 2-4 cm thick.
Layer 2	Dark gray brown (10 YR 3/2, moist) to dark gray (10YR 4/1) silty clay loam. Moderately compact to compact. Interspersed with frequent subangular pebbles and occasional cobbles. Frequent charcoal flecking. to lower layers abrupt.
Layer 3	gray (7.5 YR 5/0, moist) loose gravels. Layer mixed with pockets of compact clay, abundant charcoal, fir fractured/reddened rock and black ash. Gravels range from 1 - 30 cm diameter. Terrace fill.
Layer 4	Yellowish red (5YR 4/6, moist) clay. Extremely compact matrix containing degrading (saprolithic) pebbles, cobbles and boulders. Surface spotted with occasional burnt lenses, characterized by large charcoal pieces (1-3 cm), fire reddened rocks, compact ash and fire reddened clays.

Table 4.1 Stratigraphic Layer Description

Figure 4.3 Stratigraphic Profile and Description

throughout prehistory in the upper valley, presumably as an agricultural practice (Lepofsky 1994), the integrity of the charcoal/ash deposits at ScMo 171 suggests that burning occurred here soon before site use. One feature, a large post hole, can be associated with this earliest activity at the site. It was situated close to the east terrace edge (fig. 4.4) and was filled with, and capped by, the succeeding Layer 3. This is the only evidence of site use prior to construction of the terrace and house.

Layer 3 represents terrace fill used to raise the lateral edges of the ridge to create a wider, level habitation surface. It consisted of a mixture of alluvial gravels, clays, charcoal, fire reddened rock and ash. An abundance of burnt rock, charcoal and ash in Layer 3 further indicates that site clearing and construction occurred as contiguous events. This layer existed only at the eastern and western edges of the terrace. The fill is likely locally derived colluvium mixed with Layer 4 clays scraped from the ridge surface.

Layer 2 represents the cultural occupation of the site. This layer showed two soil types: an upper moderately compact silty-clay loam, and a subjacent slightly finer and more compact deposit. This matrix difference represents a natural soil development process in which the upper portion of the layer includes the A-horizon, or the zone of organic accumulation from which leaching occurs, and the lower portion of the deposit is less organically rich as result of the filtering of sediments and thus contains a slightly higher clay content. Throughout Layer 2, pockets of reddish-orange mottling from Layer 4 clays and degrading natural scoria were frequent. This was particularly true on the southern half of the site at the high end of the ridge. The presence of increased mixing between Layer 2 and Layer 4 in this area indicates that the surface slope was transversely cut or scraped down to level the site longitudinally.

Household Elements

Upon excavation at ScMo 171, cultural deposits were found to be richer and more complex than had been anticipated. Previous ethnohistoric and archaeological accounts of *fare haupape* have documented a simple house design with few associated features or
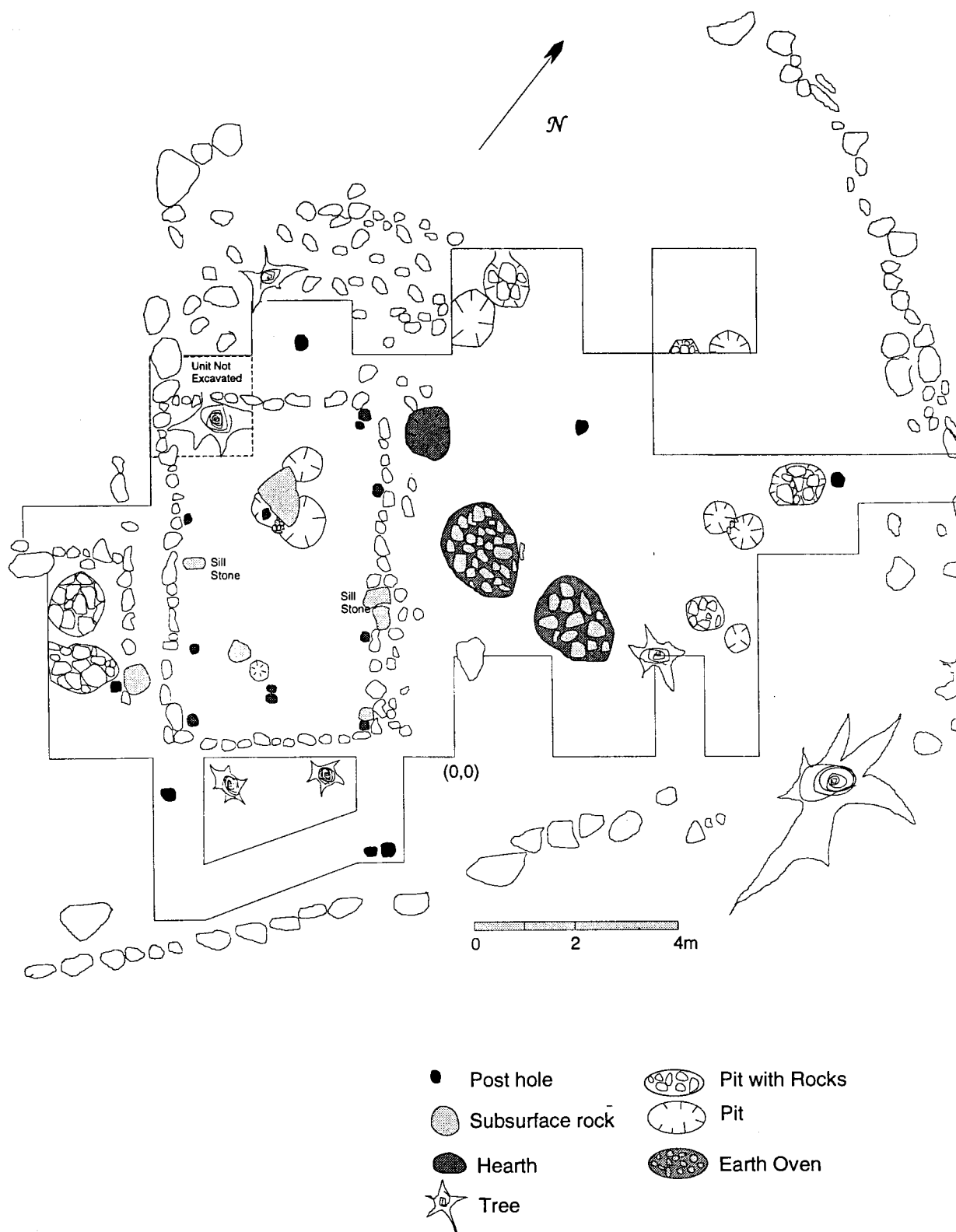
Figure 4.4 ScMo 171 - Structure A with Features

artefacts. Here, numerous features and artifacts were associated with activities at the site. Those features within Structure A are described first, followed by the structures and features from the habitation terrace.

Structure A

Structure A was visible on the present surface by a rectangular outline (4.5 x 6.5 m) of unworked basalt curbstones. Upon excavation it was revealed that the north and east wall curbstones sat directly on or were imbedded a few cm into basal clay (Layer 4). The natural ground surface under the south house wall had been scraped down during terrace preparation to level the site. As a result, the clays here were loose and there was a good deal of mixing between the deposits. Excavation under the west curbstone wall revealed extensive subsurface modification. In this area, the natural lateral slope of the ridge dipped steeply westward. In order to widen and raise the terrace, Layer 3 fill had been brought in to create a level floor. Several large boulders were placed along the western edge of the fill, presumably as a terrace wall to prevent slumpage. None of these boulders were visible on the present ground surface. The base of the west wall curbstones rested within the Layer 3 fill. A charcoal sample for radiocarbon dating was taken from the Layer 3 fill directly under the house curbs. This sample yielded a ^{14}C age of 230 ± 60 B.P. (CAMS #7087).

Table 4.2 Radiocarbon dates from ScMo 171

CAMS #	Description	Provenience	δ^{13}C	^{14}C B.P.	Calibrated range *
6260	Charcoal	earth oven	-26.6	280 ± 60	AD 1641-1677, 1776-1804, 1939-1954
7087	Charcoal	under house curbs	-26.5	230 ± 60	AD 1655-1695, 1726-1813, 1920-1954

*At 1 sigma, using CALIB program, method A (Stuiver & Reimer 1993) with decadal calibration scale (Stuiver & Becker 1993) and subtracting 40 years from ^{14}C age for southern hemisphere dates.

Inside Structure A, eleven post holes were located along the curbstone outline. Three corner posts were excavated with a fourth probably present but inaccessible due to

the presence of the tree in this area of the house. Each long wall of the house contained two posts, and two posts were situated down the midline of the structure. Several of the post holes had rocks firmly set at the base for support. Double post holes, where a second hole had been dug very close to another, were located in the northeast corner of the house and the southern midline (see fig.4.4). These likely represent the replacement of poles due to rot.

Four pit features were located inside the house. All were roughly circular with curved sides and rounded bottoms. Pit dimensions and fill descriptions are provided in table 4.3. The smallest pit was dug in the southwest corner of the house next to a small boulder (46 cm diameter) visible on the surface. This boulder may functioned as a seat or acted as a marker for the pit locale. The pit contained numerous lithic flakes and tools in its fill (see Chapter five).

Three larger pits, illustrated in detail in figure 4.5, were clustered in the northern end of the house next to a boulder of considerable size (110 x 80 cm). Each of the three pits was dug on the northern, western and eastern sides of the boulder. Only the eastern and western pits were completely excavated; the fill of the third was left in situ due to time limitations. Pit fill within the two excavated pits was a composite of two parts. The upper 30 cm contained cultural fill of friable, dark gray silty-clay with frequent charcoal flecking; the lower 20 cm contained redeposited basal clays with no cultural inclusions. The upper fill of both pits contained large numbers of lithic flakes and tools. Situated at the bottom of the western pit was a post hole for the northern center post of the house.

The walls of the western pit were well defined by hard packed sterile clay except where it intersected the adjacent eastern pit. Here, the two pits were separated by a constructed rock wall (fig. 4.5). In the eastern pit, this wall lined approximately one-third of its circumference. As the pit slightly undercut the large boulder sitting directly above it, the rock lining was not removed for fear of undermining the boulder above. The question was

Table 4.3 ScMo 171 - Features within Structure A

Feature Number	Type	Unit	Depth Below Surface (cm)	Dimension (cm)	Description
1	Post hole	0-2N, 4-6W	6-40	18 x 20	Fill loose dark gray silty-clay with frequent charcoal flecking.
2	Lithic Scatter	0-2N, 2-4W	6-25		Approx. 1 meter diameter around pit/boulder feature. Contained numerous flakes and tools.
3	Double Post hole	0-2N, 2-4W	?-61 / ?-49	20 x 20 / 18 x 16	Double center line posts. Fill loose dark gray silty-clay with frequent charcoal flecking.
4	Sill stone	2-4N, 4-6W	6	27 x 10	Flagstone 27x10cm in plan view adjacent to western house wall.
5	Post hole	0-2N, 0-2W	3-48	20 x 22	Post hole in south east house corner; fill loose dark gray silty-clay with frequent charcoal flecking.
6	Sill stones	2-4N,0-2W	6		Two large flat sill stones adjacent to eastern house wall. One measures 45x24 in plan view, and the other 52x28. Both firmly embedded in sterile clay.
7	Post hole	4-6N,0-2W	6-36	20 x 20	Fill loose dark gray silty-clay with frequent charcoal.
8	Post hole	4-6N,4-6W	?-25	18 x 20	Fill loose dark gray silty-clay with frequent charcoal flecking. Degraded rock sitting at base of post hole.
9	Post hole	2-4N,4-6W	?-28	18 x 12	Post hole cut into terrace fill under west house wall; fill loose dark gray silty-clay with frequent charcoal flecking.
10	Double Post hole	6-8N,0-2W	?-44 / ?-33	20 x 20 / 10 x 15	Double post holes separated by 20 cm. Both contain loose dark gray silty-clay with frequent charcoal flecking.
11	Eastern Pit	4-6N,2-4W	6-50	86 x 82	A constructed rock wall lines one third of the pit. A rock wall also separates feature 11 from 12. Fill in lower 20 cm loose sterile clay with no cultural inclusions. Upper fill dry gray silty-clay with frequent charcoal, subangular rock (5-10cm) and lithic artefacts.
12	Western Pit	4-6N,2-4W	6-50	60 x 40	Adjoins Feature 11 by way of a constructed rock wall. Fill in lower 20 cm of the pit loose sterile clay with no cultural inclusions. Upper fill dry gray silty-clay with frequent charcoal, subangular rock (5-10cm) and lithic artefacts.
13	Northern Pit	6-8N,2-4W	6-?	60 x 50	Unexcavated; pit boundaries clearly defined by sterile clay. Cultural matrix dry gray silty-clay with frequent charcoal, subangular rock (5-10cm) and lithic flakes.
14	Post hole	2-4N,0-2W	8-42	18 x 18	Fill loose dark gray silty-clay with frequent charcoal.
15	SW Pit	0-2N,2-4W	8-30	35 x 30	Circular basin shaped pit filled with numerous lithic artefacts.
16	Post hole	4-6N,2-4W	?-65	18 x 20	Posthole only visible at bottom of pit where it extended 15 into pit base. Rock at base of post hole.

then raised as to whether the boulder was sitting in its original locale, or if it had been intentionally placed (i.e., naturally or culturally placed). Because the pit on the northern side of the boulder was not excavated, it was impossible to assess this question conclusively. However, the eastern and western pit morphology indicates that a single large pit was dug, a portion of which was tightly lined with cobbles (or a cobble base built upon which to support the boulder) and a wall created to divide the pit to into two smaller sections. Presumably the pit on the north side of the boulder was also dug at this time. A post hole was placed at the base of the western pit to service the center house post and then each pit was partially refilled with sterile clays.

