Heterarchy and the Analysis of Complex Societies

Article *in* Archeological Papers of the American Anthropological Association · January 1995

DOI: 10.1525/ap3a.1995.6.1.1

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ARCHEOLOGICAL PAPERS
OF THE AMERICAN ANTHROPOLOGICAL ASSOCIATION

William W. Fitzhugh, General Series Editor

Number 6

HETERARCHY AND THE ANALYSIS OF COMPLEX SOCIETIES

1995

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Heterarchy and the Analysis of Complex Societies

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and Janet E. Levy, Editors**

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About the Editors . . .

Robert M. Ehrenreich was born in Schenectady, New York. He received an A.B. from Harvard University and a D.Phil. from Oxford University. As a senior staff scientist with the National Research Council of the National Academy of Sciences, he has conducted prehistoric and historic research in Britain, Ireland, Italy, Egypt, the Arctic, and the United States.

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The cover illustration, by Thomas G. Lilly Jr., is entitled "Social Metaphors." The autocrat judges from atop a crumbling hierarchical structure (left); the spokesperson assimilates multiple perspectives out of a fluid hierarchical system (right).

Library of Congress Cataloging-in-Publication Data
Heterarchy and the analysis of complex societies / Robert M. Ehrenreich, Carole L. Crumley, and Janet E. Levy, editors ; contributions by Elizabeth M. Brumfiel . . . [et al.].
p. cm. -- (Archeological papers of the American Anthropological Association ; no. 6)
Includes bibliographical references.
ISBN 0-913167-73-8
1. Social structure. 2. Power (Social sciences). 3. Political anthropology. 4. Economic anthropology. I. Crumley, Carole L. II. Levy, Janet E. III. Series.
GN478.H46 1995
301--dc20 95-34851
CIP

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Preface

The concept of heterarchy was first introduced into settlement archeology by Carole L. Crumley in 1979 as an alternative to the Central Place Model. Interest in heterarchy grew so rapidly that a symposium wholly dedicated to the subject finally had to be organized for the 92nd Annual Meeting of the American Anthropological Association in November of 1993. The objective of the symposium was to initiate a dialogue about the limitations of current societal models, the need for new alternatives, and the relevance of the concept of heterarchy to the examination of early cultures. To accomplish this objective, archeologists presented case studies that discussed their dissatisfaction with other models for *complex* societies and employed heterarchy to resolve problems and further their research. The case studies covered a range of time periods and geographic regions, including prehistoric and historic societies in Asia, the Mediterranean, Northern Europe, North America, and Central America.

This volume is the proceedings of that symposium. The volume opens with Carole L. Crumley's account of her dissatisfaction with the Central Place Model during her research of Iron Age Burgundy, France, that led to the adaptation of the concept of heterarchy to archeology. Crumley's chapter also acts as an introduction to the volume, providing a basic definition of heterarchy and discussing how it differs from other models for *complex* societies.

The next two chapters in this volume concern North and Central America. Rhea J. Rogers shows how the application of heterarchy to the modeling of tribal social relations has improved our understanding of the egalitarian politics and decision-making processes in the Late Woodland social system of the upper Yadkin Valley of North Carolina. Daniel R. Potter and Eleanor M. King discuss how the highly variable geographic zonation of the Maya lowlands influenced the formation of heterarchical socioeconomic strategies among the Maya, as seen by the analysis of prehistoric settlement patterns and lowland Maya urbanism.

The volume then moves to Europe. Robert M. Ehrenreich compares the hierarchically and heterarchically organized metalworking traditions of British Bronze Age and Iron Age societies and examines the societal influences that accounted for these different socioeconomies. Janet E. Levy examines the ambiguity of Bronze Age Denmark culture, where economic and social differentiation among individuals is implied in the mortuary evidence, but the settlement evidence reveals gender-based control of different ritual activities. Bernard Wailes discusses how the interaction of the religious and secular hierarchies of Medieval Ireland produced an apparently heterarchical society. The final chapter on Europe attempts to bridge the Old and New Worlds. David B. Small analyzes the effects of external trade on local social development, drawing on case studies from the Mediterranean as well as North and Central America.

The volume continues its journey west to India and Asia. Allen Zagarell discusses the co-existence and interdependence of the relatively egalitarian, heterarchical cultures and the state-organized, hierarchical societies of the Nilgiri mountains of Southern India. Joyce C. White compares the literary evidence from historic southeast Asia, the archeological evidence from prehistoric southeast Asia, and the ethnohistoric data from contemporary southeast Asia to show that the basic prehistoric socioeconomic unit of production was the household and that the sociopolitical organization tended toward heterarchy.

This volume concludes with Elizabeth M. Brumfiel's analysis of the progress of the application of the concept of heterarchy to archeology. Brumfiel analyzes and synthesizes the nine chapters in this volume and places them and the concept of heterarchy within the context of archeological theory.

This volume would not have been possible without the assistance of William W. Fitzhugh (Director of the Arctic Studies Program of the Smithsonian Institution and Editor of the Archeological Papers of the American Anthropological Association), Frederick Custer (Director of

Publications, American Anthropological Association), and Todd Reitzel (Senior Production Editor, American Anthropological Association). The volume editors would also like to thank the Executive Board of the Archeological Division for their useful and insightful comments.

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1

Heterarchy and the Analysis of Complex Societies

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ABSTRACT

Archeologists' dissatisfaction with Service's band–tribe–chiefdom–state model of sociocultural complexity has resulted in the epistemological reexamination of hierarchy, the exploration of heterarchy, and the historical and contextual flux between them. This calculus of power relations within and between polities aids understanding of how power shifts occur and under what conditions various power distributions constitute stable and unstable configurations. Power relations, while predicated on systems of values, leave physical evidence when their importance is ranked and reranked by individuals, groups, and organizations as conditions change. The hierarchy–heterarchy relation offers a new approach to the study of agency, conflict, and cooperation.

I backed the Renault into the farm lane and switched off the motor. My palms were sweaty, and my stomach hurt. It was June of 1976, the second year we had excavated at Mont Dardon. This season we would begin the regional survey.

The lush Burgundian countryside, enchanting to my fieldcrew, had me terrorized. A grassy carpet hid every bit of ground except in gardens or where big Charolais cattle had worn it bare under trees or along paths. On the topographic sheets, a tangle of one-lane roads ended in ancient farmyards or disappeared in somber woodlands. I was parked at the edge of our first survey segment, carefully chosen back in Missouri. While it was 6 kilometers from our site on the map, it was thirty by car. Only part of this was due to the rolling topography. Indeed, the Celtic road connecting Dardon with the next hillfort slashed straight north, disregarding terrain, but the Roman and modern roads followed latticed faults and gentle slopes.

I had just published a critique of those settlement studies employing the Central Place model to chart state formation (Crumley 1976), arguing that the world archeological record indicated not one but several distinct systems of settlement associated with the state. If this were so, there was reason to reject the necessary congruence of social and spatial hierarchies; new models were needed to explore the relation between sociopolitical organization and settlement. My doctoral work had suggested that certain Celtic Iron Age polities were states but that their sociopolitical organization was distinctive in the diversity of sources of power (Crumley 1974, 1987c). I hypothesized that polities that administratively subsumed considerable environmental and cultural diversity could be used to formulate an alternative to strictly economic models of state formation.

Burgundy, in east-central France, provided a perfect venue: it was the Iron Age homeland of the Aedui, a Celtic polity with ties to Rome. Burgundy has always brokered West European trade because of its position between the Loire River and the Rhône-Saône river corridor; the region possesses heterogeneous physiography and an extensive, well-preserved, and culturally diverse archeological and historical record. Three major climatic regimes meet in its skies; its geology includes facies of both marine and volcanic origin; land-use/land-cover is a colorful mosaic; and historical events have left marks both seen and unseen.

The sampling strategy we had devised was flexible and closely integrated with the rest of the project. Survey segments were chosen for the coincidence of cultural features, such as known Celtic roads and sites, and environmental zones and their ecotones. Preliminary research in the archeology, history, and ecology of late antique and medieval Burgundy led us to conclude that although politi-

cal, social, and economic circumstances changed markedly, many features of the landscape remained in use through several periods or disappeared and reappeared.

For better or worse, I had gotten exactly what I wanted. The complexity and rich history of the Burgundian landscape could help us identify both enduring and ephemeral elements and forge a less mechanical, more-historical interpretive frame. I eased the car out from under the trees and drove back to the crew. We would let Burgundy teach us.

CONCEPTS

Our first lessons were about *scale*. I used scale to indicate the *grain* of the unit of analysis relative to the whole matrix. Every day the survey crew argued during lunch about what was to be termed a site. I stayed out of the discussion but insisted that we pick up everything, including plastic soldiers and nineteenth century crockery.

Soon it became clear that artifact density and distribution did vary markedly between and within survey segments. To interpret these data, sites and other places where activity occurred and the boundaries themselves were analyzed at several different spatial scales (Marquardt 1977, 1985; Crumley 1976:67). Temporal and functional changes in the intensity of activity between highland and lowland, around passes, and at river fords offered clues to the fluctuating roles of commerce, defense, and cultural preference (Crumley et al. 1987). Our temporal frameworks also underwent renovation. It was simply not possible to focus on changes in settlement and land use around the time of the Roman conquest of Gaul (58 BC) without knowledge of elements that characterized earlier *and* subsequent landscapes. Matching the long chronology of Mont Dardon to the project as a whole, we expanded our research to include the entire Iron Age, the medieval period, and contemporary Burgundy.

Finally, we realized that in registering human decisions (e.g., where and how to build, what to husband), the landscape mapped changes in the perceptions of individuals, groups, and entire societies. Most challenging, however, was our realization that in our own problem-setting choices we reflected individual and cultural histories. To the extent we are able to identify either our own biases or those of peoples long dead, such perspectives constitute an important focus of analysis. We employ the concept of *effective scale*, the scale at which pattern is recognized and meaning inferred, to chart temporal, spatial, and cognitive differences and to critique our own and others' work (Crumley 1979:164-65, 1987c:420; Marquardt 1985:176; Marquardt and Crumley 1987:2,16; Oaks 1987:301; Crumley and Marquardt 1987:614).

Our period-by-period investigation of factors influencing settlement and land use has produced a maze of boundaries—social, linguistic, topographic, climatic, administrative, commercial—that do not necessarily *nest* but often crosscut one another. We consider these spatial divisions themselves worthy of study and define Burgundy as a complex dynamic system in the changing spatial, temporal, and cognitive patterns of its relations.

Most geometric models of settlement are informed by theories of both biological and social complexity that rely almost exclusively on a single type of structure: *hierarchy*. Hierarchies (as opposed to other kinds of structured relations) are composed of "...elements which on the basis of certain factors are subordinate to others and may be ranked" (Crumley 1979:144, 1987a:158). There are at least two types of hierarchy: *scalar* and *control*. A common error, not just in settlement archeology but in ecology, biology, and elsewhere, is that researchers uncritically *nest* levels of analysis, confusing scalar with control hierarchies and leading to the misinterpretation of chains of causation. Global–regional–local climate is an example of a scalar hierarchy: any level can affect any other. The American court system is an example of a control hierarchy: decisions at higher levels affect the operation of lower levels. Scalar hierarchies are routinely mistaken for control hierarchies; in essence, the position of an element in a structure is invariably given value.

In some state societies, hierarchy is not simply one of many patterns in which elements might be ordered but a pervasive structural metaphor and a definition for order itself. When hierarchy and order are considered interchangeable, the popular understanding of chaos—the word of Greek origin for confusion or lack of pattern or plan—opposes hierarchy.

Yet many structures, both biological and social, are not organized hierarchically. There is nothing intrinsically hierarchical about an oak tree or a symphony, yet each has undeniable structure and constitutes an orderly representation of the relations among elements. Nonetheless, few terms identify other kinds of order. Hierarchy—inasmuch as it is often a reductionist metaphor for order—has disproportionately influenced theory building in both social and natural scientific contexts.

To date, the almost unconscious assumption of hierarchy-as-order remains unexamined among social scientists, especially in the area of *complex* society. Class relations are cognized as social hierarchies: "marrying up" or "beneath oneself," "climbing the social ladder." Ironically, societies not as pervasively ranked (not as *complex*) then appear "closer to nature," fostering elitism and rationalizing political and cultural hegemony (Diamond 1974; Levi-Strauss 1966). This conflation of hierarchy with order makes it difficult to imagine, much less recognize and study, patterns of relations that are complex but not hierarchical. It is ironic that the governmental structure we most prize (democracy) is the ideal representation of a power *heterarchy*.

Heterarchy was first employed in a modern context by McCulloch (1945). He examined alternative cognitive structure(s), the collective organization of which he termed heterarchy. He demonstrated that the human brain, while reasonably orderly, was not organized hierarchically. This understanding revolutionized the neural study of the brain and solved major problems in the fields of artificial intelligence and computer design. To date, it has had little impact on the study of society.

Heterarchy may be defined as the relation of elements to one another when they are unranked or when they possess the potential for being ranked in a number of different ways. For example, power can be counterpoised rather than ranked. Thus, three cities might be the same size but draw their importance from different realms: one hosts a military base, one is a manufacturing center, and the third is home to a great university. Similarly, a spiritual leader might have an international reputation but be without influence in the local business community. The relative importance of these community and individual power bases changes in response to the context of the inquiry and to changing (and frequently conflicting) values that result in the continual reranking of priorities.

RELATION BETWEEN HIERARCHY AND HETERARCHY

Drawing on a long history of reciprocal borrowing and legitimation between the social and natural sciences (Ellen 1982), the past two decades of theory in biology saw hierarchy everywhere in nature (e.g., Allen and Starr 1982; O'Neill et al. 1986; Pattee 1973; cf. Ricklefs 1987). However, considerable recent work in self-organizing systems (Corcoran 1992; Kaufmann 1993; Langton 1992; Scott 1991) also finds order in a redefined chaos. Emphasizing initial conditions, this *new* chaos is not at all the opposite of order; history itself becomes the key to prediction, offering the first solid theoretical links between complex organic and physical systems. This has set the stage for renewed collaboration among physical, biological, and social scientists.

In this broader search for the sources of order in the universe, self-organization refers to the order-oriented behavior of opportunistic organisms, differentiating such order from that seen, for example, in snowflakes (Kaufmann 1993). At present, researchers in the biological and physical sciences are engaged in its exploration (but see Scott [1991], Kohler [1993], and Gumerman and Kohler [1994]). One of the most interesting findings is that self-organizing systems are able to perform the most sophisticated computations when operating at the boundary between order and randomness (Langton 1992).

Human organization, by measures of adaptability and interactivity, is arguably the most complex category of self-organizing system known. For human societies, the concept of self-organizing systems suggests that adaptive success may be related to the juxtaposition of cognitive and ecological liminality (Turner 1964; Ellen 1982) with flexible power relations. While hierarchy undoubtedly characterizes power relations in some societies, it is equally true that coalitions, federations, and other examples of shared or counterpoised power abound. The addition of the term heterarchy to the vocabulary of power relations reminds us that forms of order exist that are not exclusively hierarchical and that interactive elements in complex systems need not be permanently ranked relative to one another. In fact, it may be in attempts to maintain a permanent ranking that flexibility and adaptive fitness is lost.