Although there is no conclusive evidence that the boulder was intentionally placed, its presence most certainly marks a focal point of activity within the house. The pits all contained numerous lithic flakes and products of tool manufacture in their fill, and surrounding three sides of the boulder/pit feature was a distinct cluster of lithic flakes and artefacts, which extended in places up to 12 cm in depth. As is more fully discussed in Chapter five, this area represents a distinct lithic working activity locale inside the house.
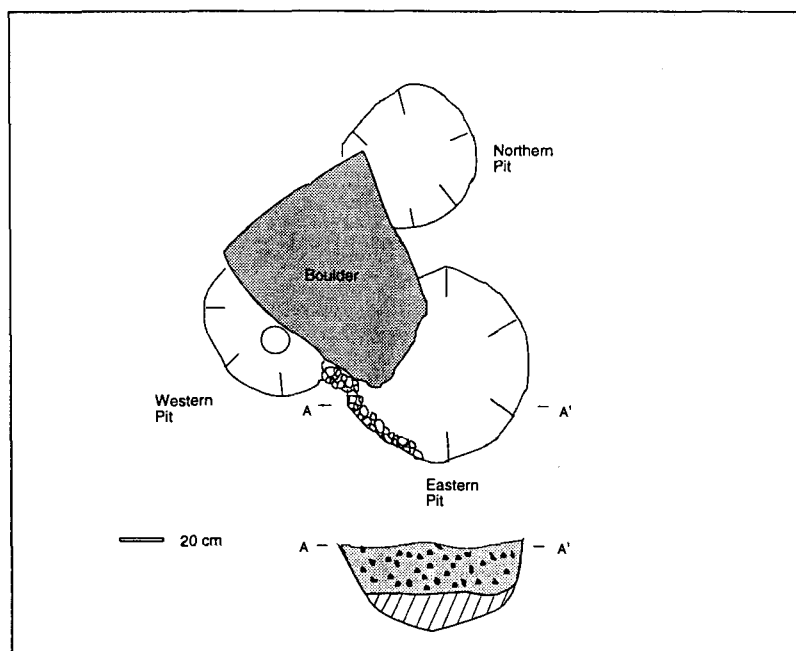
Figure 4.5 Plan Map and Profile of Pit/Boulder Feature

Two final features were found inside Structure A. First, two large flat, unworked basalt flagstones were set in a jog in the east house wall. The other was a similar yet smaller feature close to the west wall. All flagstones were set within a few centimeters of the house wall and were unusually broad and flat. These stones are interpreted as sill stones and help to identify the structure entrances.

Habitation Terrace

The habitation terrace is a large, flat raised terrace of approximately 214 m^2. It is bordered on three sides by two or three course terrace walls to the south and east, and by the steep declining slope to the west. This terrace marks the living area associated with the house.

The most frequent feature type found on the habitation terrace was a circular pit (n=11). These pits ranged in size from approximately 50 cm to over 100 cm in diameter and between 25 - 49 cm in depth (see Table 4.4). All pits were basin shaped. The pits were situated in clusters of two or three around the outer edges of the terrace. In one case, two pits had been cut so close together that a constructed rock wall formed a boundary between them. Some of the pits, at least one per cluster, were lined with basalt stones. Although none of the stones were worked, they had been carefully selected in size and shape to tightly line the pit circumference. In several instances, the rocks lining the pits were stained black from charcoal, although there was no evidence of burning in this context. Several of the pits also had a shallow scoop cut from one edge; the function of this scoop is unknown.

Pits of similar size have been interpreted by Green and Green (1967:167,169) to have functioned for the fermenting and storage of *mahi*, or breadfruit paste, whereas pits of smaller size are interpreted as general cache or storage pits. In an attempt to establish morphological criteria for each, M. Orliac (in Orliac 1982:251-256) examined a wider possible range of pit functions, including general food storage pits, waste pits, baking pits in which stones are preheated elsewhere, and pits from which earth is extracted to cover ovens.

Table 4.4 ScMo 171 - Features on the Habitation Terrace

Feature Number	Type	Unit	Depth Below Surface (cm)	Dimension (cm)	Description
1	Pit	8-10N,4-6E	4-29	37 x 66	Small oval basin shaped pit, truncated by unit wall. Fill loose dark gray silty-clay with charcoal flecks and occasional fire reddened rock.
2	Pit	8-10N,4-6E	4-47	27 x 55	Small oval pit, truncated by unit wall. Fill loose dark gray silty-clay with frequent charcoal flecking. Pit lined and filled with angular to subangular rocks (3-20 cm diameter).
3	Post hole	8-9N,2-4W	3-30	30 x 28	Fill loose dark gray silty-clay with frequent charcoal flecking.
4	Earth Oven	4-6N, 0-2E	4-68	200 x 120	Large oval earth oven; maximum depth 64 cm. Base of the oven filled with angular, fire reddened and fire fractured columnar basalt rocks. Upper oven contained smaller vesicular lava stones. Oven lined thickly with wood charcoal and ash.
5	Earth Oven	0-2N, 2-4E	4-90	150 x 80	This oven is of different form than Feature 4, it had vertical walls, with only the top 20 cm flaring slightly. The fill consisted primarily of angular basaltic rock with very infrequent vesicular lava stones. Thick charcoal and ash lining at base.
6	Pit	2-4N, 6-8W	3-45	107 x 100	Oval basin shaped pit; maximum depth 40 cm. Fill dark gray loose silty-clay with frequent charcoal and occasional fire reddened rock 7-13 cm diameter. Pit lined with unworked rocks (5-35 cm diameter).
7	Pit	0-2N, 6-8W	3-43	98 x 130	Oval basin shaped pit; maximum depth 40cm. Fill dark gray loose silty-clay with frequent charcoal and occasional fire reddened rock 7-13 cm diameter. Pit lined with unworked stones (5-35 cm diameter).
8	Post hole	4-6N, 6-8E	30-48	28 x 28	Fill charcoal, ash and loose gravels (Layer 3). Represents earliest activity on the site.
9	Pit	4-6N, 6-8E	8-57	88 x 106	Oval pit; fill dark gray silty-clay with frequent charcoal and small pebbles (1-2cm) and subangular rocks (5-10cm). Pit fitted with large, unworked (20-40cm diameter) stones.
10	Pit	4-6N, 4-6E	7-55	62 x 56	Small oval pit. Fill dry dark gray silty-clay with frequent small pebbles (1-5cm) and charcoal. An artificial rock wall separates this pit from the adjoining Feature 11.
11	Pit	4-6N, 4-6E	7-45	70 x 67	Oval basin shaped pit; fill dark gray silty-clay with frequent small pebbles (1-5cm) and charcoal. The central depression of the pit is well defined however the upper edges are indistinct. Joins Feature 10 by an artificial rock wall.
12	Pit	2-4N, 4-6E	4-40	63 x 67	Small oval pit. Fill loose dark gray silty-clay with frequent charcoal flecking and occasional subangular and fire reddened rock (5-10cm). Rock lined.

Cont. next page

cont. Table 4.4

13	Pit	2-4N, 4-6E	6-47	60 x 60	Small basin shaped pit. Fill friable dark gray silty-clay with frequent charcoal flecking.
14	Post hole	1-2S, 1-2W	4-82	18 x 20	Post mould visible, measures 25 cm in diameter, defined by slightly compact brownish-orange clay. Its depth extends 86 cm below surface. The post hole visible within the post mould by distinct fill matrix: dark gray silty clay with charcoal flecking and frequent pebbles (3-5cm).
15	Post hole	1-2S, 1-2W	4-42	30 x 20	Fill dark gray silty-clay with charcoal flecking and frequent pebbles (3-5cm). Eastern portion of the post hole packed with degraded rock, likely used as post support and narrowing the post area to about 20 cm by 20 cm.
16	Post hole	0-2.5S, 5-6W	6-56	28 x 18	Fill loose dark gray silty-clay with charcoal flecking. A large rock sits at the base of the post hole and several degraded rocks line the sides of the post hole.
17	Post hole	6-8N, 2-4E	4-26	22 x 20	Fill loose dark gray silty-clay with frequent charcoal flecking and chunks.Two rocks sit at base of the hole.
18	Pit	8-10N, 0-2.5E	4-50	90 x 90	Circular pit; maximum depth 46 cm. Fill loose dark gray silty-clay with frequent charcoal and occasional fire reddened rock. Rock lined with unworked stones.
19	Pit	8-10N, 0-2.5E	4-50	104 x 85	Pit adjacent to Feature 19; edge slightly truncated by unit wall. Fill loose dark gray silty-clay with frequent charcoal and occasional fire reddened rock. No rock lining.
20	Fire Pit	6-8N, 0-2W	4-30	78 x 104	Basin shaped fire pit, 26 cm at the deepest point. Base lined with thin lens of loose gray ash, fragmented charcoal and occasional fire reddened rock (5-20cm).
21	Post hole	0-2N, 6-8W	6-40	18 x 20	Fill dark gray silty-clay with frequent charcoal flecking.

The ScMo 171 pits concur with both Green's and Orliac's criteria of *mahi* pits, which is primarily based on depth (40 - 60 cm).

The appearance of stone lined pits in the Society Islands is unusual, although not unknown. This feature is commonly reported in fermentation pits in the Marquesas (Suggs 1961:49). Green notes the presence of large stones in the 'Opunohu *mahi* pit fill which were "medium-sized boulders...too large and dense to have been oven stones, and...show no evidence of having ever contained a fire (1967:167-168; see also Davidson 1967:124; M. Orliac in Orliac 1982:251). He draws upon Bank's description of *mahi* production to account for the stones presence; Banks noted that *mahi* was stored in a "hole dug for that purpose, generally in their houses; the sides and bottom of which are neatly lind with grass; the whole is covered with leaves, *and heavy stones laid upon them*." (Banks in Beaglehole 1962:344; emphasis added).

Evidence from ScMo 171 indicates that rock lining may not be an uncommon feature in *mahi* pits in the Society Islands. However, instead of utilizing Banks' account to explain the presence of rocks in pit fill, I draw upon Morrison's more detailed description of *mahi* production (see Chapter 3). He notes that the fruit was transferred between pits at various stages of fermentation. At ScMo 171, the stone lined pits occur in clusters with other non-lined pits; this spatial and typological patterning in *mahi* pits may indicate that the fruit was kept in particular pit types during the process of *mahi* fermentation and storage, as indicated by Morrison. Thus the stone lined pits represent a functional stage in production. The rock fill noted by Green may in fact be the remnants of lined pits.

After pits, post holes were the second most common feature type on the habitation terrace (N=7). The primary criterion for distinguishing between pits and postholes is form (see Table 4.4 for dimensions). Post holes have distinctly vertical walls instead of the typical scoop shape of pits. At ScMo 171 post holes do not exceed 30 cm in diameter. One of the post holes on the habitation terrace is stratigraphically earlier than any other feature on the site, as earlier described. Another of the terrace post holes is located inside the L-shaped

curbstone structure adjacent to Structure A and is clearly associated with that structure. The remaining five post holes are scattered around the habitation terrace and are not associated or aligned in a manner which indicates the presence of another structure. These tend to be slightly larger than the ones found inside the structures, and they may have a range of possible functions (see Household Reconstruction).

Two large earth ovens were located on the habitation terrace just east of Structure A. During excavation, the plan dimensions for each oven was determined (Table 4.4) and then each was excavated in cross section. Both ovens contained large amounts of fire-altered rock, ash and charcoal, and were ringed with red burnt soils. The oven closest to Structure A was a large oval, basin shaped form. It contained large columnar basalt stones (up to 30 cm in diameter) at the base and smaller round vesicular lava rocks (10-20 cm diameter) in the upper fill. The second oven was of a substantially different form. It was slightly smaller than the former, and instead of basin shaped, the walls were nearly vertical, flaring out only slightly at the top. It was also considerably deeper and the heating stones used in this oven were primarily columnar basalt cobbles, with very little vesicular lava.

Flotation samples from the ovens produced no tuber or seed remains. Portions of carbonized coconut husk (used for fuel) were recovered from both. In addition, archaeobotanical identification was performed on wood charcoal collected from each oven[1]. Ten identifiable (i.e., ≥ 2 cm) specimens were randomly selected from flotation samples. Each oven revealed the collection and use of local tree species (N = 70% *Hibiscus tillianus*; 20% *Inocarpus fagifer;* 10 % *Cocos nucifera*). A radiocarbon age determination on charcoal from the basin shaped earth oven yielded a date of 280 ± 60 B.P. (CAMS #6260; see table 4.2).

A small fire pit or hearth was situated on the terrace very close to Structure A. It is distinguished from earth ovens (*hima'a)* by its smaller size, shallow depth, and the lack of

---

[1]Charcoal identified by Dana Lepofsky.

heating stones. It was a shallow basin lined with gray ash, fragmented charcoal and fire reddened clays.

Directly to the north of Structure A lay the remnants of a small pavement area. As paving stones were diffuse and appear disturbed, it is difficult to determine its extent or whether it was attached to the northern house wall.

Perhaps the most intriguing feature on the terrace is an L-shaped curbstone structure approximately 50 cm west of Structure A. Since only that area directly under the west wall of Structure A had been built up with Layer 3 fill, the L-shaped structure was built on a considerable downward slope. There was no indication whether the structure had ever been comprised of more than the two curbstone walls visible on the present day surface. As noted above, one post hole was located along the long wall of the curbing. That only one posthole was found, and the profound slope of the curbstones, implies either a lean-to type structure or none at all. Two large stone lined pits had been dug within the area marked by the L-shaped curbs. Both were lined with basalt cobbles. The pits were the largest of any cluster, the most well constructed, and the only example of two associated rock lined pits.

<u>Midden</u>

There is a distinct lack of faunal, marine or botanical debris within the excavated area. Two small fragments of unidentified marine shell were recovered from post hole contexts during flotation and numerous charred candlenut (*Aleurites moluccana*) endocarps were found in the south end of the house structure during excavation. Green also documents a lack of midden in the upper 'Opunohu sites, and ph tests undertaken by him demonstrate that soil acidity here is high (Green 1967b:217). Although acidity would have little effect on charred seed/tuber remains, this may account for the lack of shell and faunal material at the household. Another likely explanation for the lack of refuse in the direct vicinity of the household is that organic remains may have been used as animal fodder, as is described ethnohistorically, or as agricultural fertilizer which is a commonly held practice today.

Chapter Summary

Household excavation at ScMo 171 indicates a late, single occupation residence. Radiocarbon dates place site occupation sometime between the 17th and 20th centuries (table 4.1). Due to fluctuations in the radiocarbon curve for this time period, the site cannot be definitively assigned to the pre- or post-contact era. However, artefact analysis, presented in the next chapter, may help determine this question further. Structural and stratigraphic evidence indicates the household was permanently occupied over a single time span. The site thus provides an excellent opportunity to assess the material nature and arrangement of *fare haupape* household form. Numerous features associated with Structure A, including artefacts related to stone tool working inside the house and multiple features outside. Although the household elements were described in this chapter, I present an overall household reconstruction and analysis in Chapter six.

The excavation design at ScMo 171 was critical to the recovery and interpretation of remains. Broad-scale areal excavation, conducted inside the *fare* and on the living flat, allowed detailed assessment of feature patterning. The association of *mahi* pits in clusters, with at least one pit rock-lined, is a typological and spatial pattern not before noted in food storage arrangements. The areal approach also allowed the documentation of a wide range of household elements which associated with this ordinary household. Based on the numerous and varied physical remains, the *fare haupape* residence at ScMo 171 indicates that this house type has a greater material complexity and variation than hitherto thought.

CHAPTER FIVE

ScMo 171: PORTABLE ARTEFACTS

In addition to the 37 discrete features exposed in excavation, the cultural component at the site yielded a total of 2,011 portable artefacts. The majority of the collection consists of items related to lithic manufacture, including adzes, adze preforms, blanks and lithic debitage. The largest proportion of the collection are flakes and other forms of debitage (97.9%) with a smaller stone tool component (1.9%) and two items of European manufacture (0.2%). All artefacts are made of basalt, which ranges from a light gray, coarse grained material to a darker and finer grained quality. Most lithics were recovered from inside the house, with fewer located outside. In the first part of this chapter, the artefact types are described. Then, I analyze the spatial distribution of lithics across the site, considering distributional patterns of both worked tools and debitage types.

Adze Assemblage

All tools recovered from ScMo 171 (table 5.1) relate to adze production, maintenance, recycling or reuse. Tools refer to those lithics that exhibit secondary work or shaping. These include: adze fragments, adze preforms, adze tip/butt frags, polished adze fragments and blanks.

Adze Fragments (N=2)

Two fragments of finished (i.e. pecked or polished) adzes were recovered from the site. One (#015) is broken at the shoulder with the butt section missing. It has a total length of 9.6 cm, shoulder width of 3.4 cm, maximum thickness of 3.6 cm, and weighs 243.9 g. This specimen is triangular in cross-section, with the apex to the front and a marked bevel projection at the shoulder. Several flakes have been removed off the blade front and the cutting edge of the adze. These flakes were probably removed after the adze had been broken in an attempt to recycle the tool, although it is also possible that the was

Table 5.1 Artefact List from ScMo 171

| Art. #	Artefact Class	Description	Dimensions: Max L x W x T (cm)	(g)	N
	Polished adze flakes	Mean length: 2.5 (s.d. 1.0) Range: 1.0-5.0 Mean width: 1.6 (s.d. 0.6) Range: 0.9-2.5 Mean breadth: 0.4 (s.d. 0.2) Range: 0.1-0.6 Mean weight: 3.8g (s.d. 4.0g) Range: 0.5-7.8g	see Description	--	21
014	Adze	**Surface** find. Complete adze, polish, Duff 4a.	16.3 x 3.2 x 3.5	422	1
013	Preform (adze)	**Surface** find. Butt missing, Duff 4a.	7.9 x 2.4 x 2.8	106	1
024	Adze fragment	Butt section of adze, finished by pecking	5.1 x 3.1 x 2.6	114	1
015	Adze fragment	Butt end missing, polished, Duff 4a.	9.6 x 3.4 x 3.6	244	1
005	Preform (adze)	Midsection only, Duff4a, produced from flake.	6.1 x 2.3 x 1.5	50	1
036	Preform (adze)	Midsection only, Duff4a, produced from flake.	6.7 x 4.6 x 1.7	100	1
020	Preform (adze)	Midsection only, Duff4a.	7.7 x 5.8 x 1.9	166	1
041	Preform (adze)	Midsection only, cortex on front, Duff 4a.	12.0 x 5.7 x 2.4	322	1
028	Preform (adze)	Butt section missing, Duff 4a.	7.8 x 2.8 x 1.8	81	1
038	Preform (adze)	Butt section missing, Duff 4a.	6.8 x 3.1 x 1.3	60	1
033	Preform (chisel?)	Cutting edge broken off. No bevel shoulder, slight side reduction produces tang, subtriangular cross-section, apex down.	6.8 x 2.3 x 0.6	30	1
043	Butt fragment	Flaked butt section, body missing.	3.9 x 3.1 x 0.6	18	1
046	Tip fragment	Flaked tip section, body missing.	1.1 x 3.2 x 1.0	10	1
018	Butt fragment	Flaked butt section, body missing.	4.1 x 2.5 x 2.0	37	1
011	Blank	Basalt flake with bilateral thinning	8.1 x 4.8 x 1.8	115	1
026	Blank	Basalt flake with bilateral thinning	6.0 x 4.7 x 1.4	91	1
007	Blank	Midsection only with bilateral thinning.	7.2 x 4.9 x 3.2	205	1
044	Blank	Flake with bilateral thinning	8.3 x 5.4 x 2.5	186	1
008	Copper frag	Historic artefact	0.3 x 0.2 x 0.1	2	1
042	Glass frag	Historic artefact	1.0 x 0.9 x 0.3	0.3	1
		Tool Total			41
--	Basalt flakes	Unmodified lithic flakes and debitage			1970
		Total			2011

adze broken during reworking. Although broken, adze morphology conforms with the Duff type 4a (Duff 1959), a type marked by an upright triangular cross-section, well-developed tang, prominent beveled shoulder and in the later prehistoric period by a projection at the poll (Emory and Sinoto 1964: 155). Early typological variations of this form are known from 13th century contexts in the 'Opunohu Valley, yet they become prolific only in the very late prehistoric period (Green 1967b: 220).

The second specimen (#024) is the butt portion of an adze. It is finished by pecking and exhibits a slight projection at the poll, a feature typical of late prehistoric adzes (Emory and Sinoto 1964:155). The fragment has a maximum length of 5.1 cm, width of 3.1 cm and thickness of 2.6 cm; it weighs 113.8 g.

Adze Preforms (N=7)

Adze preforms constitute the second most frequent tool class. Following Crabtree's definition (1982:49) preforms are an unfinished and unused form of an intended artefact type. While preforms lack refinement of form, such as edge finishing or grinding, types are identifiable and their cross-sections determinable. Six (85.7%) preforms have triangular cross-sections at or near the shoulder with the apex to the front, allowing them to be classed as Duff type 4a. Only one specimen (#033) lacks this typical cross-section -- it is a small preform with a sub triangular apex to the back cross-section. It has a slightly developed tang produced by reduction at the sides, but none to the front or back of the butt. The blade front and back are parallel, and as there is no beveled shoulder, it has a rather flat appearance. The piece is broken at the cutting edge but it could not have been more than 2.3 cm wide at this point. This tool may better be classed as a chisel rather than an adze preform.

All preforms are broken: three are fractured at or near the midsection with the butt end missing and four are missing the cutting edge. Mean dimensions are: length 7.7 cm (s.d. 1.8), width 3.8 cm (s.d. 1.4), thickness 1.6 cm (s.d. 0.5), weight 116 g (s.d. 94g). Table 5.1 presents individual measurements. Two are clearly products of a flake rather than
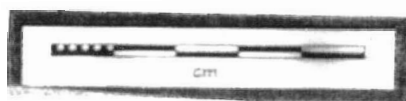
Adze Fragment (#024)
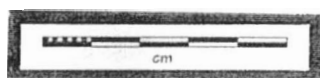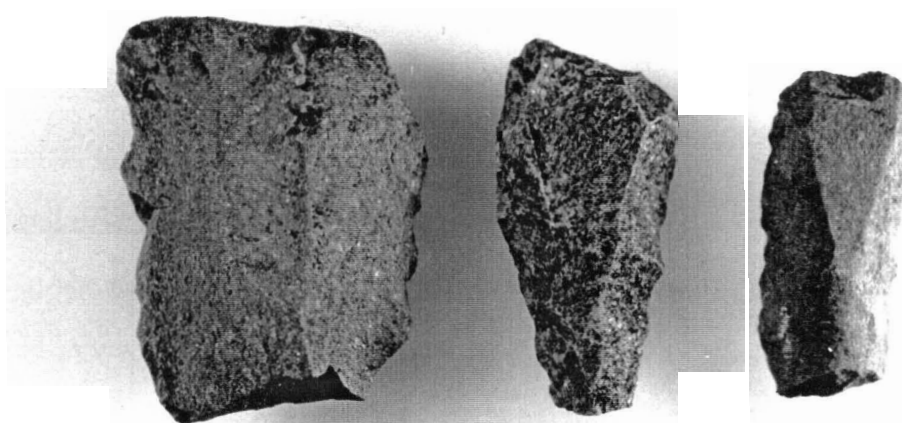
Adze Preforms (#020, #028, #038)

Figure 5.1 Selected Artefact Types From ScMo 171

a core reduction technology, in which a large flake is used to produce the desired tool type rather than a core. This production process is now widely reported throughout Eastern Polynesia (Leach and Witter 1987; Suggs 1961; Weisler 1990). The two specimens in this type retain a portion of the bulb of percussion on the back of the preform.

Preform Tip/Butt Fragments (N=3)

Three items, classed as tip or butt fragments, are pieces off larger implements, probably adze preforms. These items are classed as preform fragments since they are unfinished, showing initial shaping through flake removal but no polish. Metric attributes are presented in Table x.

Blanks (N=4)

Four blanks in the ScMo 171 collection are distinguished from preforms in that they show initial reduction but the "shape and form of the final product is not disclosed in the blank" (Crabtree 1982:27). These exhibit initial shaping, through the removal of lateral thinning flakes, however their final forms are indeterminable. Blank dimensions, shown in Table 5.1, demonstrate that the blanks are small. Three of the blanks are produced from large flakes and the fourth is indeterminable. Given the overall nature of the artefact collection, these are probably adze blanks.

Polished Adze Flakes (N=21)

The most frequent tool class in the collection are small polished adze flakes. To be classed as such, at least one surface area must exhibit grinding or polish. Mean dimensions are presented in Table 5.1. Rappoport et al. (1967: 186, 195) state that polished adze fragments in coastal contexts at Mo'orea were the preferred flake tools in general, and specifically were used in the manufacture of fish hooks and other shell industries. None of the polished flakes at ScMo 171 show evidence of use, such as edge rounding or wear. Several of the fragments have clear striking platforms and bulbs of percussion, indicating adze recycling rather than incidental breakage.

Top Row - Blanks (0#044, #007, #011), Middle Row - Tip/Butt Preform Fragments (#043, #018, #046), Bottom Row - Polished Adze Fragments

Figure 5.2 Selected Artefact Types from ScMo 171

Debitage/Flakes

By far the largest proportion of material recovered (97.9%) from the site are basalt

flakes. In general, the flakes are small, as demonstrated in Table 5.2. No flakes show

secondary retouch or grinding, and none have evidence of use wear. This suggests that

flakes are the byproducts of production and were not produced for use.

Table 5.2 Metric Attributes of Basalt flakes from ScMo 171

Attribute	x (cm)	s.d. (cm)	Range (cm)	N
Length	2.27	1.16	0.3 - 8.0	
Width	2.12	1.30	0.1 - 8.0	
Thickness	0.45	0.32	0.1 - 2.5	
Weight	5.9g	10.4g	0.1g - 85.3g	
				1970

Beyond these basic metric measures, a preliminary analysis was undertaken on selected

morphological attributes of the flake assemblage in order to assess flake distribution by

type. Preliminary attributes included flake condition (complete/broken/debris[1]), platform

modification (prepared/unprepared), and presence/absence of cortex. At interest here was

to assess whether variation in the flake assemblage was present, and if so, whether they

were indicative of patterned behavior at the site. The results of this analysis are presented in

the discussion of Flake Distribution.

Historic Component

Two items of European manufacture were recovered at the site. These include a

small green glass fragment and piece of copper (see Table 5.1 for dimensions). Both items

were found a few cm under the littermat resting on the cultural layer. To date, reliable

evidence for a historic component has not been found in the upper 'Opunohu Valley and a

firm historic association would carry significant implications in terms of valley settlement

and abandonment models. Unfortunately, the stratigraphic context of the items found at

---

[1]Debris is considered here as those fragments which lack a platform, or point of percussion.

ScMo 171 is tenuous. The small sample and the small size of each item suggests they may be intrusive. The fact that the items are not materially or functionally diagnostic makes this question difficult to assess any further. Although the valley has not been permanently occupied since the early 1800's, human impact and presence here (e.g. hunters, hikers, tourists, etc.) is constant. Therefore, the presence of a historic component remains inconclusive.

Artefact Spatial Distribution

As indicated by artefact types recovered from ScMo 171, the collection is primarily the result of adze production and/or adze recycling. Adze recycling is indicated by the number of polished adze fragments and the adze fragment with retouch. Adze production is demonstrated by the proliferation of adze preforms, tip/butt fragments and blanks. All of the tools recovered are unfinished and broken, indicating that the collection represents the byproducts of a specific activity and not the full range of a potential household tool kit. This activity is the production, maintenance, reuse and recycling of adzes. The diminutive size of the preform collection likely indicates the production of adzes for household use, rather than larger scale specialized adzes, such as those used for house building or canoe construction. This statement is strengthened by the fact that the majority of preforms are not reduced or recycled examples of larger adzes, but are clearly formed from large flakes. The uniformity in ScMo 171 artefact types may indicate some level of specialized lithic activity, although archaeological data from habitation sites is so sparse that it is impossible to assess the differences/similarities in lithic technology and production at the household level.

The spatial distribution of artefacts from the site also provides some interesting results. Inside the house a total of 1,852 flakes and tools were recovered; externally, the 25% sample generated 157 lithic pieces. Although the artefact total for the habitation terrace represents a sampled population, the difference in artefact density between the house and the terrace appears to be a real one. As a general measure, the expected population of

the terrace sample is estimated to be 157 x 4 = 628 lithics. The relative density of lithics

per cubic meter on the habitation terrace was 37 artefacts per m^3, whereas inside the house

this ratio was 257 artefacts per m^3. [2] The mean number of artefacts inside the house per 1

m unit equaled 51.4 lithics (s.d. 102.7), and outside 7.7 (s.d. 10.8). All measures suggest

that more lithic work occurred inside the house.

A distribution map of all artefacts (i.e., worked tools and flakes) recovered from

ScMo 171 clearly illustrates the difference in lithic patterning across the site (fig. 5.1). The

gray scale image indicates areas of gradient density. The highest concentrations of lithics

are in pits within the house. In total, 860 or 46.5% of all material recovered from the house

came from pit features. The second area of artefact abundance is the lithic scatter on the

house floor, within 1 m of the large boulder\pit feature in the northern end of the house.

This scatter, between 7 and 12 cm thick, contained 725 or 39.2% of house lithics. Also of

note is a lithic concentration along the west house wall curbstones adjacent to the area

defined as an entrance. A pocket of lithics was also recovered in the southeast corner of the

house. Elsewhere in the structure, flakes were sparsely and randomly scattered.

On the habitation terrace, the highest concentration of artefacts lay just outside the

east wall curbstones directly across from the boulder\pit feature in the house. A smaller

pocket of lithics also was situated outside the west curbstone wall around the house

entrance. The main area of the terrace is surprisingly clear of lithic debitage or tools.

Adze Assemblage Distribution

Looking only to the distribution of adze fragments, preforms, blanks, polished adze

fragments and preform tip/butt fragments, a similar pattern emerges (figure 5.2). Inside the

house, 21 (75%) items were located in pits and in the lithic scatter. Polished adze fragments

are the most frequently found type and these have the widest distribution across the structure.