HIERARCHY, HETERARCHY, AND *COMPLEX* SOCIETIES

Dissatisfaction the band–tribe–chiefdom–state model of sociocultural complexity forwarded by Service has increased in recent years. The complaints are by now familiar: the variability, incomparability, and indeterminacy of categories, the perfidy of clear markers in the archeological record, the failure of much archeological data to fit cultural evolutionary models, and the disagreeable

and persistent association of approaches that purport to chart increasing cultural complexity with racism and colonialism.

How might greater epistemological attention to both hierarchy and heterarchy, as well as analysis of the historical and contextual flux between them, offer new insights? I believe that there are several advantages, particularly to those who study the social formation of larger polities (generally termed chiefdoms and states), forms that now cover the planet.

First, the hierarchy–heterarchy relation admits both temporal and spatial flexibility; for example, governmental heterarchies (e.g., peer polities; Renfrew and Cherry 1986) can move over time to hierarchies and vice versa (Crumley 1987a:164-65, 1994b) without invoking the rhetoric of collapse. Heterarchical relationships among elements at one spatial scale or in one dimension (members of the same club) may be hierarchical at another (the privilege of seniority in decision making). Heterarchy is both a structure and a condition.

Such work is likely to have many other uses, and we have begun to explore only three areas: heterarchies of *scale* (Marquardt and Crumley 1987; see also Bloch [1964] on the tritemporal scale of the *Annales* school of French history), heterarchies of *power* (e.g., Crumley 1987c, 1995; Gunn et al. n.d.), and heterarchies of *values* (McCulloch 1945; Crumley 1987b; Crumley 1994a,b).

Simultaneous spatial analysis at multiple levels is the key to utilizing the huge and (for the most part) well-done site-based archeology of the last half-century. Already within- and between-site analysis has expanded our understanding of individual and group behavior and has made possible, for example, studies of gender relations and social status. It is time to make similar links among regions and continents, so as to be able to offer credible comment on the history and future of human–environment relations.

Power relations are demonstrably the most complicated and most important aspect of the governance of human societies. It is particularly important to know how power shifts occur and under what conditions various power distributions constitute stable and unstable configurations. The work would have great utility in the study of change and perhaps be able to explain how certain forms of governance can be associated with particular histories of environmental stability and instability. This gives equal value to all social formations, inasmuch as we can learn important lessons from them all.

Power relations are predicated on systems of values that are ranked and reranked in their importance by individuals, groups, and organizations as conditions change. By studying the physical evidence of decisions (e.g., the boundaries of a royal preserve), a hierarchy of values may be seen to be enshrined at one social, spatial, or temporal scale (elite aesthetics, regional biodiversity, the early Middle Ages) and contested at another (poaching peasants, microclimates, the later Middle Ages). Inasmuch as it subsumes other opinion, every decision provides the raw material for later change. New approaches to agency, conflict, and cooperation can be devised.

Finally, it is important for archeology through its theory and practice to affirm the dignity, appropriateness, and complexity of all human societies, as well as to forthrightly explore the cultural production of value as it pertains to the past. Thus may we see our data anew.

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2

Tribes as Heterarchy: A Case Study from the Prehistoric Southeastern United States

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ABSTRACT

Heterarchy is used as a basis for interpreting the archeological and ethnohistoric records of the Late Woodland social system of the upper Yadkin River Valley of North Carolina (ca. AD 1500). Modeling egalitarian (i.e., tribal) social relations according to heterarchical structuring principles yields a clearer picture of social organization in the upper Yadkin and points to the complex nature of egalitarian politics and decision-making processes in this region. Far from being a series of small, autonomous sociopolitical units, the *tribes* of the northwest North Carolina Piedmont are better understood as protean and interactive networks that were unbounded in terms of both personnel and space. This study has further indicated that recognizing heterarchically arranged social systems means that archeologists must modify their expectations of what constitutes meaningful patterning. Traditional archeological constructs that emphasize or reify the spatial boundedness of social groups may obscure patterning indicative of an egalitarian heterarchy.

The title of this chapter is ironic and perhaps a bit misleading. Actually, I would like to set aside the noun and the notion of "tribes" and discuss egalitarian social relations of the northwest North Carolina Piedmont in the fifteenth century AD. What I hope to convey is a system as intricate as the inner workings of a hand-crafted clock.

This conception of social relations is not what I envisioned when I first began looking for tribes in the archeological record of the upper Yadkin River Valley. Quite the contrary, I took at face value the ethnohistoric indications of discrete tribes scattered across the Piedmont. By discrete I mean spatially delimited, autonomous social and political units that imparted to their members unambiguous tribal identities.

Because I could find little or no corroborative evidence for such units in the material record, I was forced to re-examine my own assumptions about the nature of tribal organization. I found thinking in terms of heterarchy—as opposed to thinking about tribes—exceedingly useful because it unfettered my mind from the confines of the unitary notion of the tribe.

EGALITARIAN HETERARCHY

For the archeologist, the concept of egalitarian heterarchy entails revised conceptions of time and space. Time is, of course, a cornerstone of archeological inquiry. But time, writ small, is generally not given a great deal of emphasis in archeological models. Archeologists are accustomed to thinking of temporal change on a grand scale; that is, of the kind of cultural changes that occur over centuries or millennia. In modeling stable social structures, archeological thought can be relatively static. By this I mean that once a social structure is delineated—although it is acknowledged that the personnel moving through the structure may change fairly rapidly—it is thought that the structure itself remains the same and therefore time can be compressed or ignored.

For descriptive purposes, tribal organization is often depicted as a pyramid or cone of embedded social groups, each level being increasingly more inclusive (Sahlins 1968:16; Evans-Pritchard 1969:248; Braun and Plog 1982:507). Several households form a lineage; several

lineages form a village; several villages form a tribe. While social processes may occur at any level of the organization, these processes are subsumed under a single structural model. Furthermore, all levels are embedded, culminating in an entity dubbed the tribe. The tribal identity is given priority over the other identities contained within the structure.

Contrast this scenario with one derived from a heterarchical view of egalitarian relations. A key to understanding egalitarian heterarchy is recognizing the effects that time—measured in days, weeks, or months—may have on the social structure. The social relations comprising the social structure at one given moment may be wholly unrecognizable from those observed at a different moment, and yet all are a part of the same system. No single, logically, and progressively more-inclusive structure can always describe the entire system of social relations. One set of operant social relations, or structure, is not necessarily a building block of any other set of social relations. Players in the system are constantly coming together, breaking apart, and reshuffling, depending on the situation and the particular social rules that might be invoked at the moment.

To illustrate the point, let us consider the child's game of the cat's cradle. It is a simple game, consisting of a piece of knotted string and at least two pairs of hands. By skillful manipulation, players are able to configure the string into almost an infinite variety of shapes or structures. No one configuration has priority over the others. The point is to see how long the players can keep the game going. Individual configurations are building blocks of other configurations only insofar as a player may capitalize on certain juxtapositions to form a new structure. Extremely complicated-looking, three-dimensional configurations may in one fell swoop be reduced to something rather flat and unspectacular.

Now, to push the illustration a little farther, imagine that each string configuration represents a different social network within an egalitarian system. For example, these networks could be lineage ties, alliances forged through out-marriages or peace negotiations, contacts between trading partners, or extents of secret societies. Also imagine that, instead of seconds or minutes, the time elapsed for each play is weeks, months, or years. As an anthropologist observing the scene, tracing and understanding each formation would be arduous, but consider how difficult the task would become if suddenly all of the configurations were superimposed. This is the nature of the archeological record. It is a palimpsest of the residues of each and every social configuration. The task for the archeologist becomes teasing apart different relationships.

Space, as mentioned, is the other key to understanding an egalitarian heterarchy. Specifically, how is space organized by the society? I took a wrong turn early in my work by assuming that *a* tribe possessed *a* territory and that, for the most part, territories did not overlap. Thus, I believed, space was neatly divided into discrete areas. If this were indeed the case, then locating tribes in the archeological record would simply entail locating boundaries between different tribes, as marked by discontinuous spatial distributions of material culture. Such a conception of space clearly does not mesh with the discussion above of rapidly changing social configurations because it assumes that (1) there is a center point to tribal organization and (2) some social structure has priority over others such that a single unified territory can be delimited and recognized. I should mention that I am not advocating that we discard the notion of *territory*; I am simply suggesting that within this form of social organization, the level(s) at which territories will be manifested will be different. Boundaries indicative of territories may exist at a macro-level and/or a micro-level, but it is unlikely that they will be seen solely at the level of *the tribe*.

Within an egalitarian heterarchy, space is not something that can be divvied up and parceled out. In fact, I will argue that the system depends upon this *not* happening. Yet this does not mean that people living within such a system are homogeneous free-floaters. It means that an intricate system of interconnections exists. I say intricate because in order to maintain the system it is essential that players always have alternatives and options. Through ongoing manipulations of personal identities and contacts, a large number of players can cooperatively maintain access to natural and human resources spread over considerable distances. It is important to remember that everyone is playing the same basic *game* using the same basic rules.

Eleanor Leacock summarized the two principles that form the basis of political activity in egalitarian societies as follows:

> ...first, the parties who are responsible for carrying a decision out or who are directly affected by it must have a share in making it commensurate with their experience and wisdom; and, second, those who do not agree to a decision are not bound by it (Leacock 1983:20).

Individuals and groups of individuals maintain their autonomy through the ability to opt out of a situation. The converse to this is that they also have to be able to *opt in* to other situations. One way to achieve this is through the situation described above (the cat's cradle), wherein different structural poses do not all contribute to the same overall structure. Thus, there are always options.

HETERARCHY IN THE LATE WOODLAND OF THE UPPER YADKIN RIVER VALLEY

These insights into egalitarian heterarchy are derived from a study of 29 contemporaneous Late Woodland village sites located on a 70 kilometer stretch along the upper Yadkin River Valley in North Carolina (Figure 2-1). The Late Woodland in North Carolina begins at about AD 1000 and lasts to the time of contact. The sites used in this study all date to approximately AD 1450 ±50 years. The upper Yadkin River Valley lies in the northwest corner of the North Carolina Piedmont and is bounded to the west and north by the Blue Ridge Escarpment. To the west and south of the study area were various Mississippian societies with which Late Woodland residents of the upper Yadkin River Valley were sometimes interacting. The Late Woodland tradition is, however, usually characterized as having had a tribal social organization.

The approach to the data was fairly conventional. Different artifact classes, including ceramics, lithics, burials, and feature patterns, were analyzed and compared between sites (Rogers 1993). Ethnohistoric accounts from the region were also studied, along with available data on Late Woodland settlement patterns, settlement systems, and dietary regimes.

Perhaps the single greatest problem revealed in this study is the glaring lack of agreement between the ethnohistoric versions of native social organization and the archeologically derived evidence of social organization. Social boundaries suggested by explorers' descriptions are invisible archeologically, and archeologically defined regions were not indicated by explorers' accounts. Juxtaposing explorers' accounts of polities, "nations," or tribes against the material residues of interactive behaviors creates a noticeable contradiction. In short, how could the social processes generated by named, autonomous polities result in the patterns evident in the material record? My answer is that given the constraints posed by the initial assumption (bounded sociopolitical entities), the archeological record is not easily explained.

The physical evidence for boundary-marking behavior, be it passively produced through mundane enculturation processes or actively wrought and laden with symbolism, is a varied and sometimes contradictory lot. The fact is that no single, hard-and-fast boundary is indicated by the data from the study area. This is because patterning evident in one data-class (patterning that might be construed as evidence of a boundary) does not coincide with patterning in other data-classes. Furthermore, much of the patterning that is evident is not discrete. Formal variation within data-classes often differs not in kind but in relative frequency of similar forms.

Grappling with the ethnohistoric record and the different patterns evident in the several data-classes used in this study presents a very complex picture, one that is not easily accommodated within traditional organizational frameworks (i.e., tribes). There is no level at which all of the categories can be simultaneously subsumed to form a single comprehensible structure. In short, a hierarchical model of social order simply cannot accommodate the data.

The true mystery to be resolved, then, is not "where are the tribes?" but rather "what are the tribes?" To address the problem, let me review some of the evidence and attempt to integrate it into a coherent picture of egalitarian social relations.

Ethnohistoric Record

The starting point of this entire enterprise was the array of named *tribes* that reportedly inhabited the Piedmont at the time of contact with Europeans and that presumably existed immediately prior to that time.

The ethnohistoric record consists of the written accounts of several European visitors to the North Carolina Piedmont, beginning with the Juan Pardo Expedition of the mid-sixteenth century. Despite the 150 years spanned by these writings, the accounts consistently reported the existence of numerous distinct aboriginal sociopolitical units spread across the landscape and variously called chiefdoms, nations, or tribes (Hudson 1990; Lederer 1966; Lawson 1937; Alvord and Bidgood 1912; Mooney 1894). It is possible that these reports of separate "na-