---

[2]The 100% sample estimate for outside the house is determined by multiplying the 25% sample (157 lithics)
by four. Ratio calculations are based on the total number of artefacts divided by cubic meter of excavation.
Inside the house: $1852/7.2m^3 = 257$. Outside the house the expected population of artefacts is used:
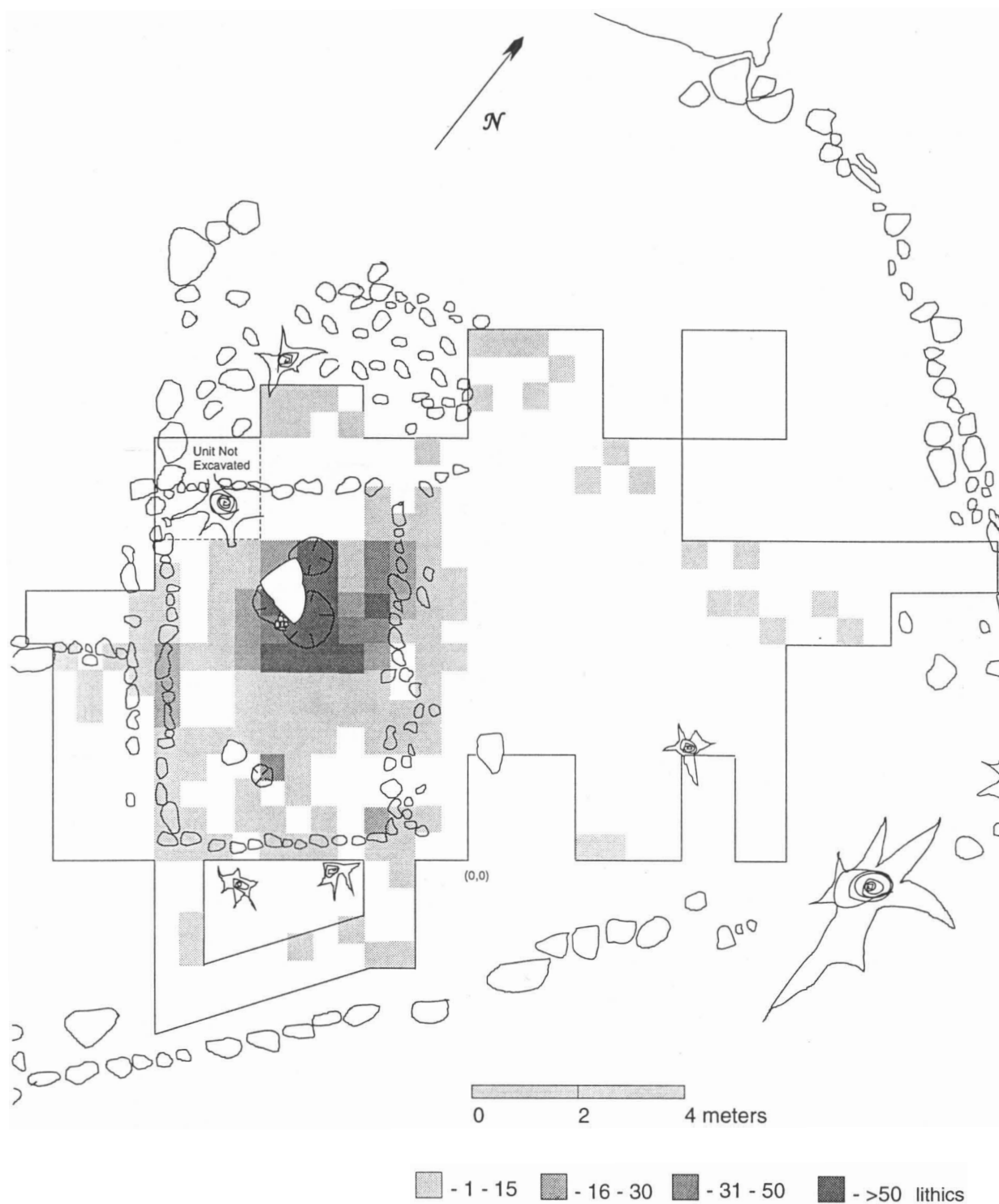$628/17.2m^3 = 37$.

Figure 5.3 Distribution of All Artefacts at ScMo 171

(0,0)

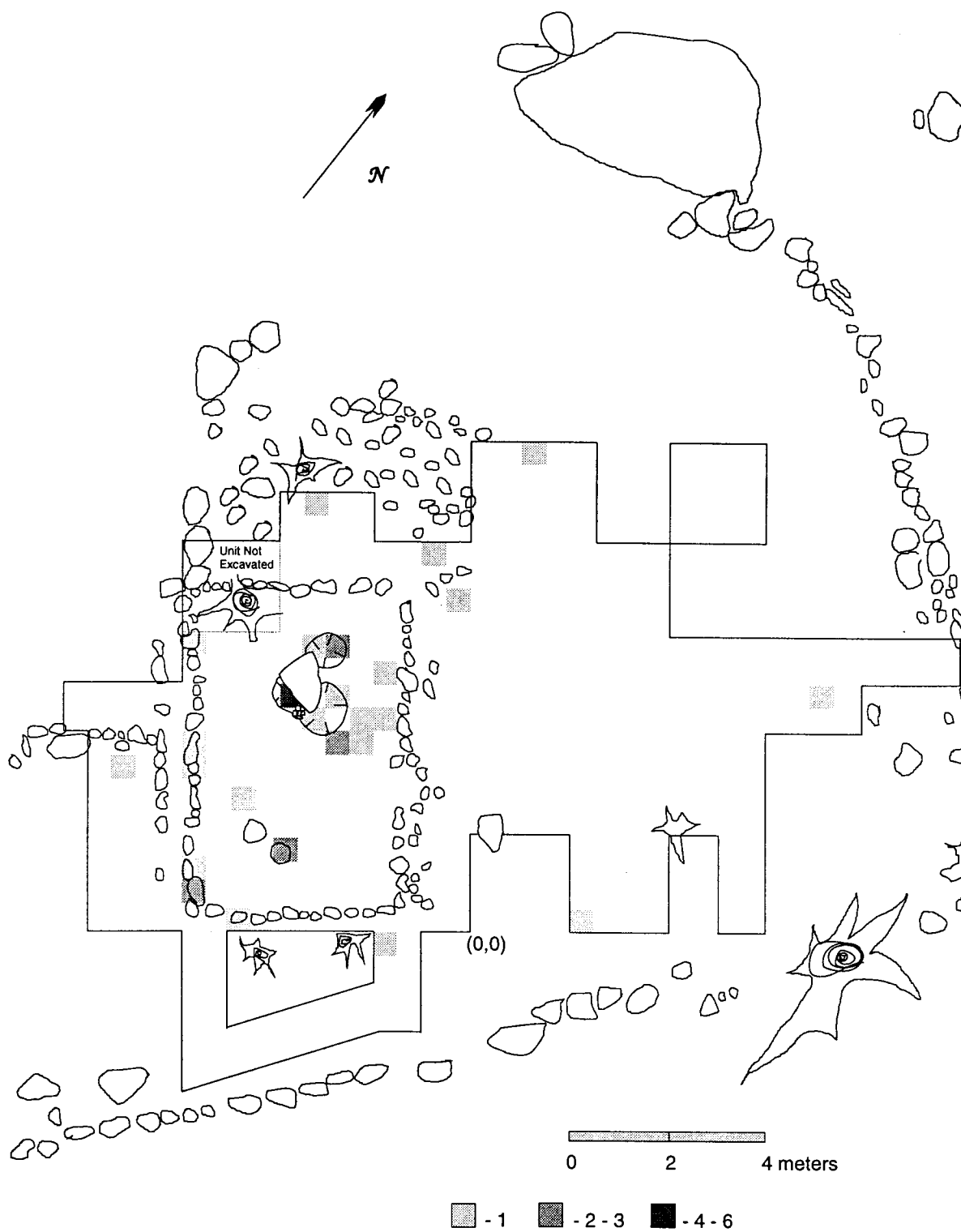0   2   4 meters

☐ - 1   ■ - 2 - 3   ■ - 4 - 6

Figure 5.4 Distribution of Tools at ScMo 171

Other types are more restricted in spatial extent, located either within pits or in the lithic scatter surrounding the boulder/pit feature. There is no apparent difference between pits, based on presence/absence of types. Blanks are the only tool type found exclusively inside the house, although their depositional context varies.

Outside the house none of the tools are associated with a feature or occur in clusters. The most frequent type is polished adze fragments (N=5), with two examples of preforms and one each of tip/butt and adze fragments.

Flake Distribution

Selected attributes of the flake assemblage were compared inside and outside the house, and by feature within the structure. Attributes included flake condition (C: complete or B: broken) and platform preparedness (P: prepared or UP: unprepared), see Table 5.3. Although not a comprehensive analysis, it was sufficient to indicate if flake properties varied according to context of deposition and to generate ideas about the nature of flaking activities. Flake types are compared in relative proportions only.

Table 5.3 Flake Types Across ScMo 171

	Complete\ Unprepared (C\UP)	Complete\ Prepared (C\P)	Broken \ Unprepared (B\UP)	Broken \ Prepared (B\P)	Debris	Total
Interior/ Exterior:						
Inside House	219 (12%)	146 (8%)	510 (28%)	291 (16%)	656 (36%)	1822
Outside House	47 (32%)	0 (0%)	50 (34%)	21 (14%)	30 (20%)	148
Features in House:						
Pits	96 (12%)	98 (12%)	189 (22%)	203 (24%)	250 (30%)	836
Lithic Scatter	88 (12%)	38 (6%)	213 (30%)	73 (30%)	296 (42%)	708
Floor	35 (13%)	10 (3%)	108 (39%)	15 (5%)	110 (40%)	278
					Total	1822

As illustrated in figure 5.3, flake collections inside and outside the house have different constituent properties. Of particular note are the following: 1) complete flakes with prepared platforms are exclusively found inside the house structure (8% vs 0% outside); 2) complete flakes with unprepared platforms make up a greater proportion of the collection outside the house than inside (32% and 12% respectively); 3) regardless of condition, more flakes on the habitation terrace have unprepared platforms (66% as compared to 40%), and 4) flake debris comprises 36% of material found in the house and only 20% on the habitation terrace. A comparison of flake types per m^3 inside and outside the house confirms the relative densities of types in each area (Inside: C/UP 30.4m^3; C\P 20.3 m^3; B\UP 70.8m^3; B\P 40.4m^3; Debris 91.1m^3. Outside: C\UP10.8m^3; C\P 0; B\UP 11.6m^3; B\P 4.8 m^3; Debris 6.8 m^3). Comparisons of flake sizes also shows no apparent size difference in flakes from the two areas.

The variant flake characteristics inside and outside the house suggest a difference in the activities performed in the two locales. Platform preparedness is "the grinding, polishing, faceting, or beveling of that part of the platform to receive applied force" (Crabtree 1982:49) and is a general measure of stage of reduction. In general, prepared platforms reflect a greater expenditure of effort to achieve a desired product. The greater proportion of worked platforms, increased debitage, and the exclusive presence of complete flakes with prepared platforms indicates a greater emphasis on secondary stage reduction inside the house. Outside the house the higher proportion of unprepared platforms suggests more primary reduction. Although decortification flakes make up an extremely small proportion of the "outside" collection (5 or 3.4% outside; 27 or 1.5% inside), the amount of unprepared platforms suggests a good deal of primary flaking at the site, most of which occurred on the habitation terrace. The lack of decortification flakes may indicate that blanks were brought to the site after initial shaping elsewhere.

Flake distribution also varied by feature within the house (fig.5.3). Flakes in pits have a greater proportion of prepared platforms regardless of condition, and fewer
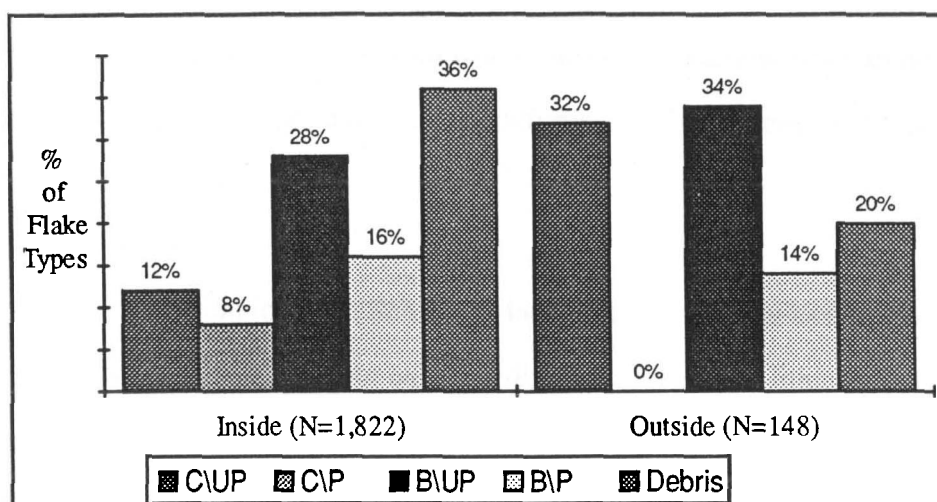
(C\P = Complete\Prepared; C\UP = Complete\Broken; B\P = Broken\Prepared
B\UP = Broken\Unprepared; Debris)
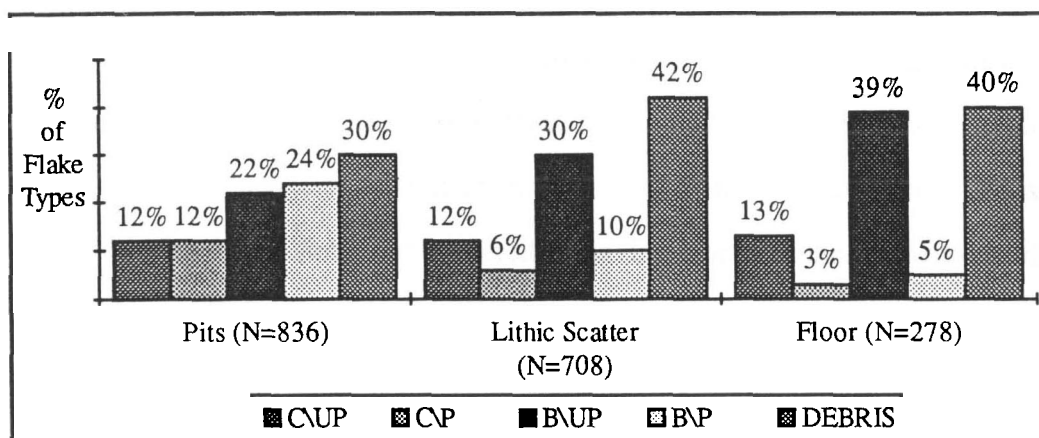
(C\P = Complete\Prepared; C\UP = Complete\Broken; B\P = Broken\Prepared
B\UP = Broken\Unprepared; Debris)

Figure 5.5   Distribution of Flakes by Type at ScMo 171

unprepared platforms. The lithic scatter and the floor contain more debitage than the pits. Metric size analysis from the features shows flakes from pits are only slightly larger than those found elsewhere. Flake types from within each of the various pits also do not vary. Comparisons of flake types per unit volume confirms the relative density of types in each of the three features analyzed.

<u>Discussion</u>

The flake distribution from ScMo 171 indicates patterning at two levels. First, flake density and morphology suggest not only that different amounts of lithic activity occurred inside and outside the house, but that different types of activities were performed in these two locales. Some lithic working, most probably the primary reduction of blanks, occurred on the habitation terrace, but the majority of lithic production was performed in the house. Based on the morphological criteria, flakes in the house indicate activities associated with secondary reduction, or shaping. This interpretation is further substantiated by the small size of flakes found at the site overall and the general lack of decortification flakes.

The second level of patterning indicated by the flake analysis is the variation of flake types according to context of deposition, or feature, inside the house. In particular, flakes in pits tend to have attributes relatively different from other features. Flakes on the house floor and the lithic scatter are similar to one another, having more debitage and flakes with unprepared platforms. This patterning indicates some level of selection of material contained in pits, although the degree of selection and the precise characteristics selected for is difficult to determine based on the criteria studied.

The areal distribution of artefacts also demonstrates patterning in stone flaking activity at the site. The bulk of the work occurred inside the house, at the northern end of the structure by the boulder/pit feature. The lithic scatter to the south of the boulder indicates that most work was oriented in this direction and that the boulder likely served as a seat for the stone worker. Although flakes from the lithic scatter and the floor are morphologically inseparable, the lithic scatter contains a much denser concentration. This

concentration suggests that stone working was intentionally contained in this area of the house. The paucity of lithics (excluding the SW pit) across the house floor and the distinct edges of the scatter may also indicate the floor was regularly cleared of debitage.

On the terrace, flake distributions are relatively even suggesting the absence of a specialized knapping area. The only cluster of lithics is located adjacent to the house curbstones directly opposite the boulder/pit feature; these lithics are likely scattered debris from inside the house. Similarly, a small concentration of flakes to the west of the house, near the entrance, is probably scatter from floor cleanings. An explanation for the relatively sparse densities outside the house may lie in the nature of the adze preforms recovered at the site. The majority show clear evidence of a reduction sequence from flakes rather than cores. Large flakes useful for the manufacture of adzes may have been quarried elsewhere and brought to the site in this form, a pattern noted by Sinoto at Huahine (1979:9). Thus, while some shaping of the flake blanks occurred on the terrace, most reduction occurred in the house. The lack of decortification flakes in the ScMo 171 assemblage reinforces this suggestion.

The concentration of lithic flakes and tools in pits requires further discussion in so far as over half (53.6%) of all worked tools in the house were in pits, with this proportion increasing to over 63% if one considers the locale of preforms, adze fragments, blanks, and tip/butt frags only. To suggest that the pits represent storage or curation of materials for later use however, is countered by the fact that several broken tools suitable for reworking are present outside of pits, either in the lithic scatter or scattered on the habitation terrace. That the pits were used as trash deposits of broken tools and flakes also is unsatisfactory given that proportions indicate a non-random assortment of flake types relative to house floor deposits.

Though speculative, I suggest the concentration of particular lithic types in pits may lie in ritual rather than purely functional considerations. Within the *Maohi* context, household tools were considered to possess the spiritual *mana* of their owner, and craft

production in general was considered *tapu*. Oliver (1974:139) states that "...their tools tended to acquire *mana* (effectiveness of a more or less supernatural kind) the longer they were used successfully, or, alternatively, that certain tools were *mana* (through spiritual association) and hence of more than ordinary effectiveness". Those tools exhibiting certain criteria, considered 'powerful', or had been intended for a special person or use may have been placed in pits. In this scenario, pits represent the containment of *tapu* material for the protection of various household members or guests.

Chapter Summary

The portable artefacts recovered from excavations at ScMo 171 indicate significant lithic working activity at the site. The assemblage indicates the primary stone working activity was adze production and reworking. Spatial distributions of artefacts across the site demonstrate distinctive patterning in adze manufacture. Inside the house, lithic work concentrated at the north end of the structure around the large boulder and within pits. Outside the house no distinct working area was located and no spatial clustering of lithics is apparent. Debitage analysis indicates that in addition to differential lithic working locales, the activities performed in each area also varied. Based on the preliminary analysis, it appears that more primary reduction occurred on the habitation terrace with secondary shaping or reworking of tools inside the house. A lack of comparative data from other households makes the assemblage difficult to interpret, particularly in terms of typical or specialized production. However, the uniformity of remains and their quantity may allow speculation that the household was occupied by a craft specialist. Several interpretations were considered regarding the containment of lithics in pits. Curation or trash functions are not well supported by the lithic evidence. A ritual interpretation was put forward as a third possibility.

CHAPTER SIX

HOUSEHOLD RECONSTRUCTION AND INTERPRETATION

Drawing together the archaeological data on household features, artefacts and their distribution across the site, I present a reconstruction of the *fare haupape* household. This reconstruction, which includes a discussion of the settlement context of the site, is then utilized to interpret the late prehistoric residential *fare huapape*. Ethnohistoric and archaeological data are drawn together to allow consideration of the household as a social entity. I conclude with a brief summary of the role of the household in changing historic context.

ScMo 171 Household Reconstruction

The origins of site ScMo 171 can be dated to the late prehistoric period. The two radiocarbon dates establish occupation sometime between the 17th and 20th centuries. Due to the nature of the radiocarbon curve at this time period, the site cannot be definitively assigned to the pre- or post-contact period. However adze types from ScMo 171 are consistant with the late prehistoric period and the lack of a reliable historic component suggests a precontact occupation.

Sometime during this period the site was cleared by burning and the habitation terrace was built. The lack of evidence for a lapse in activity between terrace construction and house building suggests that the terrace was intentionally built to accommodate the household arrangement. Structural and stratigraphic evidence indicates a single period of cultural occupation with no changes to the house plan over this time. The floor accumulations and stone lined features suggest the site was of permanent rather than temporary use. If the site was occupied over a number of discrete occupations, one would expect to see disuse of some features, changes in locale of activity areas and, in general, blurring of artefact and feature patterning.

The *fare*, as based on post hole distributions, appears to have been of a simple form. The center posts indicate the presence of a ridge pole, which would have supported the frame for a thatched gable roof. Judging by the amount of flake debris outside of the east house curbstones, the east side of the house was unwalled, or was enclosed only during inclement weather. The lack of debris outside of the north, south, and west curbstones suggests these walls were kept closed. The discrete flake cluster on either side of the entrance along the west wall reinforces the idea that the main area of this wall was closed.

Sill stones mark two entrances, one along each long wall of the house. The eastern entrance is particularly well defined by two large flag stones set in a curve in the house wall. As it opens onto the habitation terrace, it was probably the primary doorway. The second entrance faces west and is less elaborately marked than the former.

Similar to other *fare* excavations in the Society Islands a 'living floor' could not be located during excavation. Green and Green (1967:166) suggest that grass flooring and mats laid on habitation surfaces obscure the definition of compacted, well-defined house floors. Alternatively, it may be that distinctive floor lenses are not a relevant or useful criteria in this context. House floors may not be so much obscured as simply the accumulations of deposits through time, formed by household debris, activities, and flooring. If so, successive occupations would be distinguished by changes in the frequency of charcoal, artefact types, artefact densities, and distributions, structural changes, and midden remains.

Inside the house, the large boulder surrounded by pits and the lithic scatter marks the main lithic working locale at the site. There is also a small pit in the SW quadrant of the house, but it does not exhibit an associated lithic working area. All of the pits in the house are situated next to boulders; these may have functioned as seats, and/or served as markers for pit locales. The latter would be necessary if access to the pits was restricted to certain members of the household. The degree to which stone tool production was carried on inside the house seems unusual, in light of ethnohistoric descriptions which describe most activities

as being performed outside. The reason for this may be due to the fact that the upper 'Opunohu receives in excess of 3200 mm of rainfall per year (Lafforgue and Robin 1989). Inclement weather seems to have little influence over other household features however, as seen in the lack of a *fare tutu* and the presence of putative *fata* outside the house.

Given the predominance of adze working in the house, some consideration was given to whether Structure A may be better interpreted as a specialized structure, instead of a residence. However, the range of household features associated with the *fare,* including ovens, food storage pits, pavement, etc. clearly indicates a residential function. That the *fare* was occupied by a specific social group, or craft specialist is open to questioning, but that is was a "specialized" house is rejected.

No hearth was found inside the house for warming or lighting, although the presence of candlenut endocarps in the southern end of the house indicates that these may have been used as a primary light source. Their concentration in a relatively open and spacious area allows speculation that this was a gathering and/or sleeping zone.

Outside of the house there are several distinct zones of activity. A large food preparation area is marked by the presence of two large earth ovens. Both appear to have been in use contemporaneously, although this is difficult to prove, and both show evidence of sustained use through substantial quantities of charcoal, fire reddened earth, and heat fractured stone shards. Ethnohistoric documentation suggests that ovens of different sizes and morphology were employed for different cooking purposes, and different styles may relate to functional and sociological aspects of cookery (Orliac 1982:275). Ovens used for cooking vegetables, for example were generally deeper and required longer cooking times than those for meat. Since certain foods, especially meat, were restricted along status lines, oven size and depth may distinguish the social group utilizing the oven (Orliac and Orliac 1980:71).

There is no evidence for a separate cookhouse, or *fare tutu,* in the area of the ovens. In fact, there is no strong archaeological evidence for this structural type in any Society

Island excavation. It may be the case that the *fare tutu* is less common than typically reported in the ethnohistoric literature, or it is perhaps a structure employed only in elite households. The small fire pit that sits in the area of the ovens may also have been used in food preparation, for braising and quick cooking. Alternatively, Orliac (1982:70) states that such hearths were often placed close to houses, in order to provide lighting at night, and to deflect insects.

The central area of the terrace is generally clear of artefacts and features. This area likely was used for general tasks and outdoor living space. The fact that all lithic materials found on this area of the terrace are scattered around the outer boundaries may indicate that it was purposely kept clean of debris. Several post holes are scattered throughout the area. As noted, these are larger than the ones inside structures, and could have a range of possible functions. Some probably served to anchor *fata* poles, for the storing of provisions. Some *fata* are noted in ethnohistoric literature as having specialized functions, such as those for keeping chickens used in cock fights or the keeping of highly prized *fe'i* (*Musa australimusa*) or mountain plantain (Morenhout 1959 t.1:147; t.2:286). Some may also have anchored *ti'i* or boundary markers.

Mahi pits form an outer food storage zone around the boundary of the habitation terrace. The pits are clustered in groups of two or three, with one pit smaller than the other and at least one of the pits rock-lined. Whether this type of spatial and typological patterning is consistent with *mahi* pits at other sites is currently difficult to assess. Previous excavations of *mahi* pits have been situated within multiple occupation sites, making synchronic relationships difficult to determine (Green and Green 1967; Davidson 1967; Orliac 1978). The ScMo 171 pits suggest that *mahi* pit arrangement, in addition to formal characteristics, is a relevant identification aid and analytic criterion.

A formal gathering area outside the house is marked by the paving which once sat at the northern end of the house structure overlooking the valley below. It appears to have only extended the width of the house and northward to the boundary of the terrace.

Pavements are ethnohistorically described as serving an environmental function, however Green (pers. comm.) states that they may also be a feature closely tied to the sociological standing of the residence. Although a fairly common surface component, pavements infrequently associate directly with rectangular houses (see Green and Descantes 1989) and more often associate with *fare pote'e* structures (see table 4, Green and Green 1967). The appearance of the paving at Structure A is further explored in an analysis of overall settlement at ScMo 170/170 (see below).

Last, the L-shaped curbstones to the west of the *fare* demarcate an area of specialized use. These curbstones surround the two largest and best constructed *mahi* pits at the site, and are the only example of two stone-lined pits. These factors suggest that the pits have been specially marked or segregated. Ethnohistoric documentation notes that *mahi* pits were "owned" by individuals within the household, and particularly along gender lines (Chapter three). These pits therefore could represent such a differentiation in ownership or gender within the household.

Based on the reconstructed evidence, household organization can be summarized by zones of activity. Inside the house, two main zones are apparent: the northern portion of the house which was devoted to lithic production, and the southern half of the house which served for communal gathering and sleeping. Outside the house, five zones of activity are identifiable, including 1) a food preparation area, 2) a food storage area (*mahi* pits), 3) a formal gathering/eating area (pavement), 4) a specialized food storage zone (L-curbstones), and 5) a general activity area (terrace).

Settlement Context

As is typical of most households reported in the protohistoric period, the Structure A *fare* was situated within a cluster of several household units (fig.4.1). At the top of the ridge is the medium sized *fare pote'e* (ScMo 170), which based on ethnohistoric accounts of house size and surface features, can be interpreted as a chiefly household (Green and Green 1967:173) and, specifically, one associated with lesser chiefs such as *to'ofa* or perhaps

ra'atira (Orliac 1982:285). On the upper terrace of ScMo 170, adjacent to Structure A, are two other rectangular curbstone alignments. On the lower ridge are an empty terrace and two other unidentified structures.

The ability to interpret settlement patterning at the site cluster level is hindered by the fact that excavation was performed on Structure A only. Although the structures of ScMo 171 cannot empirically be proven as contemporaneous, such an argument can be made on logical grounds. In particular, I suggest Structures A, B and C of ScMo 171 and the round ended house of ScMo 170 are one related complex. These houses sit in close proximity to one another and all exhibit a similar state of preservation. They are also all located on the essentially bounded landscape of the upper ridge. The ridge is defined by declining slopes to either side, a steep incline above ScMo 170 and the fanning out of the slope to a wider, flat plain just below Structure C. The structures north of Structure C are less likely contemporaneous with the cluster as they sit away from the naturally bounded area of the ridge and show a greater degree of disturbance.