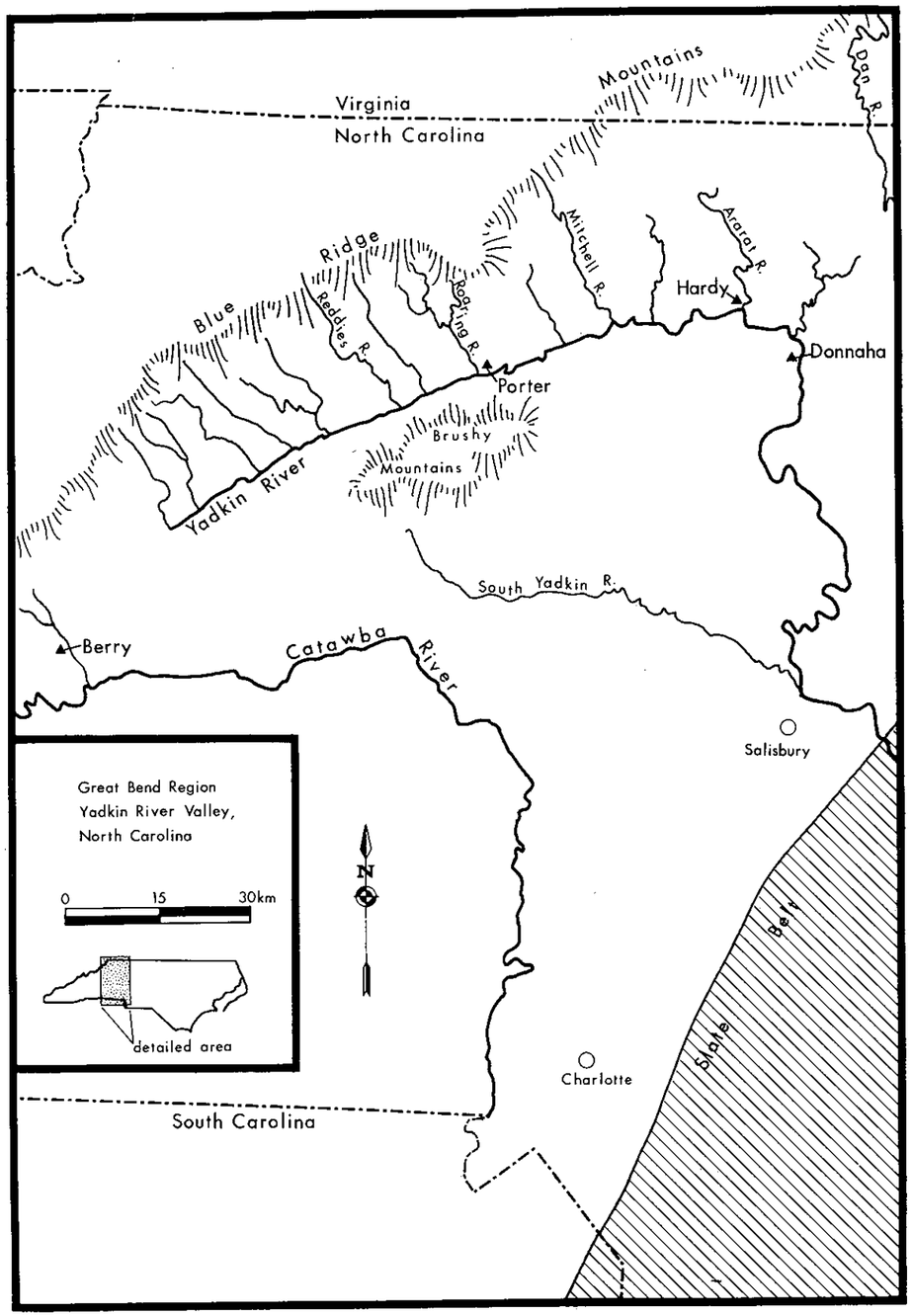

Figure 2-1: *The upper Yadkin River Valley, North Carolina, with the locations of the three, large, Late Woodland sites discussed in this article.*

tions" are partly influenced by European's own perceptions (i.e., they were predisposed to see bounded polities because that is what they knew). Nevertheless, the consistency and detail in these reports are striking and suggest that there is a significant reality in them. Surprisingly, these units were reported to be located very close to one another. For example, John Lawson wrote:

> The three Nations I now mentioned, do not live above ten Leagues distant, and two of them, viz: the Tuskeruros and the Woccon, are not two Leagues asunder; yet their Speech differs in every Word thereof, except one....Now this Difference of Speech causes Jealousies and Fears amongst them, which bring Wars....In short, they are an odd sort of People...(Lawson 1937:251).

Yet despite their close proximity, members of individual nations were said to be highly distinctive in physical appearance and speech (Lederer 1966; Mooney 1894; Lawson 1937). Furthermore, such nations apparently engaged in warfare with one another on a regular basis. I am not convinced, however, that warfare followed strict national lines—it may in reality have been a function of the lineage (discussed below) that crosscut the nation. The motivation for war seems to have been a limited blood feud. Lawson (1937:210,212) stated that nations went to war over the loss of a member and that they were relentless in their pursuit of revenge. Warfare apparently consisted of ambushing scouting-parties or unsuspecting visitors.

Discrete political entities are unambiguously indicated by the ethnohistoric record, yet the material record (reviewed below) indicates interactive behavior. This raises the question of how distinctive and highly localized groups could have persisted and maintained their integrity at all. The archeological record is indicative of certain social processes that should have acted as opposing forces, discouraging the provincialism of the *nation*. The reality of some kind of social unit cannot be dismissed, *but I would argue that acknowledging the existence of "nations" or "tribes" does not fully disclose the nature of the social organization.* The assumptions that named groups equate to tribes and that the tribe is the pinnacle of a set of nested social-organizations are the reason why a correspondence between the ethnohistoric and archeological records cannot be located. A heterarchical approach removes the tribe from its heralded position at the top of the organizational pyramid and considers it as one of several coexisting social constructions. In so doing, the burden of explaining *every* data set within the confines of a *tribal* structure is removed. Therefore, for the moment, let us suspend the question of the *tribe* and consider the evidence for and implications of various interactive social behaviors.

Nations did indeed exist and were apparently marked through ephemeral stylistic displays, such as clothing and other body adornments. More permanent markers of allegiance are lacking in the archeological record, and this is probably indicative of the nation's fluidity of membership. Structural commonalities must have existed between different nations, enabling players to move between them with relative ease—in other words, to opt in or to opt out. Nations consisted of several neighboring villages and were apparently loosely organized under a *king* or headman or headwoman. Nevertheless, decision making was conducted in an egalitarian fashion, with counselors who convened to discuss and decide all affairs of the village or village cluster.

The nations' spatial integrity (indicated by European observers) suggests that their membership was predicated on residence bearing in mind that residence can be changed almost instantaneously. This means that players' *national* allegiances may have changed just that rapidly.

Settlement Systems and the *Nation*

It is clear both from archeology and ethnohistory that the subsistence base was founded upon a combination of horticulture, hunting, and gathering of wild plant foods (Mikell 1987; Lederer 1966; Lawson 1937). In the upper Yadkin River Valley, hunting and gathering appears to have maintained considerable importance in the subsistence regime (Mikell 1987). Nevertheless, horticulture was at least equally important. This reliance was accompanied by a settlement preference for sandy floodplains along the Yadkin and its tributaries.

Floodplain settlement introduced certain spatial limitations to the settlement system because of the size and physical distribution of arable floodplains. Floodplain size and site size are positively correlated (Barnette 1978). Thus, village populations probably varied greatly, ranging from single households to large agglomerations (Woodall 1984, 1990). The floodplain distribution itself also physically separated populations.

A secondary problem posed by the settlement preference and the horticultural complex is that village sites could not be sustained indefinitely due to eventual soil exhaustion. Periodically, village sites were abandoned completely, and the resident population presumably moved to a new site and/or dispersed among other existing villages (Rogers-Marshall 1988). These periodic shifts of population could only be undertaken as long as there were always some unused arable land and as long as village groups were not prevented from moving by other competing groups. This means that there must have been some regionally recognized rules of land use and social integration.

What I am suggesting is that *nations* were these momentarily spatially integrated residential groups. Horticultural land use, a highly localized activity, was managed at the level of these individual *nations* or *tribes*. Nevertheless, in order to guarantee on-going access to arable lands, many separate *nations* had to be integrated via other social connections into a larger system of cooperation. Additionally, social means had to be exercised to prevent ambitious leaders from ascending to positions of permanent importance and thereby solidifying the boundaries of a particular nation. For example, Lawson described how warfare was sometimes used as a social leveling-device:

> This Accusation is laid against an Indian Heroe sometimes wrongfully, or when they have a mind to get rid of a Man that has more Courage and Conduct than his neighboring Kings or great Men; then they allege the Practice of poisoning Indians against him, and make a Rehearsal of every Indian that died for a year or two, and say that they were poisoned by such an Indian; which Reports stir up all the Relations of the deceased against the said Person, and by such means make him away presently (Lawson 1937:208).

Lithics

The lithic raw materials include local quartz and non-local metavolcanics (e.g., felsite, rhyolite, and vitrified tuff) as well as small amounts of jasper and chalcedony (Woodall 1990). The distribution of non-local lithics among the 29 sites in the study area suggests two things. First, no single site had preferential access to non-local lithic supplies. Second, the people living within the study area probably had direct access to those lithic outcrops that are located outside of the study area. These conclusions run counter to the assumptions that sedentary, bounded groups acquired non-local resources through trade (in other words, through indirect access) and that trading activities were channeled through influential individuals residing at important sites that served as distribution centers.

Maintaining direct access to distant resources required a social landscape without barriers (or, at least, with highly permeable boundaries). Social connections had to be sustained across a sufficiently broad area to encompass the resources in question and could have been achieved by a number of tactics, including the practice of *marrying out* (i.e., avoidance of proximity in marriage), the forging of alliances, and the maintenance of dispersed lineages. Note that this requirement seems to contradict the existence of *nations* discussed above but is not completely counter-intuitive when the nations are considered as units whose membership changed rapidly through time and that were, therefore, highly interconnected.

Ceramics

The Late Woodland ceramics of the upper Yadkin River Valley are generally open jar and bowl forms manufactured from a grit-tempered paste and decorated with net-impressing, brushing, or cord-marking. There are some plain vessels, and rims can be decorated with folds, notches, punctations, or incising (Figure 2-2; Woodall 1984, 1990; Rogers 1993). A Brainerd-Robinson coefficient of agreement matrix of all the ceramic assemblages revealed no discontinuities in the distribution of ceramic attributes. Differences between assemblages consist primarily of differences in the relative frequency of different attribute combinations. In terms of spatial distribution, sites with highly similar ceramic assemblages were not necessarily neighboring sites. Thus, variation does not appear to be the result of down-the-line diffusion. In other words, similar assemblages were almost randomly distributed across the entire 70 kilometer corridor. This suggests that there was either a great deal of information-flow among potters, a great deal of movement of potters, a great deal of movement of pots, or a combination of all three. Assuming that potters were for the most part women, this suggests high mobility of females.

This interpretation was corroborated by skeletal analyses of three village sites in the upper Yadkin River Val-

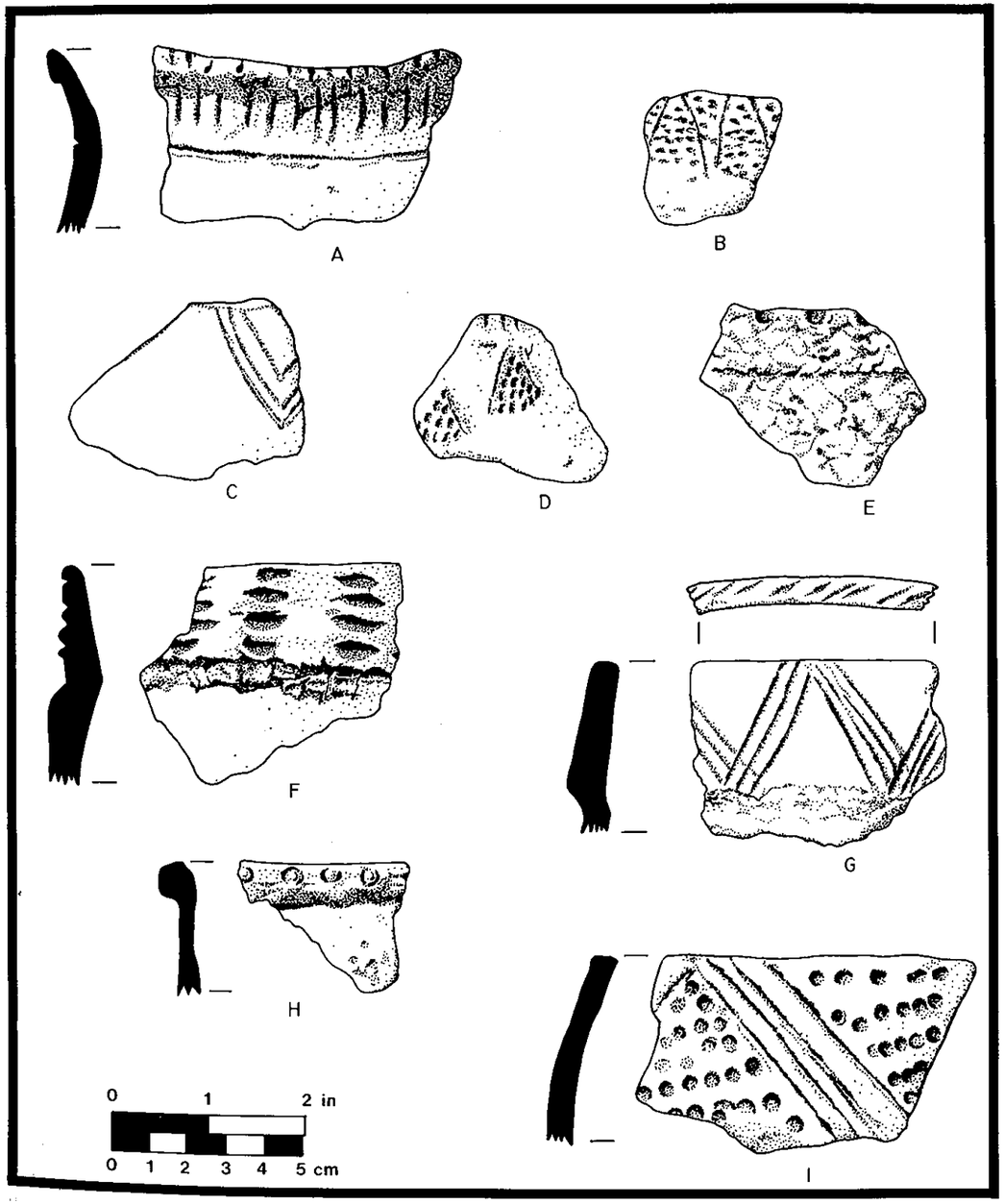

Figure 2-2: *Examples of decorated pottery from the upper Yadkin River Valley, North Carolina (A–C from Donnaha, 31Yd9; D–E from the Hardy Site, 31Sr50; F–I from the Porter Site, 21Wk6).*

ley, which revealed greater heterogeneity of skeletal traits among intrasite female populations than among male populations (Seifert 1991) and may be indicative of post-marital residence patterns. If ceramic assemblages are in any way indexing female residence patterns, then the record indicates a tendency for females to avoid proximity to site of origination. Avoidance of spatial proximity is a marriage strategy observed in many modern traditional societies and may be caused by a combination of low population densities and a need to maintain contacts across larger ecological regions (Adams and Kasakoff 1976:165). This suggests that the Yadkin River Valley pattern is indexing the establishment of broad-based, geographically diffuse social-ties through an institutionalized movement of personnel.

Ethnohistoric descriptions and differences in burial treatments (Rogers 1993) point to the existence of numerous exogamous matrilineages. Therefore, *nations* probably consisted of several co-residential lineages. Outmarriage predicated on spatial and genealogical (i.e., lineage) distance kept the composition of spatial units mixed and socially interconnected. Whether nations took their identity from a dominant lineage is unknown but certainly not impossible. If they did, then it should be noted that membership in the lineage did not ensure membership in the nation. By the same token, membership in the nation by no means indicated membership in a particular lineage.

Feature Patterns

Feature evidence tentatively suggests that house construction methods were different between the northwestern and southeastern halves of the study area. Evidence of wattle and daub is found in the northwest but not elsewhere, suggesting that bark, skins, or thatch were used in house construction in the southeast. If so, then this piece of material culture is the only one with a discontinuous distribution. Other feature patterns were highly similar across the whole study area, most notably the ubiquitous trash-filled pits, which are assumed to have been subterranean storage facilities. Their persistent presence on Late Woodland sites is a puzzlement. DeBoer (1988) has suggested that the use of subterranean storage facilities is a strategy for concealing surpluses. Concealment might be necessitated by a seasonal abandonment of the village site. Certainly the ethnohistoric record of the North Carolina Piedmont reveals that residences were periodically uninhabited and that large portions of village populations were often absent. Thus, protection of food stores could be achieved through concealment. This view suggests that Late Woodland populations were far more mobile than is often suggested (DeBoer 1988:14) and that they were seasonally abandoning sites.