Table 6.1 Surface Features and Dimensions of Structures at ScMo 170 and ScMo 171

	Dimensions (m)	House Area (m$^{2)}$)	Terrace Area (m$^{2)}$)	Associated Surface Features
ScMo 170				
fare pote'e	5 x 14	70	900	Habitation terrace, bounded across ridge. Large pavement with uprights.
ScMo 171				
Structure A	4.5 x 6.5	29.25	208	Habitation terrace, bounded by terrace walls to south and east and a row of curbstones define the north edge of the living flat. Small pavement and large stone seat in food preparation area
Structure B	4 x 7	28	75	Habitation terrace marks living flat to east; terrace situated on long side of house. No pavement or other features.
Structure C	4 x 5	20	?	No terrace marked. No surface features.

Several patterns are notable in the size and placement of structures on the upper terrace. While there is a substantial difference in house size/area between the *fare pote'e* of ScMo

170 and all *fare haupape* of ScMo 171, the dimension/area of the *fare haupape* houses varies little (table 6.1). Among these latter houses, distinguishing criteria are the size of the terrace associated with the house, the extent to which the terrace area is clearly demarcated, and the number of associated surface features. The *fare pote'e* at the top of the slope contains the largest terrace and the largest number of surface stone markers, seen in the presence of a pavement, terrace walls, and stone uprights. The latter are columnar basalt stones set vertically into the ground which represented backrests or genealogical markers for those of rank (Eddowes 1991:54). The *fare haupape* are then situated along the ridge in diminishing order of house size, terrace area, and terrace elaboration. It appears that households within the cluster were hierarchically arranged in terms of topographic locale as well as by amount of terrace area, visual terrace boundaries, and elaboration of structures on the habitation terrace.

At least some of the gardens associated with the household cluster are located along the eastern slope of the ridge and are marked by numerous stone terraces ranging between 1 and 5 m wide. Other such terraces in the vicinity may also have been used by the household. Some of the agricultural terraces associated with the site may have been previously· established and in use prior to site occupation but these were certainly utilized and integrated into the household economy of ScMo 171.

Associating a *marae* with the cluster is somewhat more difficult. Though there are a number of *marae* in the area, their associations seem equivocal. The two closest *marae* are ScMo 159 and ScMo 128. ScMo 128 is the closest of the two but it is located on a spatially discrete ridge, and whether proximity alone is sufficient to correlate use-rights seems tenuous. This *marae* is a large structure with coral facings, a feature associated with *marae* of the elite. The ScMo 159 *marae* is an annexed form of a simple *marae.* However, it has been associated with agricultural terraces that date to the 13th and 15th centuries, drawing the age of the *marae* into question (Lepofsky 1994:161).

Household Interpretation

Reconstruction of the Structure A residence indicates a permanent, late, single occupation household. A large terrace with clearly demarcated boundaries establishes the residential context, and defines the direct living area associated with the house. Distribution analysis of portable artefacts and features clearly demonstrates the spatial separation of household remains into zones of activity. The material remains from the site indicate that lithic production and agricultural production/storage were the primary economic activities.

Based on the material remains, design of space, and settlement within the household cluster, ScMo 171 appears to be part of a residential complex of some social rank. The association of the round ended house in the cluster immediately marks the group as chiefly. But, of particular interest is that numerous features within Structure A itself carry indicators of social status.

First, in terms of cluster settlement, Structure A sits highest on the ridge after the *fare pote'e* and it is the largest *fare haupape* both in terms of house size and terrace area. It maintains the most clearly demarcated terrace boundaries and surface terrace elaboration. Such features are likely critical to the interpretation of households and their associated social group. If this is true, the residences within the ScMo 171 cluster were hierarchically arranged to reflect social differentiation among the kin group. In such a hierarchical arrangement of residences, Structure A would appear to be the highest ranking of the *fare haupape*. This implies not only that differential social groupings were operative within the household cluster, but that *fare haupape* residences reflect such differences. Thus, the late prehistoric *fare haupape* residence should not be expected to be uniform in either social or material expression.

The material remains associated with Structure A support an interpretation that it was a household of some rank. There is evidence of abundant craft production, substantial agricultural production and storage, and a complex household design based on zones of activity and reflecting principles of social stratification.

The emphasis on food storage or surplus at Structure A is most likely linked to the presence of the chiefly house in the cluster. A primary right of both major and minor chiefs in the protohistoric period was the collection of foods and goods. This accumulation and control of wealth acted to both ceremonially and practically assert legitimacy within the lineage (Newbury 1967:9). Although, we have no good empirical or anecdotal basis upon which to estimate the average number of storage pits per household, I suspect that the number of *mahi* pits found here is high. In Green et al.'s (1967) excavations of four *fare haupape*, only one *mahi* pit was located. As these houses were specialized in function, and not residential, this is may be a skewed measure. However, in excavations of the largest community houses in the valley the largest number of pits directly associated with any house is five (Green and Green 1967:168). Davidson rightly questions the small number of pits for these large structures and suggests that "probably the inhabitants...drew on resources stored elsewhere" (1967:138). The storage of *mahi* at Structure A likely represents part of the economic larder of a ranking household cluster.

The organization of features within the household also shows spatial arrangements historically noted as applicable to households of rank. For example, the isolated *mahi* pits away from the main food storage zone suggests the presence of segregated food storage within the household. Likewise the presence of the dual earth ovens, dual house entrances and the spatial separation of numerous activities correspond with historically recorded features (see Chapter 3) linked to differential gender, age or status groups within the household.

The Residential Fare Haupape

Archaeological data from ScMo 171 confirms the basic set of physical correlates set forth in the ethnohistoric model. This includes a primary living structure, food preparation area with ovens and hearths, a pavement, post holes (of which some probably relate to *fata* poles and perhaps *ti'i)* and the household's close association with *marae*. Although garden terraces are closely associated with the

ScMo 171 residence, Lepofsky (1994:212) has demonstrated this is not a common pattern throughout the 'Opunohu.

Archaeological examination of the ordinary household considerably augments this ethnohistoric picture. Little information is historically available on the role of households in craft or agricultural production. Lithic activities and food storage remains at ScMo 171 initiate a data base on the economic role and activities associated with the *fare haupape* residence. Whether a similar kind and range of activity are present at other *fare haupape* residences is an important issue for future excavations. This will help address the question of whether *mahi* storage at ScMo 171 is related to the elites control of surplus or represents a typical range of household production. Archaeological data on the spatial arrangement of household artefacts and features also is more complex than that indicated in the ethnohistoric record for *fare haupape* households. Structural and spatial differentiation are seen in the segregation of "special" *mahi* pits, a distinct lithic working locale inside the house, the separation of food storage from other areas, and the other identified zones of activity around the household.

Archaeological examination of the *fare haupape* residence indicates a range of material variation not represented in the ethnohistoric literature about this house type. Attention to chiefly households and coverage of the more normative aspects of ordinary households has resulted in the perception that *fare haupape* were uniformly associated with the commoner social class of *Maohi* society. Settlement surveys have also inadvertently acted to compound the normative aspects of household form. Surveys have been constrained by factors such as accessibility and visibility in the often dense forested environment, resulting in the under-representation of low-lying or temporary structures (Green and Descantes 1989:7). Lepofsky notes in her resurvey of the Tupauruuru that attention to mundane, and non-aggregated structures by Green et al. (1967) was, at times, sporadic (Lepofsky 1994:144). Additionally, the

existence of many empty terraces throughout the windward valleys are likely the remnants of house sites which were less permanent or less well-preserved (Lepofsky 1994:213). Only the subsurface testing of such terraces for the presence of midden, features, structural remains and artefacts will confirm the function of these terraces (Descantes 1990) and illuminate the kind and style of housing once associated with them.

The combined result of these biases has been to implicitly confirm the ethnohistoric characterization of the *fare haupape* household as non-variable and static. This study on the material *fare haupape* only begins to document the range of variation extant in the material form of this residential type. Continued archaeological excavation is needed to find and document the range of material variation within houses, to specify their causes and understand how these spaces were used by various activity and kin groups.

Social Implications of the Fare Haupape Household

Archaeological evidence from ScMo 171 establishes two main conclusions concerning the late prehistoric *fare haupape* residence: 1) that *fare haupape* residences cannot be uniformly associated with the lowest social class and, 2) that a continuum or range of social groups are evident in *fare haupape* residences. These are significant conclusions given the typical gloss of this house type as of low social rank. The first conclusion is supported by several lines of evidence. For example, extent of agricultural storage or surplus at the site, the segregation of certain features historically recorded status markers, such as dual doorways, ovens and *mahi* pits, and the house design marked by numerous zones of activity all indicate the household may have associated with a social group of some social rank.

The second conclusion, that *fare haupape* households have a range of hierarchical associations, follows from the spatial and structural analysis of the settlement cluster. Surface structural associations, terrace size and the extent to

which terrace boundaries are marked vary according to topographic placement along the ridge. This settlement patterning correlates with Wilson's statement (Chapter 3) describing the arrangement of households clusters around a principle residence. Further archaeological excavation will determine if these households also differed in number and kind of subsurface features. Continued excavation of this residential type will reveal, I suspect, that late prehistoric *fare haupape* were far from uniform in social or material associations and that they will exhibit hierarchical associations that extend from *manahune* to *ra'atira,* and in specialized contexts, *ari'i.*

In addition to sociological associations, ethnohistoric reconstruction of the household (Chapter three) documented that house design and arranged space was organized by cultural predicates of appropriate relations between individuals. Archaeological correlates based on this literature expect that social relations within the household might be seen through the differentiation of space and dual representation of features, especially those related to food and eating. Further, if it is true that lesser status households did not require or participate in extensive ritual segregation, these households should show less rigidity in the overall setup and use of space. While necessarily speculative, given the lack of comparative household data, archaeological features at ScMo 171 contain indicators that suggest defining such relations within the material record is attainable. The presence of the two ovens, if they are in fact contemporaneous, the presence of the segregated *mahi* pits, and the dual house entrances may be features linked to variant age or gender groups within the household.

The Household as a Social Entity

The view of the household as a social entity means that in addition to its functional role, the structure of settlement space acted to both reflect and convey certain social and ideological forces in late precontact *Maohi* society. Cosmological concepts of *ra'a* and *no'a* are ethnohistorically documented to have been incorporated

into household design. Archaeological manifestations of these concepts may be interpreted in the topographic arrangement of residences at ScMo 170/171. For example, the higher the status the household, the more restricted and inaccessible they become. This restriction is signified by topographic arrangement along the ridge, terrace boundaries, and surface structure elaboration. The internal segregation of certain activities or features within the household may also reflect principles of *tapu*. In this interpretation, the material form of the residence (internally and externally) acted to "remind" people of appropriate routes of behavior. Thus, settlement space was organized not only to exhibit essential social hierarchies, but to reinforce them. The increased restriction of chiefly households, manifest in topography, fencing, elaborate *ti'i*, stone uprights, etc., served to restrict peoples' behavior and access. This restriction was justified through cosmological concepts of divinity, but reified and enforced through the daily, ongoing behavior. The form and organization of space of the household was critical to guiding daily interaction. For example, Wilson (1799:184) observed "Otoo [Tu] built a house in every district where servants reside and he occasionally visits. They represent his soverignty, and none dare pass them without stripping, the same as to himself". Thus, even at the secondary residences of chiefs, lesser status individuals were beholden to observe deferential ritual behavior, such as stripping to the waist upon passing. Regardless of chiefly presence, the household represented and enforced chiefly power and prerogative. Lesser status households were less internally and externally segregated, emphasizing their lesser *ra'a* or divine association, and thus justifying social and economic inequality.

The material construction of the household can be seen as overtly political in this sense, in that its placement and form was used to reinforce and justify the prerogatives of the elite. For instance, the placement of secondary households throughout districts served to ensure and justify chiefly sanctity, but as importantly, their right to tribute. Similarly, the association of chiefly households with other elite

structures (Descantes 1990) acted to reinforce the elites' divine right to social and economic advantages. Last, the form of the chiefly household itself required that individuals maintain social and spatial distance.

The Household and the Changing Maohi Social Context

Based on the settlement history of the 'Opunohu, the late prehistoric and protohistoric periods were marked by increasing social complexity and stratification. Ethnohistoric documentation also demonstrates increasing chiefly competition and efforts at aggrandizement in the late precontact period (Newbury 1980). Religious and political structures were used to towards chiefly efforts at political hegemony. Green and Green (1967:172) note, for example, that the appearance of extremely large *fare pote'e* in the ethnohistoric record of Tahiti are likely "correlated with the rather late struggle between leading chiefs for political ascendancy over large portions of the island". Similarly, with the spread of the 'Oro cult and its growing association with certain high ranking kinship lines of Tahiti and Mo'orea, features attributable to this sect were incorporated into *marae* architecture (Eddowes 1991)..

In the 'Opunohu, intensification in the late period is also noted in structure morphology. In the Tupauruuru, there are increased numbers and types of structures such as *fare pote'e* and archery platforms, and "late" religious structures that show increasingly elite associations (Eddowes 1991:157). Lepofsky (1994:211) suggests that differential pressures on land use or social restrictions on land tenure in the late period also become increasingly apparent. Certainly by the late 18th century nearly all households would have been part of larger polities or districts. We lack residential excavations and associated temporal data on the household, however we might surmise that household arrangements also become increasingly complex through time. One aspect of growing household complexity might be seen in the increase in hierarchical associations between sociological groups as well as the increased use of complex structural design by non-chiefly households.

The changing effect to household structure (materially and socially) in the historic period, and the question of changing land use is a worthy area of study too broad for this context. Several of the more apparent changes affecting household arrangement as result of European influence are noted however. Direct effects to the household are evident in missionary incentives to restructure the living habits of *Maohi* to conform with Christian moral principles and standards of hygiene (see Ellis 1967(II):72-90). Indirectly, population decline undoubtedly had an effect on household membership, perhaps resulting in the decline of household size and the loss or diminishment of clusters. The decentralization of the class and religious structure was a rapid effect of European contact, expecially given the loss of numerous *ari'i* and ritual specialists (Lepofsky 1994; Newbury 1980). A positive spin-off of this decentralization has been suggested for *manahune*, who were perhaps more able at this time to improve their wealth and status (Newbury 1980; Oliver 1974:1171-1350). This was because ritual knowledge and restrictions could no longer be sustained and the ability to enforce or uphold social control over class distinctions and land tenure was eroded.

Whether such changes can be archaeologically determined remains to be addressed. One difficulty will be the quick rate at which interior valleys were abandoned for settlement on the coast. This latter context is now so heavily disturbed by modern developments that discerning any early historic patterns there may be difficult.