DeBoer further suggests that hiding surpluses may be an act of resistance. He points out that sedentism and the ability to store surpluses are often viewed as the prerequisites to the formation of a social hierarchy. Yet he contends that:

> Rather than a marker of institutionalized social inequality, subterranean storage is more likely to be a powerful signal of resistance to a new social order in which such inequality might be imposed by human elites, superhuman gods, or some holy coalition between the two. Rather than an index of increasing trade, subterranean storage can just as well be construed to indicate the precariousness of all external relationships, whether based on trading or raiding. In short, subterranean storage can be viewed as a tension point between egalitarian and inegalitarian social formations, in which the outcome is uncertain (DeBoer 1988:14).

It is relevant to point out that the upper Yadkin River Valley was on the fringes of some very powerful Mississippian chiefdoms, such as Cofitachequi and Coosa (Hudson 1990).

In addition to the question of domination and resistance, the very practical question of degree of sedentism must be considered. These data suggest that a high degree of seasonal mobility characterized the settlement system, thus necessitating the concealment of stores. In terms of real behaviors, this means that while residents were out and about, it was anticipated that non-residents would be traveling through. It stands to reason that the target "audience" of concealment (to borrow loosely Wobst's (1977) terminology) must therefore have been socially distant enough not to know where supplies were hidden. This likely precluded other members of the village, who would have been close enough to observe concealment activities. Thus, in terms of territoriality, it seems likely that the concealment behavior was a response to regular visitations by *outside* personnel. If territories were tightly delimited and rarely violated by people moving through them, there would be little need for secrecy. Recognition of this has

two important implications. First, *outsiders* constituted a recognizable entity (emically speaking). Second, interaction (albeit often remote interaction) was anticipated and accepted within the overall system.

DISCUSSION

A fallacy of Late Woodland studies is the belief that because people planted maize and then built houses nearby, they were necessarily tethered to a particular piece of ground and its nearby catchment area. Following on the heels of this fallacy are the assumptions that such tethered groups would differentiate themselves (materially and culturally) from neighboring people who were doing essentially the same thing and that each group would cling tenaciously to their chosen territory and their uniqueness.

Instead, I contend that this is a highly decentralized system that depended on constant interactions to ensure that all players had equal opportunity to access necessary resources, such as lithic outcrops, fallow floodplains, and hunting–gathering territories. Rather than relying upon central authorities (e.g., big men who regulated trade with distant trading partners) to allocate access, autonomous individuals sustained access by maintaining level social-relations, forging alliances, inter-marrying, and practicing high mobility. The archeological and ethnohistoric records are indicative of all of these decentralizing activities.

In unraveling the tribal landscape, this study suggests that the structure of an egalitarian heterarchy is not based on spatial integrity but on apparent contradictions embedded within the sociopolitical landscape. For example, the spatial integrity of the *nation* is contradicted by the players' ability to access lithic sources directly. The study suggests that the key to comprehending tribal heterarchy is understanding how coexisting elements or orders of organization intersect to maintain decentralization throughout a region. In this case, it is a system that simultaneously relied upon players maintaining memberships in spatially dispersed social-units *and* spatially integrated units. Orders of organization here have been modeled as various social networks, each fulfilling different roles. Structural contradictions, which in terms of landscape are often visible as differing patterning in material remains, between different networks prevented the ascendancy or permanent priority of any one element over the others.

What this study suggests is that tribal heterarchy is dependent on the existence of diversity, including diversity at the level of the individual (i.e., created by participation in different social networks and a lack of boundedness), while the change to a hierarchical order, such as a chiefdom, entails a homogenization or streamlining of organization and creation of boundaries. The maintenance of diversity, which fosters decentralization and enables individual autonomy, begins with the construction of the identity of the individual and encompasses different, and sometimes irreconcilable, facies that must be negotiated over the course of a lifetime.

A profitable avenue for future research is the pinpointing of factors that would foster the collapsing of heterarchical network systems into unitary and nested hierarchical structures. Differences between the Woodland and the Mississippian are as rudimentary as the relative diversity of their dietary regimes. Whether exploitative niche breadth is the cause or effect of sociopolitical organization is well beyond the scope of this work. Such correlations exist and warrant investigation, however.

I suspect that in this instance hierarchy could be generated by the co-occurrence or conflation of group identity with place. Owning or controlling a place forms a completely different basis for power and political negotiations than those described above for egalitarian societies. Where egalitarian relations must remain spatially dispersed, hierarchical relations are stacked.

From a methodological standpoint, the problem for archeologists becomes one of finding measures or indices of dispersion. It involves demonstrating a lack of centrality or central tendencies and showing an interpenetration of those elements of a cultural system that typically are considered separate and hierarchically arranged. This, of necessity, means dropping archeological conventions that presuppose boundedness and centrality (e.g., the phase designation). Traditional archeological data-classes are still amenable to study—indeed they were used in this study—and measures need only be evaluated in terms of expectations for patterning generated by these different structural principles that do not include centralization.

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3

A Heterarchical Approach to Lowland Maya Socioeconomies

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ABSTRACT

Study of Maya economy has traditionally been dominated by hierarchical or vertical models, in which societal elites were thought to have had significant impact in the organization of production and exchange. We propose that evidence for strong elite regulation of lowland economy is lacking. Both inter-site and intra-site patterns better support the likelihood that many aspects of lowland economy were probably self-organized and not regulated by a centralized controlling group or groups. It is proposed that the spatial structure of important lowland resources played a significant role in Maya socioeconomic systems. While at one time tropical forests were viewed as homogenous and spatially redundant, more recent perspectives emphasize local mosaic or patchy zonation of important biotic and abiotic resources. Intensive craft production and non-centralized regional exchange of large quantities of economic goods were elements within a self-organizing system influenced more by resource structure than hierarchical elite regulation. In our view, the concept of heterarchy represents a better way of understanding Maya economy, as it avoids the *a priori* assumption that complexity must take a tiered hierarchical form. Throughout this chapter, the heterarchical perspective is used to view the character of lowland Maya centers, the hubs of elite control, from an economic standpoint.

About ten years ago Joyce Marcus, tongue in cheek, hinted that Mayanists were conspiring to keep their subject mysterious. They were able to accomplish this deed because: "(1) they are conservative in the face of archaeological change, and (2) their progress on major issues has often been, like the Maya view of time, cyclic rather than linear" (Marcus 1983:454). Marcus implies that lowland Maya research tends to spin in circles; while generating movement, such activity fails to progress in any specific direction.

In this study, we take stock of various theoretical tools employed to understand Maya civilization and compare them with a heterarchical approach. We also express some painfully felt weaknesses in various current ideas that are essentially hierarchical. For Mesoamerica, we propose that the heterarchy concept is similar to what one would have if Blanton's concepts (Blanton et al. 1981:21) of *horizontal differentiation* and *vertical differentiation* were combined into a single term. *Horizontal differentiation* occurs when societal elements are perceived to be functionally distinct but are either unranked or occur at equivalent rank within a hierarchical structure. *Vertical differentiation* occurs when functionally distinct elements are hierarchically ranked (Blanton et al. 1981:21). As has been stressed elsewhere in this volume, heterarchy actually subsumes both of these cases, as it is concerned with functional complexity along both vertical and horizontal dimensions.

While we believe that a heterarchical approach would be applicable to a wide range of Maya topics, our theme

here will be lowland Maya socioeconomy. We view heterarchy as an attractive approach to the study of lowland Maya economics, as it provides a way of observing societal complexity without the *a priori* imposition of a hierarchical straight-jacket on our data. We will argue here that some recent studies of Maya socioeconomy are indeed constrained by a hierarchically based assumption that economic complexity should be found within settlements that functioned as the political and ritual centers of lowland Maya life. We will attempt to show that aspects of Maya economic specialization were instead tuned to the spatial structure of critical resources and not to hierarchically defined central places. As such, study of lowland Maya economy must be informed by an understanding of the distribution, quality, and quantity of important resources within the lowland natural environment.

The ancient Maya of the central lowlands in and around the Peten (or so-called "Core" region) inhabited a tropical forest. Some years ago, Netting (1977) rather poetically characterized our limited understanding of tropical forests by denoting a "darkness at the heart of tropical ecosystems." Tropical ecosystems remain poorly understood, perhaps partly due to their remote location but more so to their vast and inconceivably complex weaving of species, niches, and systems of relationships.

Rainforests, the most diverse of all tropical ecosystems, have yet to be accurately quantified in terms of species diversity quite simply because too many species are currently undiscovered or poorly understood in terms of the role they play within the ecosystem. Caufield, however, gets the point across by observing:

> A typical four-square-mile patch of rainforest, according to a report by the US National Academy of Sciences, contains up to 1,500 species of flowering plants, as many as 750 species of tree, 125 species of mammal, 400 species of bird, 100 of reptile, 60 of amphibian, and 150 of butterfly, though some sites have more....Insects in tropical rainforests are so abundant...that 2.5 acres might contain 42,000 species (Caufield 1984:60).

Generally speaking, environments with high degrees of species diversity, such as tropical forests, possess large numbers of species but less tendency for dominance (i.e., numeric superiority of one or more species over others in a given space) when compared to temperate ecosystems. This is not to say that dominance does not occur, for it certainly does, but dominance is not as marked as it is in more temperate environments.

In mature tropical forests, much of the biomass is locked up in the living forest itself. New plant production takes place largely in the forest canopy and is inaccessible to many organisms, including humans. For this reason, fauna (secondary biomass) are only thinly distributed. With the preponderance of organic material stored in the standing forest, tropical soils are typically thin and frequently low in organic content and fertility. Many areas are not suitable for agriculture. For these reasons, tropical forests have been described as "green deserts," an overgeneralization that may persist because it possesses a germ of truth.

The Maya lowlands (Figure 3-1) diverge from this stereotypic picture because they possess some seasonality in the form of cyclical wet and dry periods. In addition, variation in landform and soil produces striking local variation in natural vegetation as well as in such agriculturally critical factors as soil fertility, depth, and moisture content (Sanders 1977; D. Rice 1993). As time has passed, prevailing perspectives of the lowlands as a green sea of redundant resources (Rathje 1972) have changed to greater appreciation for the subtle but significant spatial variation of important economic resources. Ecologists describe this variability as a "patchy" or "mosaic" resource structure (Emlen 1973), and anthropologists are increasingly using such terms to describe the Maya area:

> Thus, in spite of the stereotypic view of tropical forests as homogeneous, the vegetation of the Maya lowlands demonstrates considerable spatial diversity. The distribution of associations is a mosaic that reflects the non-random arrangement of topography, soil fertility, and soil moisture (D. Rice 1993:25-26).

In terms of human ecology, the most critical of these patches were fertile, well-drained, upland agricultural soils (Sanders 1977), bajo and riverine margins suitable for intensive wetland agriculture (Turner and Harrison 1983; Pohl 1990), and water (Scarborough 1993). Of lesser importance were salt (Andrews 1983; Mock 1993), clay for ceramic manufacture (Fry 1980), chert (or flint; Rovner 1975; Hester and Hammond 1976; Rovner 1981; Potter 1993; Hester and Shafer 1994), and marine resources (Shaw 1991). All of these occurred in spatially discrete patches or zones and were of variable quality within their distributions. Some of these resource patches underwent either improvements or maintenance through investment of human labor, such as the creation of agricultural terraces on suitable landforms (Turner 1979), the control and storage of water through a variety of means (Scarborough 1993), the ditching of wetland margins for agriculture (Turner and Harrison 1983), and the intensive production of sea-salt by various modes (Andrews 1983; Mock 1993). Labor inputs likely enhanced and further localized important resource locales, especially salt production facilities, and modified agricultural landforms and water-control systems.

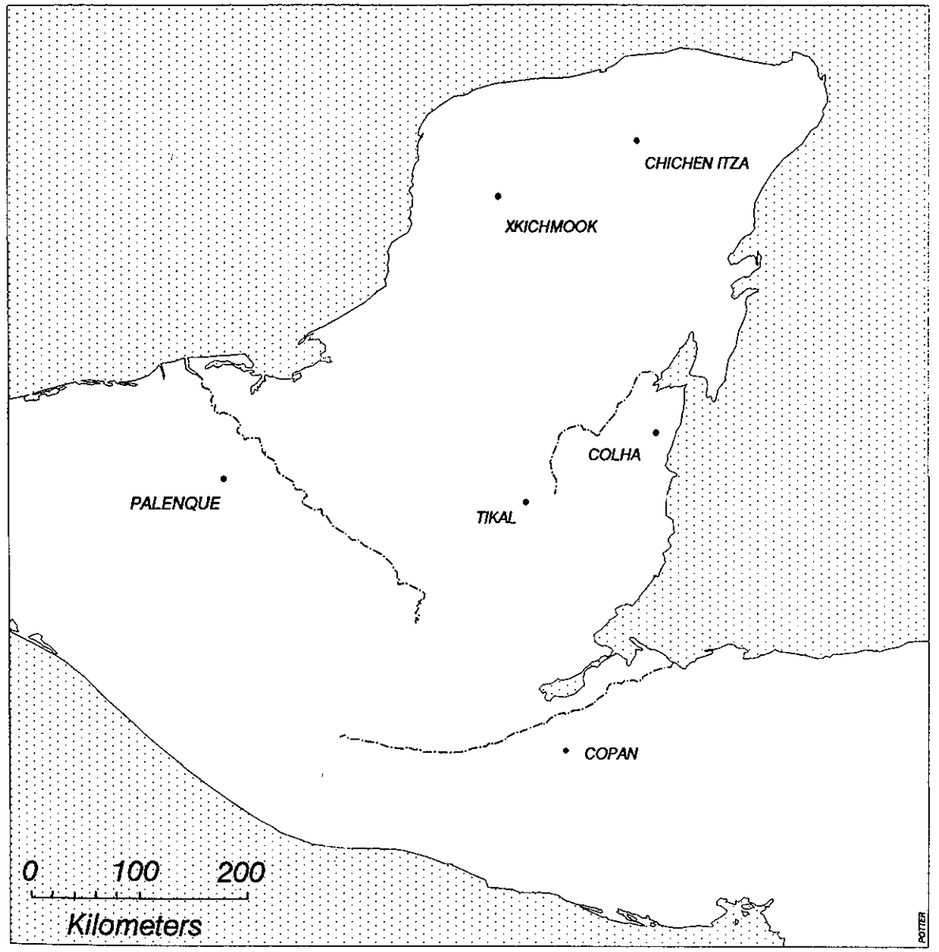

Figure 3-1: *Map of Maya Lowlands with the locations of the sites discussed.*

How did Maya economy relate to this patchy lowland resource structure? We propose that Maya settlements located in proximity to critical resource zones developed specialized extractive/productive community specializations. The evolution of community specialization may have been a rapid phenomenon and likely took place late in the Preclassic Period (c. 250 BC), when a number of archeologically detected changes were manifesting themselves within Maya culture.