Several researchers have proposed the existence of remnant, refuge populations in valley interiors after the turn of the 19th century (Descantes 1990, 1993; Eddowes 1991). Eddowes (1991) in particular notes the existence of late rectangular house curbstones within the precincts of *marae* and large *fare pote'e* in the interior of the Papeno'o Valley, Tahiti. This patterning is seen as representative of members of the historically recorded Mamaia cult attempting to reestablish kin-based

congregation and worship in the face of massive change to "traditional" social and ritual networks (1991:192-193). The existence of rectangular house curbstones set in earlier *fare pote'e* is also noted by Davidson (1967: 127,134) and Gerard (in Orliac 1982:262). An alternative explanation for their presence throughout the windward valleys may be the attempt of a late and straggling household to take advantage of the decentralized class-based hierarchy. Locating a household on a residence of previous status might represent an attempt to access the social prestige once associated with this house form. There is little evidence to suggest any sizable population or socio-economic activity associated with these late households, which mitigates Eddowes hypothesis of a developed attempt to return to a previous lifestyle. Instead, such settlement appears very short-lived, sporadic, and represents a final gasp of valley occupation.

Conclusion

In summation, this study provides detailed physical data on the residential *fare haupape* and establishes an excellent opportunity to address the broader issues in household spatial use and organization in the late prehistoric Society Islands. The areal excavation of the residence, the quality of features and contemporaneity of remains are critical to the examination of household settlement. While this research was set up as a case study of the ordinary archaeological residence, it is limited by the lack of a comparative material data base on households. Finding and excavating a range of households in varying settlement contexts, locales, and settlement clusters should be a primary concern for archaeologists.

Archaeological excavation of the ScMo 171 residence suggests that *fare haupape* are more materially and socially complex than hitherto considered. Ethnohistoric bias towards activities and households associated with the elite has led to the perception that *fare haupape* were uniformly associated with the lowest social class of *Maohi* society. A lack of archaeological attention to the material household

has further compounded the notion that *fare haupape* residences are simple and insignificant in their potential for contributions to prehistoric sociopolitical interpretation. An examination of the archaeological and ethnohistoric evidence suggests neither was the case.

More than morphological form, it is the associated structure, features and artefacts of the household as well as its internal organization of space that are the significant criteria for assessing the *fare haupape* residence.

Appendix A
Glossary of Tahitian Terms Used

Amehiti   The western sociopolitical district of the 'Opunohu Valley, as recorded by *Ari'i Taimai*.

Ari'i   The chiefly class of precontact *Maohi* society

Ari'i rahi   Certain prestigious chiefs, who at the time of contact, commanded authority over several districts or an entire island.

Ari'i ri'i   Chiefs, heads of certain ranking kin-congregations, usually a single district

Fare   A house

Fare haupape   A small rectangular house type

Fare pote'e   A large round ended house type

Fare ta'oto   A sleeping house

Fare tutu   A cook house

Hima'a/Umu   An earth oven

Mahi   Fermented breadfruit

Mana   Supernatural power

Manahune   The commoner class of precontact *Maohi* society

Maohi   Indigeous inhabitants of the Society Islands

Marae   Religious structures associated with ritual activity and worship

No'a   Lack of sacredness; unrestricted

Ra'a   Sacredness

Ra'atira   The middling class of precontact Maohi society, referred to as landholders

Rahui   The placement of an embargo on cerain goods, land or resources usually during specific times to garner surplus for feasting or war

Tapu   Restrictions based on sacred associations

To'ofa   Lesser *ari'i*; family members or close associates of district *ari'i*

Tupauruuru   The eastern sociopolitical district of the 'Opunohu valley, as recorded by *Ari'i Taimai*

Umu/Hima'a   An earth oven

References Cited

Adams, H.
    1947 *Tahiti: Memoirs of Ari'i Taimai.* Scholars Facsimilies and Reprints. New York.

Ashmore, W. & R. Wilk
    1988 House and Household in the Mesoamerican Past: An Introduction. In R. Wilk & W.
        Ashmore (eds.) *Household and Community in the Mesoamerican Past* pp. 1-28.
        University of New Mexico Albuquerque, New Mexico.

Bailey, D.W.
    1991 The Living House: Signifiying Continuity. In R. Samson (ed.) *The Social
        Archaeology of Houses,* pp. 19-48. Edinburgh University Press. Edinburgh.

Bawden, G.
    1982 Community Organization Reflected by the Household: A Study of Pre Columbian
        Social Dynamics. *Journal of Field Archaeology* 9:165-181.

Beaglehole, J.C. (ed.)
    1955 The Journals of Captain James Cook on His Voyages of Discovery, vol. 1. *Hakluyt
        Society Extra Series,* 34.

Beaglehole, J.C. (ed.)
    1961 The Journals of Captain James Cook on His Voyages of Discovery, vol. 2. *Hakluyt
        Society Extra Series,* 35.

Beaglehole, J.C. (ed.)
    1962 *The Endeavour Journal of Joseph Banks 1768-1771,* 2 vols. Angus and
        Robertson. Sydney.

Beaglehole, J.C. (ed.)
    1967 The Journals of Captain James Cook on His Voyages of Discovery, vol. 3. *Hakluyt
        Society Extra Series,* 36.

Bellwood, P.
    1970 Dispersal centers in East Polynesia. In R.C. Green & M. Kelly (eds.) *Studies in
        Oceanic Culture History,* pp. 93-104. vol 1. Pacific Anthropological Records, no.
        11. B.P. Bishop Museum. Honolulu.

Bellwood, P.
    1971 Varieties of ecological adaptation in the Southern Cook Islands. *Archaeology and
        Physical Anthropology in Oceania* 6:145-169.

Bellwood, P.
    1972 *A Settlement Pattern Survey, Hanatekua Valley, Hiva Oa, Marquesas Islands.*
    Pacific Anthropologica Records 17.

Bellwood, P.
    1978 *Archaeological Research in the Cook Islands.* Pacific Anthropological Records,
    no.27. B.P. Bishop Museum. Honolulu.

Bender, D.
    1967 A Refinement of the Concept of Household: FAmilies, Co-Residence and Domestic
    Functions. *American Anthropologist* 69:493-504.

Bligh, W.
    1969 *A Voyage to the South Sea, Undertaken by Command of His Majesty, for the
    Purpose of Conveying the Breadfruit Tree to the West Indies, in His Majesty's
    Ship of the Bounty, Including an Account of the Mutiny on Board the Said Ship.*
    Published by permission of the Lords Commisioners of the Admiralty. London
    1792. Australiana Facsimile Editions No.21. Libraries Board of South Australia.

Bougainville, L.A.
    1967 *A Voyage Round the World, Performed by Order of his Most Christian Majesty,
    in the Years 1766, 1767, 1768 and 1769, by Lewis de Bougainville.* Bibliotheca
    Australiana #12. Frank Cass and Company Ltd. London.

Bourdieu, P.
    1973 The Berber House. In *Rules and Meanings: The Anthorpology of Everyday
    Knowledge,* M. Douglas (ed.), pp.98-110. Harmondsworth. Penguin Books

Chang, K.C.
    1972 *Settlement Patterns in Archaeology.* Addison-Wesley Module in Anthropology 24.
    Addison-Wesley Publishing Company. New York.

Chapman, J.
    1990 Social Inequality on Bulgarian Tells and the Varna Problem. In R. Samson (ed.) *The
    Social Archaeology of Houses,* pp.49-92. Edinburgh University Press. Edinburgh.

Clarke, D.L.
    1977 Spatial Information in Archaeology. In *Spatial Archaeology* , Clarke, D.L. (ed.).
    Academic Press. New York.

Corney, B.G. (ed.)
    1913 *The Quest and Occupation of Tahiti by Emissaries of Spain During the Years
    1772-1776,* vol. 1. Cambridge University Press. London

Corney, B.G. (ed.)
    1915 *The Quest and Occupation of Tahiti by Emissaries of Spain During the Years 1772-1776*, vol. 2. Cambridge University Press. London

Corney, B.G. (ed.)
    1919 *The Quest and Occupation of Tahiti by Emissaries of Spain During the Years 1772-1776*, vol. 3. Cambridge University Press. London

Cordy, R.
    1981 *A Study of Prehistoric Social Change: The Development of Complex societies in the Hawaiian Islands*. Academic Press. New York.

Crabtree, D.E.
    1982 *An Introduction to Flintknapping* (2nd edition). Occasional Papers of the Idaho Museum of National History, No. 28. Idaho.

Cunningham, C.
    1964 Order in the Atoni House. *Bijdragen to de taal-land-en Volkenkunde*, vol. 120:34-68.

Davidson, J.M.
    1967 Two Round-ended Houses Sites in the Eastern Portion of the 'Opunohu Valley. In *Archaeology on the Island of Moorea, French Polynesia*, by Green, R., Green K., Rappaport A., Rappaport R., and J. Davidson Anthropological Papers of the American Museum of Natural History 51(2):119-140

Dening, G.
    1966 Ethnohistory in Polynesia. *Journal of Pacific History* 1:23-42.

Dening, G.
    1986 Possessing Tahiti. *Archaeology in Oceania* 21:103-118.

Descantes, C.
    1990 *Symbolic Stone Structures: Protohistoric and Early Historic Spatial Patterns for the 'Opunohu Valley, Mo'orea French Polynesia*. Unpublished MA thesis. University of Auckland, New Zealand.

Descantes, C.
    1993 Simple Marae of the 'Opunohu Valley Mo'orea, Society Islands, French Polynesia. *Journal of the Polynesian Society* 102:187-216.

Donley, L.
    1982 House Power: Swahili Space and Symbolic Markers. In *Symbolic and Structural Archaeology*, I. Hodder (ed.), pp. 63-73. Cambridge University Press. Cambridge.

Donley, L.
    1987 Life in the Swahili Town House Reveals the Symbolic Meaning of Spaces and Artefact Assemblages. *The African Archaeological Review* 5:181-192.

Douglas, M.
    1982 Symbolic Orders in the Use of Domestic Space. In *Man, Settlement and Urbanism*, Ucko, R. Tringham and G.W. Dimbleby (eds.), pp.63-73. Duckworth. London.

Duff, R.
    1959 Neolithic Adzes of Eastern Polynesia. In J.D.Freeman and W.R. Geddes (eds.) *Anthropology of the South Seas*, pp.121-147. New Plymouth. New Zealand.

Eddowes, M.
    1991 *Ethnohistorical Perspectives on the Marae of the Society Islands: The Sociology of Use.* Unpublished MA theses. University of Auckland, New Zealand.

Ellis, W.
    1967 *Polynesian Researches*, 2 vols. Fischer, Son and Jackson.

Emory, K. P.
    1933 *Stone Remains in the Society Islands*. Bernice P. Bishop Museum Bulletin 119.

Emory, K. P.
    1943 Polynesian Stone Remains. *Papers of the Peabody Museum American Archaeology and Ethnology* 20:9-21.

Emory, K.P.
    1947 *Tuomotuan Religious Structures and Ceremonies.* Bernice P. Biship Museum Bulletin 191. Honoulu.

Emory, K.P. and Sinoto Y.H.
    1964 Eastern Polynesian Burials at Maupiti. *Journal of the Polynesian Society* 81:143-160.

Emory, K.P. and Sinoto Y.H.
    1965 *Preliminary Report on the Archaeological Investigations in Polynesia.* Report to the NSF. Bernice P. Bishop Museum. Honolulu.

Fairclough, G.
    1992 Meaningful Constructions - Spatial and Functional Analysis of Medieval Buildings. *Antiquity* 66:348-366.

Firth, R.
    1936 *We, the Tikopia.* George Allen and Unwin. London.

Flannery, K.
    1976 *Early Mesoamerican Village.* Academic Press. New York.

Flannery, K. and M. Winter
    1976 Analysing Household Activities. In *Early Mesoamerican Village*, Flannery, K.
        (ed.), pp. 34-47. Academic Press. New York.

Forster, J.R.
    1968 *A Voyage Round the World 1754-1794.* Akademie-Verlag (reprint). Berlin.

Forster, J.R.
    1778 *Observations Made During a Voyage Around the World in Physical Geography,*
        Natural History, and Ethic Philosophy. G.Robinson. London.

Foster, S.
    1989 Analysis of Spatial Patterns in Buildings (Access Analysis) as an Insight into Social
        Structure: Examples from the Scottish Atlantic Iron Age. *Antiquity* 63:40-50.

Garanger, J.
    1964 Recherches archaeologiques dans le district Tautira (Tahiti, Polynesie Francaise).
        Journal de la Societe des Oceanistes, XX:5-21.

Garanger, J.
    1980 Prospections archaeologiques de l'ilot Fenuaino et des vallees Airura et Vaiote a
        Tahiti. *Journal de la Societe des Oceanistes*, XXXVI (66-67):77-104.

Gerard, B.
    1974 *Contribution a l'etude des structures lithiques a caractere religieux aux iles de la*
        Societe. Ethnologie, Archeologie, Memoire de Stage de l'ORSTOM, Papeete,
        Tahiti.

Glassie, H.
    1975 *Folk Housing in Middle Virginia: A Structural Analysis of Historic Artefacts.*
        University of Tennessee Press.

Godson, C., J. Allen, W. Ambrose, D. Anson J. Golson, R. Green, P. Kirch, I. Lilley, J. Spector
and M. Sprigges
    1989 Lapita sites of the Bismarck Archipelago. *Antiquity* 63:561-586.

Goldman, I.
    1970 *Ancient Polynesian Society.* University of Chicago Press. Chicago.

Green, R.C.
    1961 Moorean Archaeology: A Preliminary Report. *Man* 61:169-173.

Green, R.C.
  1967a Survey and Excavation at Selected Religious Structures in the Eastern Portion of the 'Opunohu Valley, In *Archeaology of Mo'orea, French Polynesia*, by R.C. Green, K. Green, R.A. Rappaport, A. Rappaport, and J. Davidson Anthropological Papers of the Museum of Natural History 51:141-163.

Green, R.C.
  1967b Summary and Conclusions. In *Archeaology of Mo'orea, French Polynesia*, by R.C. Green, K. Green, R.A. Rappaport, A. Rappaport, and J. Davidson Anthropological Papers of the Museum of Natural History 51:216-227.

Green, R.C.
  1984 Settlement Pattern Studies in Oceania: An introduction to a symposium. *New Zealand Journal of Archaeology* 6:59-69.

Green, R.C.
  1986 Some Basic Components of the Ancestral Polynesian Settlement System: Building blocks for more complex Polynesian societies. In P.V. Kirch (ed.) *Island Societies: Archaeological Approaches to Evolution and Transformation,* pp.50-55. Cambridge University Press. Cambridge.

Green, R.C. and C. Descantes
  1989 *Site records of the 'Opunohu Valley, Mo'orea.* Green Foundation for Polynesian Research, University of Auckland.