Archeological study has shown that the Maya, in keeping with their natural environment, exhibited less tendency to aggregate in true urban settings than did

contemporary cultures of the central highlands of Mexico. The dispersed spatial structure typical of Maya settlement has long been the subject of thought and debate among Mesoamericanists (Willey et al. 1965; Ashmore 1981), and indeed the Maya Lowlands have seen some of the earliest settlement studies conducted (Willey et al. 1965).

Sanders and Price (1968) addressed this discrepancy between lowland and highland archeological cultures nearly 30 years ago by dividing Mesoamerican civilization into two sub-types. One type was urban and represented primarily by Teotihuacan and the Aztec, based on intensive hydraulic agriculture. The second type was more dispersed, supported by non-intensive forms of agriculture, and included the Olmec and lowland Maya. Sanders and Price believed the Maya were not city-dwellers because the lowland economic system could not produce sufficient energy to support true urban population concentrations. In their view, the urban center was the hallmark of the pristine state. While Sanders and Price (1968:206-207) acknowledged the existence of non-urban states, they believed it unlikely that these rose on their own: "It seems to us increasingly likely that the 'civilizations without cities' are what Fried (1960) would term secondary states, formed as a response to pressures set up by the nearby presence of a preexisting state, itself either pristine or secondary but with a hydraulic and urbanized base." Sanders and Price were specifically arguing that lowland Maya civilization evolved as a reaction to encroachments from Teotihuacan, which was the greatest urban state within the central highlands and all Mesoamerica. The Sanders and Price model of Mesoamerican cultural evolution was not diffusionary; rather they conceived of two distinctive types of state-level systems that were involved in an interactive process.

Archeologically, this interaction was thought to be evidenced by the distribution of highland-derived *talud-tablero* architecture at Kaminaljuyu, Tikal, and other Maya sites (Figure 3-1); green obsidian from the Pachuca (Sierra de las Navajas) source near Teotihuacan throughout the lowlands; slab-footed cylinder tripods vessels (a form conventionally associated with Teotihuacan); and certain carved monuments with Teotihuacanoid stylistic traits within the lowland region. Such materials were the basis for arguing that a strong Teotihuacan presence was felt by the Maya during the Late Preclassic (400 BC–AD 250) and Early Classic (AD 250–600) periods, with the result that the less-complex lowland system fundamentally changed in order to maintain its own coherence.

Archeological work has continued since Sanders and Price published their synthesis, particularly in Oaxaca and the Maya area. During this time, the conception of the Maya as a secondary state has not gained wide acceptance, and a diverse array of new research questions has emerged as our database has expanded. Mesoamericanists have maintained a strong interest in the form and density of Mesoamerican settlement and its implications, however, and we think it is fair to say that most Mayanists retain the opinion that it is the major Lowland Maya centers that hold the key to the definition of what Maya economy was like.

Our perception is different. We argue that most economic data emerging from the lowlands clearly indicates that many of the behaviors associated with complex economic systems, such as community-based specialized craft-production and its bulk exchange, occurred not at the large centers but at smaller centers or villages located on or near critical resource locations. Access to resources was the critical factor in defining the spatial loci of specialized economic settlements rather than propinquity to large urban or semi-urban centers. We suggest that the economic system that developed in this type of setting is best explained in a heterarchical framework.

Prior to presenting our case for heterarchy, we will briefly outline some of the past and/or prevailing theoretical approaches to the Maya and their settlements. All of the models outlined below are fundamentally hierarchical, and, as Ashmore (1981:448 ff.) has pointed out, such approaches are representative of most current Maya research in that they presume that all lowland centers functioned identically. Small and large centers alike are thought to have had a uniform ritual–residential organization, with facilities for public administration and ceremonies as well as habitation of elites and their supporting populations. Following our brief review of existing models, we will attempt to show where such approaches are at odds with lowland economic data and why a heterarchical approach may be more productive.

HIERARCHICAL MODELS

The following is a brief overview of some of the models used to interpret Maya civilization. Some of these, such as central place theory and regional rank size analysis, are not as current as others. Aspects of both of these older approaches have been incorporated into prevailing views of the Maya, however. Our aim in this section is not to discuss each model in depth but to point out where each possesses a hierarchical emphasis and attempt to show that all are part of a tradition of hierarchical reference to the study of early states.

Central Place Theory

Central Place Theory is an economic model that was initially devised as a way of modeling the location of settlements with respect to the movement of goods to markets on a homogenous and unbounded plain (Christaller 1933, 1966). As such, the approach pertains to the function of settlements as economic and mercantile entities (Crumley 1987). The thrust of the model is explicitly hierarchical, with the larger settlements acting as central nodes for the collection and distribution of goods. Settlements of lower-rank were evenly spaced around higher-ranked ones in nested hexagonal lattices. The model assumes centralized organization of production via access to and control of markets.

One of the first applications of Central Place Theory to the Maya lowlands was by Kent Flannery (1972), who expanded the scope of service functions provided by central places to include administrative and ceremonial functions as well as economic ones. Although Flannery appropriately distinguishes among these subsystems, most applications of Central Place Theory in Mesoamerica conflate the economic sphere with others, frequently in unclear ways. The model assumes that the location and rank of a site in its hexagonal lattice correlates with its relative political, social, and religious status, as well as with its role in the production and redistribution of manufactured goods and resources. This merging of separate systems into a single, fixed structure obscures the fact that different cultural subsystems may have operated differently, and independently, of one another. More subtly, this conflation focuses research attention on the largest *central places*. In the Maya area, the application of this theory is further biased by the fact that the emphasis on large central places does not extend to whole settlements but just to site cores or downtown areas, where most of the massive construction and political power resided.

Central place theory is currently not widely applied, although it continues to be an underlying factor in some discussions regarding Maya sociopolitics (e.g., Ball and Taschek 1991; Marcus 1993). More importantly, it still conditions Mayanists' fundamental perceptions of the role, function, and relative significance of large and small sites.

Rank Size Analysis

Regional rank size analysis does not constitute a separate theory so much as a method of hierarchically ordering Maya sites. While several approaches to ranking have been taken (e.g., Hammond 1975; Adams and Jones 1981), they all share the goal of finding objective, easily measurable criteria by which Maya sites can be ordered along the common dimension of site size. Like central place theory, rank size analysis focuses on the site core rather than on the whole settlement, measuring the volume and number of monumental structures or structure groups present at each site in a given region. These regions are in turn somewhat arbitrarily centered on the largest and best-known centers, and their boundaries defined by the distribution of certain architectural styles or geographic commonalities. It has yet to be demonstrated, however, that rank size hierarchies among sites within a region are actually germane to ancient Maya socioeconomic systems. Hierarchical, regional rank size analyses impose *a priori* expectations regarding site relationships that can obscure important differences within regions.

Segmentary States

The segmentary state model, drawn from Southall (1956), was first proposed by Fox (1987) for the Postclassic Maya. His underlying premise was that the Maya were organized into agnatic lineages. These in turn were grouped with related lineages into larger units that traced descent from a common ancestor. As Fox (1987:4-5) describes, in a segmentary society "while often egalitarian ideology prevails, neighboring segments can be grafted onto the pyramidal grouping of like segments, based again on degrees of common descent, to eventually yield the segmentary state." Segmentary states thus have a fundamentally hierarchical structure, rooted in "uneasy alliances" (Fox 1987:4) between successively larger groupings of equivalent parts. In segmentary states, social organization is primarily controlled through the political sphere, with segments bound together by mechanical solidarity. Such systems are dynamic, or perhaps better described as volatile, because while each segment holds a measure of political authority, no one segment is supreme. Indeed, the system as a whole is held together by the "structured

oppositions" between like segments, rather than by "an absolute central authority able to monopolize the use of force" (Southall 1956:257; quoted in Fox [1987:5]). Segmentary states are therefore less stable than their unitary counterparts; while each lineage is continually jockeying for power, none can hold such power permanently. Social power is thus maintained in a decentralized form.

While Fox originally used the model to explain Postclassic settlement patterns and shifts in material inventory, other Mayanists have recently used it to explain the fragmented and ever-changing political landscape typical of earlier time periods as well. The most important treatments, presented in a symposium organized by Peter Dunham at Cleveland State University, are not yet published. We can perhaps suggest, however, how the model might be applicable. Decipherment of glyphs at several major sites has underscored the fractious nature of intersite political relations, particularly in the Late Classic Period (AD 600–900). Major centers seem to have been constantly forging new alliances and dissolving old ones, grouping together to war against one site and then retreating to the confines of their own boundaries. The segmentary state model allows free play to these shifting political alliances while providing a rationale for the basic autonomy that apparently characterized all major centers.

The model as described by Fox, however, proceeds with two unfounded assumptions that we hope the recent syntheses will address. The first of these is that the primary organizing mechanism of Maya polities was kin-based political allegiance. The second is that Maya sites were redundant in function and only mechanically integrated. The model leaves no room for independent economic or religious influence on sociopolitical structure. If considered at all, these factors are subsumed under politics as the prime structural shaper. While politics were no doubt very important in Classic Maya life, we doubt that they were the only significant forces at work.

Peer Polity

Peer polity interaction is a concept developed by Renfrew and Cherry (1986) and focuses on a broad range of interactions between autonomous polities. As defined by Renfrew (1986) and elaborated by Sabloff (1986) and Freidel (1986) for the Classic Maya, the model stresses horizontal political relationships. At first glance, the peer polity paradigm appears to present an alternative to traditional hierarchical perspectives. Further examination, however, shows that the approach focuses on sites of equivalent rank and size in adjacent hierarchies. While these peers were never related in a stable hierarchy in relation to each other (Sabloff 1986:11; cited in Crumley [1987:162]), the old assumption still holds in that each is viewed as serving as the central economic node as well as the ultimate political power within its own territory.

Thus, a politico-ideological emphasis on equality among polities is paired with a purely hierarchical structure within each polity. Many of the assumptions prevailing in more overtly hierarchical models are therefore implicit in this perspective, being confined to those levels below the peer polity sphere of interaction. Although the peer polity approach attempts to include everything from ritual to trade (Renfrew 1986:1), the strongest emphasis remains on political relationships between elites. This slant is hardly surprising, given that the polities in question and their status as peers are defined from the outset in political terms: "self-governing and in that sense politically independent...socio-political units" (Renfrew 1986:1). Nonetheless, we perceive an inherent bias, as once again political concerns structure the framework through which economics and/or any other social domain is viewed.

Regal–Ritual Model

Sanders and Webster (1988) have recently revived the discussion of urbanism in Mesoamerica and devised a new classification. Using Fox's (1987) typology of urban forms, they seek to categorize Mesoamerican cities for purposes of cross-cultural comparison. Most, they find, fit within the category of *regal–ritual centers*, that is, central places where "ideological functions are extremely obtrusive" (Sanders and Webster 1988:523) and indeed dominate all else. The only other of Fox's types that they find strongly represented in the culture area is the *administrative city*, whose primary function is political (Sanders and Webster 1988:525). While the categories are functional, the criteria Sanders and Webster use to distinguish them are essentially demographic (Smith 1989). Thus, their opening definition of administrative cities is that they are "larger, denser, and more heterogeneous urban communities than regal–ritual ones" (Sanders and Webster 1988:525). Not surprisingly, the only cities that qualify for this category are the densely nucleated settlements of the Mesoamerican highlands, such as Teotihuacan and Tenochtitlan. By virtue of their open, non-urban configuration, the Maya sites are all lumped together in the regal–ritual type. Here we may perceive one of Joyce Marcus's circular tracks alluded to earlier, for surely in this model we hear the echoes of Sanders and Price's (1968) two-part scheme published nearly three decades ago.

Smith (1989) and Chase et al. (1990) have pointed out that Sanders and Webster's approach neglects variability among Mesoamerican cities. None of these critics, however, draw out the implications of Sanders and Webster's model for settlement hierarchies. The largest cities in their typology are administrative, followed by the secondary or smaller regal–ritual cities (Webster and Sanders 1989). Although the first type encompasses variable functions, all cities of the latter class are thought to be functionally redundant, with differences in organization due only to local environmental and demographic factors or to regional cultural histories (Sanders and Webster 1988:534-5). Indeed, Sanders and Webster (1988:524) feel that the architecture of the regal–ritual centers is like that of the surrounding countryside, only "writ large" and that "urban–rural settlement contrast is minimally developed."

Highland Market Concept

While not offered as an explicit model, the idea that permanent, elite-controlled markets were of primary significance within large centers is an important and pervasive one in Mesoamerica and is implicit in the models discussed. While non-permanent, periodic markets also existed in the highlands, our primary focus here is on the permanent markets that were so important to the make-up and character of major centers. Conquest Period accounts reveal that goods produced locally or regionally were redistributed via markets in the Valley of Mexico, and that markets facilitated elite economic control. Markets were well-organized establishments composed of distinct sections, each devoted to a specific craft, including featherworkers, silver and goldsmiths, mat-weavers, potters, and so forth (Motolinia 1903:Pt II:Ch 22:326-7; Durand-Forest 1971; Feldman 1978).

In permanent Aztec markets, such as the one at Tlatelolco, there was a close spatial relationship between the location of the market and the craft specialists. Highland markets represented the institution through which elite control of production and circulation of goods was maintained, as well as being a major factor promoting the craft diversity and occupational density typical of highland cities (Sanders and Price 1968:46,158-159). There is evidence that Aztec craft specialists often resided together in special districts or *barrios*. In these cases, production may have been supervised by super-household kin or corporate entities, adding an additional administrative layer of control over production. Regardless of the exact specifics of economic control, the linkage between Aztec elite and permanent central markets seems clear and unarguable.

This clarity vanishes when the model is applied to the Lowland Maya, as we will see below. A permanent central market of the highland type has been tentatively proposed for Tikal (Jones 1979; Morley, Brainerd, and Sharer 1983:283), and several archeologists have suggested that the ceremonial plazas of major centers doubled as markets (Coe 1967:73; Freidel 1981:378; Folan et al. 1983:49-64; P. Rice 1987:77; Jones et al. 1983). Many archeologists would still agree with Morley et al. (1983:249), who felt that "[t]he most important economic institution of the ancient Maya was the centralized market." Just as was the case with Aztec markets, elites at large sites are assumed to have controlled the production and distribution of goods via their markets, gathering a wide variety of products made in smaller, outlying centers and adding them to the luxury goods they themselves produced (Marcus 1993).

In its lowland Maya context, the market model specifies that large sites were the foci of production and distribution for luxury and utilitarian goods. Propinquity to permanent markets is viewed as stimulus for further economic complexity within major centers. The market model thus conforms to other hierarchical views of production and exchange in the Maya area in that it hierarchically links economic complexity with settlement size and is closely related to Central Place Theory as already described. If this approach were correct, it would follow that large centers would indeed be the best place to look for Maya economic data in the lowland archeological record. We do not believe this to be the case, however.