Green, R.C. and K. Green
  1967 Interpretation of Round-ended House Sites of the 'Opunohu Valley Based on Excavation of an Example in the Western Portion of the Valley. In *Archaeology on the Island of Moorea, French Polynesia*, by Green, R., Green K., Rappaport A., Rappaport R., and J. Davidson Anthropological Papers of the American Museum of Natural History 51(2):164-176.

Green, R.C. and K. Green
  1968 Religious Structures (*Marae*) of the Windward Society Islands: The Significance of Certain Historical Records. *The New Zealand Journal of History* 2:68-89.

Green, R., Green K., Rappaport A., Rappaport R., and J. Davidson
  1967 *Archaeology on the Island of Moorea, French Polynesia.* Anthropological Papers of the American Museum of Natural History 51(2).

Gunson, N.
  1963 A Note on the Difficulties of Ethnohistorical Writing, with Special Reference to Tahiti. *Journal of the Polynesian Society* 72:415-419.

Hammel, E. and P. Laslett
     1974 Comparing Household Structure over Time and between Cultures. *Comparative Studies in Society and History* 16:73-109.

Handy, E.S.C.
     1930 *History and Culture in the Society Islands*. Occassional Papers 79, Honolulu.

Handy, E.S.C.
     1932 *Houses, Boats and Fishing in the Society Islands*. Bernice P. Bishop Museum Bulletin 90.

Hawkesworth, J. (ed.)
     1773 *An Account of the Voyages Undertaken by the Order of his Present Majesty for Making Discoveries in the Southern Hemisphere and Successively Performed by Commodore Byron, Captain Wallis, Captain Carteret and Captain Cook, in the Dolphin, the Swallow, and the Endeavour; Drawn up from the Journals Which Were Kept by Several Commanders and from the Papers of Joseph Banks, Esq.*, 3vols. W. Strathan and T. Cadell, London.

Henry, T.
     1928 *Ancient Tahiti*. Bernice P. Bishop Museum, Honolulu.

Hillier, G. and J. Hanson
     1984 *The Logic of Space*. Cambridge University Press. Cambridge.

Hodder, I.
     1982 *Symbols in Action*. Cambridge University Press. Cambridge.

Hodder, I.
     1985 Post-processual archaeology. In *Advances in Archaeological Method and Theory*, M.B. Schiffer (ed.), vol. 8, pp. 1-26. Academic Press. New York.

Hodder, I.
     1986 *Reading the Past*. Cambridge University Press. Cambridge.

Hodder, I
     1987 The Contextual Analysis of Symbolic Meanings. In *The Archaeology of Contextual Meanings*, Ian Hodder (ed.), pp 1-10. Cambridge University Press. Cambridge.

Irwin, G.
    1985 *Land, Pa and Polity: A Study Based on the Maori Fortifications of Pouto.* New Zealand Archaeological Assocation Monograph No. 15.

Jennings, J. and R. Holmer
    1980 Archaeological Excavations in Western Samoa. *Pacific Anthropological Records* 32. Bernice P. Bishop Museum.

Jennings, J., R. Holmer, & G. Jackmond
    1982 Samoan Village Patterns: Four Examples. *Journal of Polynesian Society* 91(1):81-102.

Joppien, R. and B.Smith
    1988 *The Art of Captain Cooks Voyages*, 3 vols. Yale University Press. New Haven.

Kellum-Ottino, M.
    1971 *Archaologie d'une vallee des Iles Marquises: Evolution des structures de l'habitat a Hane, Ua Huka.* Publications de la societe des Oceanistes, no. 26. Musee de l'Honne. Paris.

Kirch, P.V.
    1985 *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory.* University of Hawaii Press. Honolulu.

Kirch, P.V.
    1989 Prehistory, pp.13-46. In A. Howard & R. Borofsky (eds.) *Developments in Polynesian Ethnology.* Universtiy of Hawaii Press. Honolulu.

Kirch P.V. and M.D. Sahlins
    1992 *Anahulu: The Anthropology of History in the Kingdom of Hawaii*, 2 vols. Chicago University Press. Chicago.

Kirch, P.V. and D. Yen
    1982 *Tikopia: the Prehistory and Ecology of a Polynesian Outlier.* Bernice P. Bishop Museum Bulletin 238.

Lafforgue, A. and J. Robin
    1989 *Etudes hydrologiques sur les iles de Raiatea et Tahaa de 1980 a 1989.* Centre ORSTOM de Tahiti. Papeete.

Leach, H.M. and D.C. Witter
    1987 Tataga-matau "rediscovered". *New Zealand Journal of Archaeology* 9:33-54.

Lepofsky, D.S.
   1994 *Prehistoric Agricultural Intensification in the Society Islands, French Polynesia.*
      Unpublished Ph.D. dissertation. University of California at Berkeley.

Lepofsky, D.S., H.C. Harries and M. Kellum
   1992 Early Coconuts on Mo'orea Island, French Polynesia. *Journal of the Polynesian
      Society* 101(3):299-307

Lepofsky, D., P.V. Kirch and K. Lertzman
   n.d.   Stratigraphic and Paleobotanical Evidence for Prehistoric Human-Induced
      Environmental Disturbance on Mo'orea Island, French Polynesia. Submitted to
      Pacific Science.

McCoy, P.
   1976 *Easter Island Settlement Patterns in the late Prehistoric and Early Protohistoric
      Periods.* International Fund for Monuments. Easter Island Committee Bulletin 5.
      New York.

Moerenhout, J-A
   1837 *Voyages aux Iles du Grand Ocean, Contenant des Documents Nouveaux sur al
      Geographie Physique et Politique, la Langue, la Litterature, la Religion, Les
      Moeurs, les Usages et les Coutumes de Leurs Habitants; et des Considertions
      Generales sur Leur Commerce, Leur Histoire et Leur Gouvernement, Duspuis les
      Temps les Plus Recules Jusqua nos Jours.* A. Bertrand. Paris.

Moore, H.
   1986 *Space, Text and Gender.* Cambridge University Press. Cambridge.

Moore, H.
   1988 *Feminism and Anthropology.* Minneapolis. University of Minnesota.

Morrison, J.
   1935 *The Journal of James Morrison, Boatswain's Mate of the Bounty, Describing the
      Mutiny and Subsequent Misfortunes of the Mutineers, Together with an Account
      of the Island of Tahiti,* edited by O. Rutter. Golden Cockeral Press

Newbury, C.
   1967 Aspects of Cultural Change in French Polynesia: The Decline of Ari'i. *Journal of
      Polynesian Society* 76:7-26.

Newbury, C.
    1980 *Tahiti Nui: Change and Survival in French Polynesia 1767-1945*. University of
        Hawaii Press, Honolulu.

Oliver, D.
    1974 *Ancient Tahitian Society*, 3 vol. University Press of Hawaii, Honolulu.

Orliac, C.
    1982 *Materiaux pour l'etuide des habitations Protohistoriques a Tahiti (Polynesie
        Francaise)*. Unpublished Ph.D. dissertation, Universite de Paris.

Orliac, C. and M. Orliac
    1980 Les Structures de Combustion et Leur Interpretation Acheologique: Quelques
        Exemples en Polynesie. *Journal de al Societe des Oceanistes*, XXXVI, 66-67.

Orliac, C. and M. Orliac
    1982 Les Structures de combustion reflects des activtes et des structures sociales en
        Polynesie. *Bulletin de la Societe de la Etudies Oceanistes* XVIII no. 220/9:1113-
        1122.

Parkinson, S.
    1773 *A Journal of a Voyage to the South Seas in His Majesty's Ship The Endeavour,
        Faithfully Transcribed from the Papers of the Late Sydney Parkinson,
        Draughtsman to Sir Joseph Banks, Esq. on this Late Expedition with Dr.
        Solander, Round the World*. Stanfield Parkinson. London.

Prickett, N.
    1979 Prehistoric occupation in the Moikau Valley, Palliser Bay. In Leach, B.F. and
H.M.
        (eds), Prehistoric Man in Palliser Bay. *National Museum Bulletin* No.21:29-47.

Prickett, N.
    1982 An Archaeologist's Guide to the Maori dwelling. *New Zealand Journal of
        Archaeology* 4:111-148.
Rallu, J-L
    1989 Position de these. *Journal de la Societe des Oceanistes* 88-89:129-132.

Rappaport, R. and A. Rappaport
    1967 Description of Test Excavation in Coastal Sites. In *Archaeology on the Island of
        Moorea, French Polynesia*, by Green, R., Green K., Rappaport A., Rappaport R.,
        and J. Davidson Anthropological Papers of the American Museum of Natural
        History 51(2):177-183.

Rappaport, R., A. Rappaport and R.C. Green
    1967 Descriptive and Comparative Analysis of Portable Artefacts Recovered from
        Coastal Excavations. In *Archaeology on the Island of Moorea, French Polynesia*,
        by Green, R., Green K., Rappaport A., Rappaport R., and J. Davidson
        Anthropological Papers of the American Museum of Natural History 51(2):184-200

Robertson, G.
    1955 *An Account of the Discovery of Tahiti*. The London Folio Society. London.

Sahlins, M.
    1958 *Social Stratification in Polynesia*. University of Washington Press. Seattle.

Sahlins, M.
    1985 *Islands of History*. University of Chicago Press. Chicago

Samson, R.
    1991 *The Social Archaeology of Houses*. Edinburgh University Press. Edinburgh.

Saunders, T.
    1990 The Feudal Construction of Space: Power and Domination in the Nucleated Village.
        In R. Samson (ed.) *The Social Archaeology of Houses*, pp.181-196. Edinburgh
        University Press. Edinburgh.

Sinoto, Y.H.
    1979 Excavations at Huahine, French Polynesia. *Pacific Studies* 3:1-40.

Sinoto, Y.H.
    1988 A Waterlogged Site on Huahine Island, French Polynesia. In *Wet Site Archaeology*,
        B. Purdy (ed.), pp. 113-130. The Telford Press. New Jersey.

Sinoto, Y.H. & Komori
    1988 *Settlement Pattern of Mata'ire'a Hill Maeva, Huahine, Society Islands, French
        Polynesia*. Report of the Bernice P. Bishop Museum. Honolulu.

Sinoto, Y.H. & P.C. McCoy
    1975 Preliminary Excavations of an Early Habitation Site on Huahine, Society Islnands.
        Journal de ls Societe des Oceanistes 47:143-186.

Sheppard, P. and R. Green
    1991 Spatial Analysis of te Nenumbo (SE-RF-2) Lapita Site, Solomon Islands.
        Archaeology of Oceania 26:89-101.

Spriggs, M. and A. Anderson
    1993 Late Colonization of East Polynesia. *Antiquity* 67:200-217.

Stanish, C.
    1989 Household Archaeology: Testing Models of Zonal Complementarity in the South Central Andes. *American Anthropologist* 91(1):7-24.

Stuiver, M. and B. Becker
    1993 High Precision Decadel Calibration of the Radiocarbon Time Scale, A.D. 1950-6000 B.C. *Radiocarbon* 35:35-65.

Stuiver, M. and R.J. Reimer
    1993 Extended 14C Data Base and Revised Calib 3.0 14C Age Calibration Program. *Radiocarbon* 35:215-230

Suggs, R.C.
    1961 *Archaeology of Nuku Hiva, Marquesas Islands, French Polynesia.* Anthropological papers of the American Museum of Natural History, vol. 49 (1).

Sutton, D.G.
    1990a *The Archaeology of the Kainga: A study of precontact Maori Undefended Settlements at Pouerua, Northland, New Zealand.* Auckland University Press. New Zealand.

Sutton, D.G.
    1990b Organization and Ontology: Origins of the Northern Maori chiefdom, New Zealand. *Man* (n.s.) 25(4):667-692.

Trigger, B.
    1967 Settlement Archaeology - Its Goals and Promise. *American Antiquity* 32(2):149-160.

Trigger, B.
    1989 *A History of Archaeological Thought.* Cambridge University Press. Cambridge.

Tringham, R.
    1991 Households with Faces: the Challenge of Gender in Prehistoric Architectural Remains. *In Engendering Archaeology: Women and preshistory*, M. Conkey and J. Gero (eds.), pp. 93-131. Cambridge University Press. Cambridge.

Verin, P.
    1962a Documents sur l'iles de Me'etia. *Bulletin Soc. Etudes Oceaniennes* 139:59-80.

Verin, P.
    1962b Prospection Archaeologique Preliminaire de Tetiara. *Bulletin Soc. Etudes Oceaniennes* 140:103-124.

Verin, P.
  1962c Releve Archeologique de l'Ile de Mai'ao. *Bulletin Soc. Etudes Oceaniennes* 138:35-45.

Verin, P.
  1964 Notes sur les sites du plateau de Mahina, domain de Non-Ahu, Tahiti. *Journal de la Societie des Oceanistes* 20:22-27.

Wallin, P.
  1993 Ceremonial Stone Structures. The Archaeology and Ethnohistory of the Marae complex in the Society Islands, French Polynesia. *Aun* 18, Societas Archaeologica Upsaliensis. Uppsala.

Weisler, M.
  1990 A Technological, Petrographic and Geochemical Analysis of the Kapohaku Adze Quarry, Lana'i, Hawaiian Islands. *New Zealand Journal of Archaeology* 12:29-50.

Weisler, M. and P.V. Kirch
  1985 The Structure of Settlement Space at Kawela, Molokai, Hawai'ian Islands. *New Zealand Journal of Archaeology* 7:129-158.

Willey, G.R.
  1953 Prehistoric Settlement Patterns in the Viru Valley, Peru. *Bureau of American Ethnology Bulletin* No. 155. Washington.

Wilk, R. and W. Ashmore
  1988 *Household and Community in the Mesoamerican Past.* University of New Mexico Press. Albuquerque, New Mexico.

Wilk and Netting
  1984 Households: Changing Forms and Functions. In *Households: Comparative and Historical Studies of the Domestic Group*, R. Netting, R. Wilk and E. Arnould (eds). , pp. 1-28. Berkeley: University of California Press.

Wilk, R. and W. Rathje
  1982 Household Archaeology. In Archaeology of the Household: Builing a Prehistory of Domestic Life, Wilk, R. and W. Rathje (eds.). *American Behavioral Scientist* 25(6):617-40.

Wilson, J.
  1799 *A Missionary Voyage to the South Pacific Ocean, Performed in the Years 1796, 1797, 1798, in the Ship Duff, Commanded by Captain James Wilson Under the Direction of the Missionary Society.* J. Cundee. London.

Yanagisako, S.
    1979 Family and Household: The Analysis of Domestic Groups. *Annual Reviews of Anthropology* 8:161-205.

Yates, T.
    1989 Habitus and Social Space: Some Suggestions about Meaning in the Saami (Lapp) Tent ca. 1700-1900. In *The Meaning of Things*, I. Hodder (ed.), pp. 249-262. Unwin Hyman Ltd. London.