LOWLAND MAYA PRODUCTION AND EXCHANGE: WHERE'S THE MARKET?

Despite the widespread acceptance of this idea of permanent central markets, there is very little archeological evidence to support it. We note in particular that after

over 30 years of extensive research programs at a number of the largest lowland Maya sites, there are still no solid archeological data that permanent markets existed at any of them. Prudence Rice (1987:77) has pointed out that there are no known *barrio*-like clusters of workshops or craft-specialist residences at any lowland site. Thus, arguments for permanent market institutions and elite economic control remain rather tortuous.

Proponents rightly point out that most periodic markets, with their temporary shelters and largely perishable goods, would leave minimal traces in the archeological record. While we find the idea of temporary markets neither unreasonable nor unlikely, arguments that such events were of primary economic importance within large centers are less than satisfying when based on such a conspicuous lack of supporting data. We agree with Rice's opinion that the Maya, unlike the Aztec, did not have a strong, hierarchically organized, and centrally administered market economy.

The low scale of elite economic involvement is supported by other evidence—or rather lack thereof. In this case, the negative findings involve writing, which in the lowlands was apparently an exclusive tool of the elite. Due to recent advances in the decipherment of Maya writing, we now know that Maya texts discuss, at times to impressive length, the important life events, lineage histories, and political concerns of rulers and their kin and retainers. Functionally, Maya writing appears to have been used, along with various art media, primarily as a tool in ritual aimed ultimately at the legitimation of the existence of the elite and the Classic period social order. References regarding or implying control of markets, production, or movement of goods are unknown. While it can be argued that the Maya recorded these kinds of transactions on perishable media, none have survived. If central economic control was an important source of elite power, might we not expect to have it mentioned or implied by these elites, if only in passing statements?

By way of contrast, a large proportion of the known written corpus in Mesopotamian states deals with production, storage, and exchange of goods, and it is likely that writing itself evolved within the economic sphere (Schmandt-Besserat 1978). The evolution of Mesopotamian states also exhibits strong linkage between rulers and economic production and exchange, and there is no doubt that elite power from Uruk times was embedded largely in the economic sphere.

Some Mesoamerican sites may well have been different in this respect. Blanton (1976, 1978) has proposed that the Oaxacan site of Monte Alban was a *disembedded capital*, in that site function was largely non-economic. Although Willey (1979) reviewed Blanton's concept and found it unsuitable as applied to Mesoamerica, we find that it has utility, as it appears that Maya elite power flowed from non-economic subsystems within lowland culture. Elites did not play a central role in Maya economies, and control of Maya economies were not important in the maintenance of elite rank.

We perceive a pattern in which the spatial distribution of sites where significant craft-production took place is linked to resource patchiness of the lowland environment, as described previously. The best studies currently available show that specialized production typically occurred at small sites positioned on or very near discrete resource locations. The data also suggest that large centers, such as Tikal and Copan, are more accurately viewed primarily as consumers rather than producers of craft products and that the production that took place at such sites was unspecialized and moderate in output. This observation applies only to utilitarian products, however, as luxury goods apparently followed a different trajectory for production and distribution. The economic data briefly reviewed below pertain specifically to the manufacture and exchange of ceramics and lithics, the most widely traded non-perishable Maya artifacts. We would note, however, that further support for our interpretation could be drawn from studies of intensive wetland agricultural production and salt manufacture, both of which also occur in spatially discrete resource areas.

Ceramic Production and Exchange

Ceramic production studies in the Maya area are severely hampered by the absence of tangible manufacturing remains. Few kiln sites are known, and most of these date to the Postclassic period (AD 900–1500) after the collapse of many lowland Maya sites. Studies of modern pottery-making (Reina and Hill 1978), as well as technical examination of archeological ceramics, suggest that the preferred mode of firing was in an open hearth outside the workshop. The quickly dispersed debris of this temporary installation would leave little or no trace in the archeological record. Similarly, pottery-making tools are hard to identify scattered among other household remains. The best studies of ancient ceramics thus rely on archeometric analysis of clays from sherds or whole vessels to determine source location.

Two notable sourcing studies have involved analyzing the ceramics found at major centers and comparing these to clay deposits in the surrounding countryside. In one such study, Rands and Bishop (1980) found that while the great western Maya center of Palenque may have exported very small quantities of ritual ceramic artifacts (censor stands), the site was mostly a consumer of imported utilitarian ceramics. Analysis of ceramic pastes revealed that a number of production loci were involved, and these were best characterized as a series of small villages located within 50 kilometers of Palenque. Ceramic distribution was also non-centralized in that distribution was not apparently dependent on Palenque or on any market the site may have had. Instead, Rands and Bishop (1980) propose that these "small-town" potters traded locally made wares directly to consumers, regardless of whether they resided at Palenque or at neighboring small sites in the area.

At Tikal, a site frequently claimed to be a major market and trading center for the Maya core area, Fry (1980) has come to a similar conclusion regarding ceramic production and exchange. Analyzing paste composition of ceramics recovered at Tikal, Fry found that certain classes of vessels, primarily utilitarian, were not produced within the areas of densest occupation. Rather, the clay sources for Tikal ceramics were likely to be from deposits found in or near the *bajo* Santa Fe and from the muscovite-rich upland clays of the El Palmar ridge northwest of Tikal. While the entire area could be termed "Greater Tikal," the settlements closest to these clay sources are more appropriately conceived of as small satellite communities. Following Fry (1980), we believe it likely that the communities nearest the relevant clay sources were the pottery producers. Fry (1980:16) appears to be describing the quintessential heterarchical system when he observes that:

> Reviewing the data presented here on Late Classic Maya ceramic production and distribution, we can see that the entire ceramic system was highly complex....*The system, however appears to be less centralized than many of us had expected. It is surprising that much of the exchange around the great site of Tikal during its Late Classic height was handled through localized distribution subsystems.* If there was a central Tikal market...it did not traffic heavily in utilitarian pottery. Central Tikal appears to have been a consumer rather than a redistributor in the pottery exchange system (Fry 1980:16; emphasis added).

On the basis of these and other ceramic studies, P. Rice (1987) has proposed that utilitarian ceramic trade was informal and localized and probably flowed through kinship networks. Ball (1993:245) suggests that a degree of community-level specialization prevailed, similar to that documented ethnographically in the highlands of Guatemala (Reina and Hill 1978). He notes that both the Palenque and Tikal studies show that each community produced a range of forms, although some communities may have specialized in one form above others, as do their modern counterparts (Ball 1993:245; Reina and Hill 1978). We would add that this kind of community-level exchange is best characterized as horizontal rather than vertical, as it does not depend on the hierarchical relationship of one community to the other.

The production and exchange of luxury or elite vessels was probably strikingly different. These vessels, frequently painted and/or modeled and often bearing hieroglyphic texts, were apparently produced within the larger centers themselves. Either the ruler or his kin may have directly sponsored production or elite individuals may have actually participated in the manufacturing process. It is unclear at this point whether single artisans typically made and painted ceramic vessels or several individuals were involved in the manufacturing process. Regardless, individual scribe/artisans or schools of artisans have been identified through analysis of painting style (Reents-Budet 1994; Reents-Budet et al. 1994), and at least some scribe/artisans were kin-members of elite lineages. At Copan, for instance, one of the elaborate residences in the elite Sepulturas Group has been identified as belonging to the "powerful...royal scribe" (Sharer 1994:332). These ornate vessels were probably gifted between elites on the occasion of state visits, weddings, funerals, and the like, in what McAnany (1991:282) refers to as "inter-polity high level exchange." If such is the case, the hierarchical market-redistribution approach appears as poor a model for elite wares as it is for utilitarian ones.

In sum, we perceive two different systems of lowland Maya ceramic production and exchange, neither of which were particularly hierarchical in structure. One of these systems consisted of local manufacture and trade of utilitarian wares. These were either located around small centers near clay sources or perhaps not oriented around

Site/Group	*Volume in m^3*	*Count*	*Density per m^3*	*Reference*
Tikal/5D-2	261,250	644,685	2	Moholy-Nagy 1993
Copan/Satellite	1	3,500	3,500	Mallory 1986
Xkichmook/Workshop	1	850,000	850,000	Potter 1993
Colha/2007	1	4,956,125	4,956,125	Roemer 1984; Hester and Shafer 1994

Figure 3-2: *Table of densities of lithic debris from four Maya sites.*

centers at all but on some smaller level, such as the corporate household. A second system involved smaller quantities of more valuable goods. These were produced specifically for and at least partially by elite individuals and likely traded over greater distances. This latter distinction echoes a theme long-recognized by Mayanists between long-distance trade in exotics and local exchange of lowland economic products (e.g., Tourtellot and Sabloff 1972).

Lithic Production and Exchange

Because lithic production is a reductive process using various imperishable media (e.g., chert, chalcedony, obsidian), lithic remains provide one of the most indelible sources of data regarding the structure of ancient economic systems. Sufficient work has now been done across the lowlands that a general picture of both the spatial and temporal structure of lithic resources and their economic significance has begun to emerge (Rovner 1975; Sheets 1976 Fowler 1991; McAnany 1991; Potter 1993). As was the case with ceramics, the best evidence for intensive production of lithics comes not from large centers but from small ones, and these settlements are located literally on top of the resource.

Research focusing on the lithic economies of large lowland central places has revealed a dearth of evidence indicating central control over the production or distribution of stone tools. The overwhelming proportion of the observed lithic assemblage at Tikal was collected (or observed but not collected) from redeposited architectural fill, either in the form of general excavation or special deposit lots. Moholy-Nagy has estimated that the architectural fill of Group 5D-2 (a major architectural group in the "heart" of Tikal), included 239,447 pieces of chert and 405,238 items of obsidian (Moholy-Nagy 1993:8; Figure 3-2). At first look, these are impressive numbers of lithic artifacts. Moholy-Nagy (1993) has suggested that such vast amounts of redeposited lithic material must have come from workshops close by the 5D-2 Group and, thus, well within Tikal's monumental center. She has further proposed that the speculated central location of such workshops indicates that full-time lithic craft-specialists must have resided under the control of elites within Tikal's monumental center in Late Classic times.

When placed in comparative context, however, the Tikal data seem less impressive. Figures 3-2 and 3-3 compare lithic densities from Tikal with those at three other lowland sites. Copan, like Tikal, was one of the largest lowland sites and a major political power in the Late Classic. Xkichmook (located in the southern Puuc region of the northern lowlands) and Colha (located in northern Belize) were minor centers.

If large sites were truly economic production centers, we might expect that they would reveal higher densities of discarded artifacts and lithic production residues. The opposite is actually the case, however, and overwhelmingly so. Inspection of Figure 3-2 shows that while Tikal's monumental group 5D-2 is estimated to have contained over 500,000 artifacts, the group is comprised of over 250,000 cubic meters of architectural fill. Thus, the group as a whole has an average lithic density of about two pieces per cubic meter—not an impressive figure.

Of course, it can be argued that density figures based on redeposited materials are not likely to be representative of their previous, primary-context densities, having been diluted by other fill elements in the construction of this massive group. We would agree with this argument but note that this point is somewhat moot, as the entire Tikal 5D-2 assemblage is still not equal to the number of chert artifacts coming from a *single cubic meter* of primary workshop fill at the much smaller sites of Colha and Xkichmook. Thus, we can account for all of the lithic materials within this major architectural group at Tikal without reference to workshops at all.

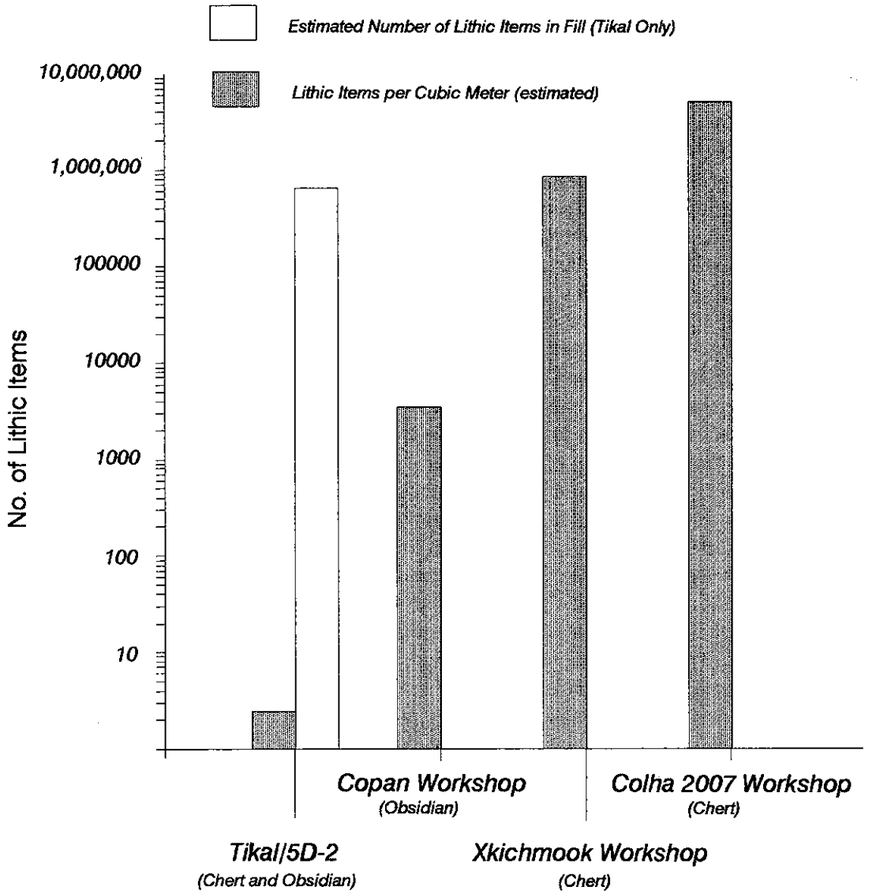

Figure 3-3: *Graph of densities of lithic debris from four Maya sites.*

Figure 3-2 also shows that Copan's highest lithic densities are substantially higher than those found at Tikal. Significantly, the Copan data come from a small obsidian workshop located at "one rural site of the lowest rank" within the greater Copan area (Mallory 1986:153). Mallory estimates a density of over 3,500 obsidian items per cubic meter for this deposit and notes that it far exceeds any other known context in the Copan valley. Still, we note that these densities fall short of those for workshop contexts at Xkichmook or Colha by several orders of magnitude and are inclined to agree with Mallory's observations that:

> Informal speculation in the field involved models of elite control over the acquisition and specialized production of a valuable resource....However, results from the analysis of over 35,000 pieces of chipped stone subsequently invalidated such models. Our original conjectures concerning the specialized production and tightly controlled distribution of a valued resource were confronted, therefore, by data indicating a general lack of specialized blade production... (Mallory 1986:153).

As was the case with ceramic production, it is at the much smaller sites that the density and context of lithic materials support a reasonable archeological argument for specialized craft-production. The site of Colha in northern Belize is by far the best known of lowland lithic-produc-

tion locales. Through the investigation of its massive chert workshops, this very small center has significant implications for any consideration of lowland Maya economic organization (Shafer and Hester 1983; Hester and Shafer 1994). Beginning at perhaps around the onset of the Late Preclassic Period and continuing for over a millennium, Colha was by far the most striking locus of intensive stone tool production in Mesoamerica. Production residues at Colha outstrip those of the largest lowland Maya sites and even the well-known obsidian workshops at Teotihuacan, in terms of size, volume, and density of lithic debris (Clark 1986; Hester and Shafer 1994).

Production estimates for just one of the several tool forms that were mass-produced at Colha run to over 1.5 million specimens for the Late Preclassic period alone (BC 250 to AD 250; Shafer 1982; Shafer and Hester 1983). Hester, Shafer, and their colleagues have argued that this scale of production is more than would have been required by the ancient occupants of Colha, which was a rather modest settlement. They have bolstered the argument by documenting the distribution of Colha utilitarian tools in considerable numbers within an approximate 75 kilometer diameter region of present-day northern Belize. The destination of Colha tools was primarily to other small sites in northern Belize that were located in areas either of poor-quality chert or without chert resources altogether. Significantly, some of these consumer communities were themselves specialized wetland agricultural sites, such as the Pulltrouser Swamp site (McAnany 1986, 1989; Hester and Shafer 1994). While this exchange network remained predominantly a local affair, a considerable mass of production was carried within that system via mechanisms we currently do not understand well.

A recent study (King n.d.) of the organization of lithic production at Colha during the Late to Terminal Classic (AD 600–850) lends support to the idea that much of the bulk lithic trade, like the pottery trade, moved through horizontal rather than vertical networks. Indeed, all the available evidence suggests that specialization at Colha took place at the community level, just as Ball (1993) has proposed for ceramic production (King n.d.). However, the tangible manufacturing byproducts visible at Colha permit a more complete definition of the form of specialization when compared to the elusive ceramic workshops. Careful examination of the contexts, concentration, scale, and intensity of production at the site (following Costin 1991) suggests that autonomous individual or household-based units, loosely aggregated throughout the community, managed production for unrestricted regional consumption (Costin 1991:8-9; King n.d.). Importantly, this characterization implies that neither production nor distribution was controlled by the elite or, indeed, by anyone but the chertworkers themselves. Furthermore, chertworker households seem to have been relatively well-off (King 1990; King and Potter 1994; King n.d.). This finding contrasts sharply with the view currently gaining wide acceptance among Mayanists that all lowland craft-specialists were land-poor or marginal folk who were attached to wealthier land-owning households (e.g., McAnany 1993; Ball 1993).

In contrast to local, economically oriented utilitarian exchange systems, P. Rice (1987) has noted that the distribution of exotic obsidian and jade materials was very widespread within the lowlands. A similar, more widely distributed pattern has already been pointed out above for ritual ceramics at Palenque. In a similar manner, Colha ritual/luxury lithic artifacts (including primarily chert eccentrics and finely made, stemmed macroblades) were exchanged over a much larger area than were utilitarian items. Furthermore, because these widely dispersed ritual and/or exotic items are found primarily at large centers, their archeological distribution conforms well to what we would expect in the case of a hierarchical redistribution model focused on central places. In addition, the discovery of Colha-produced artifacts at theorized long-distance trade stations on the Belizean coast suggests that luxury chert items, obsidian, and jade all flowed through the same centralized system or systems. We propose that this apparent utilitarian/ritual dichotomy in the production and exchange of goods presents a good example of heterarchical organization of systems among the Lowland Maya.

To summarize, ceramic and lithic data suggest that Maya production and exchange occurred within two cross-cutting systems. One system was distinguished by a relatively high volume of goods over limited areas and functioned as a buffer against the mosaic distribution of important resources and temporal fluctuations in their availability. The second system was characterized by the production of a small number of politically or ritually valuable goods, distributed through far-flung, low-bulk exchange routes via important centers. The first system appears not to have been centrally administered. Indeed, the data on craft production of utilitarian goods best fit Costin's (1991) community specialization type, which implies a certain degree of autonomy for the producers. The second system, on the other hand, may well have been centrally administered, as predicted by the hierarchical approaches. Many luxury items were apparently created by attached or tethered specialists, in some cases by the elites themselves, and distributed through major Maya central places. These two systems of production and exchange intersected at certain points: at common resource areas, for example, and at large centers that were simultaneously consumers of bulk goods and nodes within elite exchange networks. These systems were essentially separate in their workings, however. While consideration of this divergence is awkward at best within the hierarchical paradigm, it fits nicely within the more inclusive heterarchical approach.

HETERARCHICAL APPROACH TO MAYA ECONOMICS

Crumley (1987:158) defines structures as "heterarchical when each element is either unranked relative to other elements or possesses the potential for being ranked in a number of ways." This statement aptly describes the structure of Maya economy. In heterarchical terms, the organization of the utilitarian trade can be described as unranked, whereas that of the luxury trade is ranked. This difference suggests that, despite the fact that we are dealing with exchanges of goods in both cases, both the purpose and processes involved in each system of exchange were qualitatively and quantitatively different. In the case of utilitarian items, the primary function of trade seems to have been economic: people obviously needed these items to make their daily living. Goods appear to have traveled laterally through as yet poorly understood horizontal networks that may have relied on existing kin ties to ensure access to economically critical products. We believe that this system was both self-organizing and *self-triggering* (Adams 1988:62-64). Repeated attempts to link this heterarchical system archeologically with central regulatory control have failed, as discussed above.

In contrast, luxury items were by definition not essential within the realm of economics. They were used primarily by the elite and served to enhance their position and status, both as political peers in relation to each other and as superiors within local polities. Thus, we can heterarchically view luxury exchange from at least two different cross-cutting perspectives: one lateral (between peers at neighboring polities, for example) and the other vertical (down a specific hierarchical chain within a single polity). The trickling down of fine polychromes, obsidian, and other exotics to non-elites—or less-elites—as symbols or badges would have served to emphasize the legitimacy of a vertical social and political structure, as has been proposed for Copan (Mallory 1986) prior to its collapse. In such cases, as McAnany (1991) reminds us, while the items of exchange undoubtedly possessed great value, the route of exchange itself was of equal or greater value, as it marked important political relationships.

In sum, Maya production and exchange systems were dynamic and multi-purpose entities that can be broken down into several subsystems. While all production and exchange involved economic value at one level, it would be a serious mistake to lump these into a single monolithic notion termed "economy." Use of a heterarchical approach allows us to uncover the distinctive workings of two cultural subsystems: one self-organized and economic and the other politico-ritual and centrally administered. It also holds the promise of uncovering the interplay of other elements. Chase and Chase (1992), for example, have pointed out the need to distinguish between two types of luxury goods: those that were mere sumptuary items and those that served as symbols of elite political-religious authority. It is possible that work conducted within a heterarchical framework might reveal these more subtle distinctions.

Thus, a heterarchical approach permits not only the integration of a variety of formerly contradictory data but also raises interesting new questions on the nature and development of Maya statehood. These questions would not even occur within a hierarchical paradigm because unwarranted assumptions are made concerning the interplay of certain Maya cultural subsystems. Specifically, the general conflation of subsystems within a single vertical structure obscures some fascinating differences in their operation. While we share the anthropological canon that all cultural subsystems are interrelated, we believe that care must be taken in modeling exactly how such systems were organized. Failure to do so will lead to continued neglect of important information on variable site function because such data strikes a dissonant chord under hierarchical frameworks. The beauty of heterarchy is that it allows us to take these seemingly contradictory data into account. As Crumley (1987) points out, heterarchy does not negate hierarchy, it subsumes it. It is this flexibility that makes the approach a useful one for the study of Mesoamerican cultural complexity.

ACKNOWLEDGMENTS

Steve Epstein, Tom Hester, and Fred Valdez kindly read and commented on earlier versions of this chapter. Ken Brown and Francis Meskill helped with illustrations. Carole Crumley, Joyce White, and Wendy Ashmore graciously shared their thoughts on several matters related to this study. We are grateful for their efforts and their company.

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4

Early Metalworking: A Heterarchical Analysis of Industrial Organization

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ABSTRACT

The study of prehistoric industries is examined from the perspective of heterarchy. The main metalworking traditions of Bronze Age and Iron Age Wessex in southern England are discussed. Bronzeworking during the earlier period seems to be organized in a hierarchical fashion. The concept of heterarchy illuminates the complex organization of ironworking in the Iron Age, however, an industry that was deliberately non-hierarchical.

Heterarchy is a significant model for the analysis of prehistoric industries and socioeconomies. The relevance of heterarchy to archaeology is discussed in this chapter within the context of a comparison of the development of two prehistoric metalworking traditions within one geographic region. The region to be examined is central, southern Britain, commonly known as Wessex (Figure 4-1). The traditions to be examined are the *hierarchically* organized Bronze Age bronzeworking industry of 2000 to 700 BC and the *heterarchically* structured Middle Iron Age ironworking industry of 400 to 100 BC. The Early Iron Age (700–400 BC) has been omitted from this discussion because the metalworking evidence is too scant to permit the formulation of substantive conclusions.

There are three sections in this chapter. The first section summarizes the societal organization of the Bronze and Iron Ages in Wessex. The second part examines the levels of craft specialization and industrial organization attained by the bronzeworking and ironworking communities respectively within these societies. The level of craft specialization for each period is determined on the basis of three criteria: the production of surplus artifacts for trade, the existence of dedicated workshops, and the control of technologies. The final section places the results of the industrial analysis within the context of the two societies to ascertain how industries respond to and reflect changes in societal organization.

WESSEX IN THE BRONZE AND IRON AGES

Archeologists generally believe that Wessex society was hierarchical and agrarian during the Early Bronze Age (2000–1400 BC; Burgess 1980; Pearce 1983; Darvill 1987; Sherratt 1994). Archeological and environmental evidence of the desiccation of peat bogs, the clearance of forests, and the expansion of settlements onto marginal soils during this period suggests that the climate was warmer and drier than currently (Pearce 1983; Darvill 1987). The previously prevalent chambered tombs were also sealed and abandoned, and barrows of single burials with significant differentiation came to predominate. Approximately 100 rich burials, placed near the center of barrows and accompanied by such prestige goods as daggers and sheet gold, date to this period in Wessex. It was on the basis of these lavish artifact assemblages that Piggott (1938) identified the *Wessex Culture*. Archeologists have postulated that the stratified burial mounds and other power displays of this period (e.g., the henge monuments) indicate the existence of a stratified society, perhaps led by dominant lineages (Renfrew 1974; Pearce 1983; Darvill 1987). The discovery of graves containing smithing residues in southwestern Britain suggests that the dominant elite may have had retinues of craftsmen, including bronzesmiths (Pearce 1983). The similarity of the British and northern European metalwork also indicates the prev-

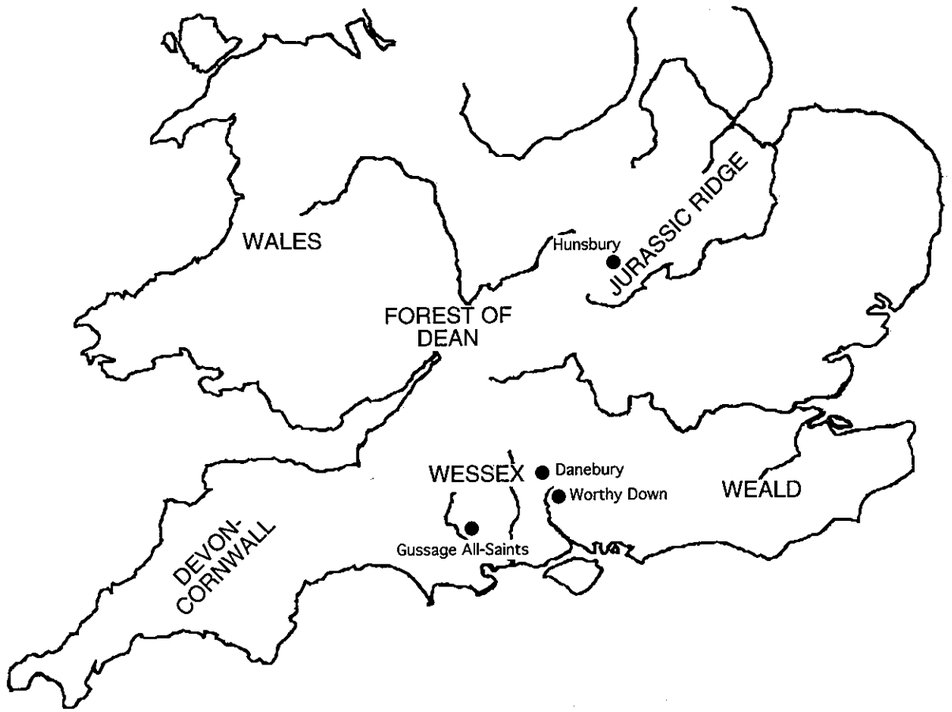

Figure 4-1: *Map of Southern Britain showing the locations of the regions and sites discussed.*

alence of cross-channel trade during this period, which may have been controlled by the elite.

The resurgence of the deep peat beds and the extension of the trackways at the Somerset levels during the Middle and Late Bronze Ages (1400–900 and 900–700 BC) argue for a period of climatic cooling and increased rainfall (Darvill 1987; Pearce 1983). The abandonment of fringe settlements, the increase in reforestation as shown by pollen evidence, and the refortification of sites in previously more established regions suggest that this deterioration in weather, perhaps combined with the exhaustion of marginal lands, caused a constriction of settlement areas. Although the previous elite level of the second millennium BC may have continued, clear evidence of its existence disappears with the abandonment of henges and the change from barrows to flat cremation cemeteries containing few grave goods. Bradley and Hodder (1979) state that evidence of stress is shown by an increase in the deposition of hoards and development of sharper boundaries among ceramic style zones. The material and settlement evidence suggest that the centuries around 1000 BC were marked by heightened stress in which the societal structure was changing (Darvill 1987; Harding 1994). The continued presence of burials with bronzesmithing residues in southwestern Britain and the appearance of new weapons assemblages show that retinues of craft specialists may have continued and that specialized weapons-smiths may have evolved during the early part of this period (O'Connor 1980; Pearce 1983). The similarity of the metalwork of Britain and Northern Europe and the discovery of shipwrecks full of scrap off the coast of Dover show that cross-channel trade was still extremely strong during this period.

The construction of fortified settlements further increased during the Early Iron Age, indicating that societal instability intensified during this period (Cunliffe 1978). Large numbers of hillforts were built in the seventh century BC, 75 percent of which were abandoned or destroyed during the fifth century BC. The remaining hillforts were expanded, refortified, and occupied throughout the Middle and Late Iron Ages, suggesting that a new societal structure had stabilized. Although some archeologists have used the size difference between the hillforts and small, defended settlement sites as proof of the existence of hierarchies, little evidence has been recovered to suggest that the larger sites were elite occupations; the materials assemblages of the hillforts were not superior to those of the settlement sites. The large concentration of storage pits covering most of the hillforts' interiors would suggest that hillforts were simply large, central storage facilities within a heterarchical society that had no truly preeminent settlements. Burials disappear entirely during the Iron Ages in Wessex, and votive deposits of high-prestige artifacts and weapons in rivers, bogs, and lakes predominate. The reduction of northern European artifacts in the archeological record also implies that cross-channel trade may have declined during this period (Cunliffe 1978).

METALWORKING TRADITIONS OF BRONZE AGE AND IRON AGE WESSEX

Artifact production can be divided into three segments: materials acquisition (i.e., the location, extraction, and refining of resources); object manufacture (i.e., the creation and repair of preforms and finished products); and materials trade (i.e., the distribution system for resources, preforms, and finished products). The organization and interdependence of these industrial segments varies depending upon many factors, including the structure of the society, the attributes of the material, the craft-working traditions of the culture, the use and demand for the metal, the knowledge base required for artifact manufacture, and the viability of trade networks. The main technological segments to be examined in this chapter are those associated with object manufacture and materials trade. Materials acquisition is not considered because the inhabitants of Bronze Age and Iron Age Wessex were equally dependent on imported metal.

Bronze Age Bronzeworking

The discussion of Bronze Age bronzeworking in Wessex is limited by the lack of actual bronzeworking remains discovered (Pearce 1983; O'Connor 1980). This is especially true for the Early Bronze Age, when little evidence of bronzeworking exists beyond those artifacts found in barrows. Therefore, this section will concentrate on the metalworking phases of the Middle and Late Bronze Ages, for which there is more substantive metalworking data.

The bronzeworking material sources exploited by Wessex society remained relatively constant throughout the Bronze Age. Wessex does not have tin or copper reserves, the two main constituents of bronze; thus, its inhabitants have always been dependent on imports (Rowlands 1976). Some large-scale copper and tin production did occur in Wales during the Middle and Late Bronze Ages, but trade of the bun-shaped ingots was primarily restricted to the highlands of Britain (Darvill 1987). Small-scale bronze production was also performed in Cornwall for local use. The predominant source of metal for Wessex was scrap imported from the Continent, as shown by the discovery of a shipwreck dating from approximately 1100 BC off the shore of Dover that contained over 95 broken Continental bronze artifacts bound for Britain (Burgess 1980; Darvill 1987).

The first criterion to help determine the level of metalworking craft specialization attained in Middle and Late Bronze Age Wessex is the production of excess artifacts for trade. There is clear evidence that smiths were producing object surpluses for exchange during this period in this region. Middle Bronze Age Britain is renowned for its large quantities of hoards. The hoards can be divided into two groups: the more prevalent collections of smaller, less technically sophisticated, semi-finished tools and weapons; and the rarer, higher quality groups of larger, more technically intricate, prestige objects (Darvill 1987). Bradley (1990) divides these hoards into types of *secular* and *votive*. This distinction aside, the clear separation of the hoards and almost complete lack of artifacts common to both segments suggests the existence of a two-tiered craft-specialist system during the Middle Bronze Age with distinct production sites and trade routes (Rowlands 1976). The broader distribution and simplicity of the unfinished hoards suggest that a lower craft echelon consisted of a wide-spread distribution of semi-dedicated, small-scale smiths who traded locally (Rowlands 1976; O'Connor 1980). The rarity and intricacy of the finished hoards imply that the upper craft echelon probably consisted of highly skilled smiths who worked on regional industrial sites where they produced exotic and technically sophisticated objects for long-distance trade, including to the Continent.

The number of upper craft echelon hoards dramatically decreased after 900 BC, suggesting that the two-tier

system began to wane during the Late Bronze Age. Most of the hoards discovered from this later period resemble those of the previous lower craft echelon type, and almost all of the artifacts were locally made (Darvill 1987). This trend suggests that the regional industries may have declined, leaving mainly the local craft specialists. The preliminary conclusions are that Bronze Age metalworking had attained a high degree of craft specialization and that the Early and Middle Bronze Age industries may have been hierarchically organized (Rowlands 1976).

The second criterion to help determine the level of bronzeworking craft specialization in Wessex is the existence of dedicated metallurgical work-areas. Unfortunately, no Bronze Age bronzeworking sites have yet been discovered in Wessex. The distribution of duplicate artifacts can provide some indication of the existence of such sites, however. Duplicates are produced when a single mold is repeatedly used, thus producing multiple artifacts. Because there is no evidence of the prehistoric trade of molds, it can be concluded that any replicas must have been produced at the same site. The apparent clustering of Bronze Age duplicate artifacts within 15-20 kilometer regions in Wessex suggests that dedicated work-areas probably did exist within certain locales (Rowlands 1976; Burgess 1980; O'Connor 1980; Darvill 1987). No statement can be made, however, as to whether these sites were part of a set hierarchy since the range of artifacts produced at the sites cannot be determined by this evidence.

The third criterion is the control of technology. An examination of the hoards reveal a marked difference in the technological skills acquired during the Middle Bronze Age: the upper craft echelon objects were made using complex molds whereas the lower craft echelon objects were produced using simpler molds (Rowlands 1976; Darvill 1987). This difference in technological ability suggests that the regional industrial centers controlled technologies that were beyond the capabilities of the local bronzesmiths during this period.

Bronzesmithing techniques appear to have become more broad-based during the Late Bronze Age. Two innovations were introduced that eased artifact production (Darvill 1987). The first was the use of sheet bronze, rather than casting, for the manufacture of prestige goods. The hammering of bronze into thin sheets is time consuming but should not have been beyond the abilities of most smiths of the period. The second technical innovation was the general adoption of leaded bronze. The addition of lead to bronze beneficially increases its fluidity when molten, which facilitates the casting of objects and raises production yields. The obvious advantage of these two techniques is that they made it possible for local smiths to produce intricate artifacts that were previously in the domain of the regional production centers.

The evidence presented suggests that a high level of craft specialization and a hierarchical industrial organization existed during the Bronze Ages in Wessex. The Early Bronze Age burials with smithing residues in southwestern Britain imply the existence of a hierarchical industrial organization containing craft specialists and elite bronzeworkers. The presence of dedicated work-areas, the production of excess objects for exchange, and the technological and typological distinctions between the two bronzeworking echelons suggest that this hierarchical industrial organization continued during the Middle Bronze Age. The level of craft specialization remained high during the Late Bronze Age, but the hierarchical, two-tiered system may have begun to deteriorate with the introduction of new technologies that simplified the metalworking process.

Iron Age Ironworking

Although iron ore is common in Britain (Tylecote 1986), Middle Iron Age iron production was mainly restricted to the island's three richest ore sources: the Weald, the Forest of Dean, and the Jurassic Ridge. Iron was traded in two standardized forms, known as currency bars, during this period (Allen 1967). The first type is spit-shaped, low in phosphorus, and thought to have been produced in the Forest of Dean area based on its concentration in this region (Cleere 1981). The second type is sword-shaped, high in phosphorus, and believed to have been produced from the phosphorus-rich ore sources of the Northants region due to its concentration in this region and the existence of the possible manufacturing site of Hunsbury (Allen 1967; Ehrenreich 1985).

The first criterion for the determination of the level of blacksmithing craft specialization attained is the manufacture of product surpluses for trade. Unlike the Bronze Age, the evidence of object surplus production during the Middle Iron Age is rare. Few iron hoards have been found that contain artifacts other than currency bars. Hunsbury is the only Middle Iron Age site to produce an example of finished artifacts made to exceed local needs

(Ehrenreich 1985). Two plowshares were found at Hunsbury with the point of one rusted into the socket of another, as if they had been stored for trade. The scarcity of evidence that finished iron artifacts were hoarded versus the wide-spread hoarding of currency bars suggests that finished ironwork was not produced in surplus for export; rather iron was traded mainly as raw stock.

The second criterion for smithing craft specialization is the existence of dedicated work-areas. Evidence of work-floors is elusive in Wessex. Millennia of plowing in this region has erased most floor levels and left only those artifacts discarded in pits to be recovered. Thus, possible workshop locations must be inferred from the clustering of metalworking debris in certain regions of sites. Although evidence of smithing has been found on many Iron Age sites in this region, the smithing remains appear random at most sites (Ehrenreich 1991). For instance, the ironworking by-products discovered at the Danebury hillfort show no obvious concentration within any specific region of the hillfort (Cunliffe 1984). This evidence suggests that ironworking was generally performed throughout the site.

The only site that seems to have contained a prolonged, distinct metalworking area during the Middle Iron Age in Wessex is the small, agricultural settlement of Gussage All Saints (Spratling 1979). Gussage All Saints was apparently inhabited by agriculturists who were also part-time bronzeworkers. Nearly 50 sets of clay molds were recovered for the manufacture of bronze harness-rings. The lack of any finished examples of these artifacts suggests that they were exported after completion. Some ironworking, including smelting, was performed on the site, but only in support of the bronze industry; iron was being worked into the tools and cores required for the manufacture of harness-rings and bronze-covered artifacts. Thus, the archeological remains suggest that it was part-time, bronzeworking specialists who inhabited Gussage All Saints and that ironworking was only performed to aid the bronze industry.

The final indicator of smithing craft specialization is the control of resources or technologies. Iron does not appear to have been restricted during the Middle Iron Age in Wessex (Ehrenreich 1991). Currency bars have been recovered from both hillforts and settlement sites, suggesting that access to raw stock was not restricted to particular site types. The data from Danebury also show that the quantity of iron available during the Iron Age increased over time (Ehrenreich 1985). Thus, the archeological evidence suggests that the inhabitants of all site types were generally able to obtain iron via trade networks during the Middle Iron Age.

Similarly, no technological imbalances are apparent for Wessex during this period (Ehrenreich 1985, 1991). Blacksmithing was generally unsophisticated, and ironworkers at both hillforts and settlement sites were unable to enhance the properties of their tools or weapons (Ehrenreich 1985). First, metallurgical analyses revealed that the methods of production were the same for elite artifacts and basic tools. Second, the only Middle Iron Age artifacts found to have been produced in more sophisticated manners were two quench-hardened chisels from the Danebury hillfort and one quench-hardened wedge from the Worthy Down settlement site. The discovery of advanced tools on both site types indicates that neither superior artifacts nor advanced smiths were restricted to one site form. Thus, the evidence presented suggests that both iron stock and ironworking technologies were generally distributed and readily available throughout the Middle Iron Age in Wessex.

The evidence presented above suggests that a high level of craft specialization and a hierarchical industrial organization did not exist during the Middle Iron Age in Wessex. First, no evidence of the manufacture of surplus iron artifacts for trade is currently available to suggest that elite, specialist sites existed. Second, smithing, using readily available metal, appears to have been generally performed on small settlement sites and throughout hillforts to support the local needs of the inhabitants. Third, except for the presence of the three quenched artifacts, very little understanding of the methods for the alteration of iron's properties was present, and the generally low quality of the goods does not offer any reason to conclude that elite artifacts were produced by specialists on hillforts. This evidence would suggest that the Iron Age ironworking community of Wessex was a more subtle and complex organization, indicative of a heterarchy (Ehrenreich 1991). A heterarchical organization should not be equated with stagnancy or simplicity, however. As Crumley (1987) states, "What is most powerful about the concept of heterarchy is its indeterminacy, its potential, its sense of movement carried to all dimensions." This is especially true for the Middle Iron Age ironworking community of Wessex where a dynamism existed within the broad distribution of smiths, as shown by the discovery of the quench-hardened artifacts on both a hillfort and a settlement site (Ehrenreich 1991).

DISCUSSION

The analysis of the main metalworking communities of Bronze and Iron Age Wessex has permitted the formulation of three main conclusions. The first conclusion is that these industries had different levels of craft specialization. Bronze Age bronzeworking had a high level of craft specialization, whereas Iron Age ironworking had a lower level. Bronze Age bronzeworking would have been restricted to specialists because of the complex technical knowledge required to achieve high probabilities of success when casting. This was especially true during the Early and Middle Bronze Ages when the harder-to-cast unleaded bronze predominated. Iron Age ironworking was not limited by the need for advanced technical knowledge, however, because techniques for enhancing the properties of iron artifacts were basically unknown during this period. Any individual who could hot-forge iron was essentially a successful blacksmith. The ease by which iron tools can be repaired may also have contributed to the lower level of craft specialization. Whereas bronzework must usually be recast when broken, iron tools can generally be fixed by welding. New tools are only required when an artifact can no longer be repaired or resharpened. Thus, insufficient demand for new artifacts may have existed to support a dedicated smithing community.

The second conclusion of this chapter is that the industrial organizations of the main metalworking communities were becoming less rigid with time. Bronzeworking was apparently hierarchically structured during the Early and Middle Bronze Ages in Wessex (Rowlands 1976). This organization declined during the Late Bronze Age, but some vestiges remained (Darvill 1987). The Iron Age ironworking community of Wessex was apparently independent of a set hierarchy, however, and possessed a structure that was more indicative of a heterarchy (Ehrenreich 1991).

The third conclusion is that industrial organizations are affected by changes in societal organization, and new technologies may be adopted in response to societal stresses. The bronze-to-iron transition was apparently not fueled by improvements in the properties of the materials, because Iron Age iron was generally softer than Bronze Age bronze (Ehrenreich 1990). Thus, the transitions from bronze to iron and the evolution from a hierarchically structured metalworking industry in the Early Bronze Age to a heterarchically organized community in the Middle Iron Age must have been for reasons other than improved properties.

The transformation of the organization of the main metalworking industries of prehistoric Wessex paralleled the general trend from a hierarchical society in the Early Bronze Age to a heterarchical society in the Middle Iron Age. As cross-channel exchange diminished and society became less stable, the need for smaller groups, greater self-reliance, and more secure trade routes may have increased for all aspects of society (Ehrenreich 1991). For the metalworking community, this transition may have initially manifested itself in the change from the two-tiered, copper-tin bronzeworking industry of the Early and Middle Bronze Ages to the wider spread, less hierarchical, copper-tin-lead bronzeworking industry of the Late Bronze Age. As communities became more self-reliant, the adoption of a material that was easier to cast may have been advantageous.

As society further changed from a hierarchical organization, however, an even more generally available material might have been required. Although initially inferior to bronze, iron may have appeared an attractive alternative to the inhabitants of prehistoric Wessex because the region was surrounded by three major sources of iron and because it was simpler to produce and repair iron tools. For the inhabitants of heterarchical Iron Age Wessex, iron would have been a good material on which to base the formation of a new metalworking community, a material that mirrored their societal organization. The fact that bronzeworking was still a craft specialized industry during the Middle Iron Age, as shown by Gussage All-Saints, shows that metalworking craft specialization was still possible during this period. Thus, the transition in the main metalworking industry to a heterarchical organization during the Iron Age was not due to an inability to sustain a hierarchical metalworking industry but to a decrease in societal stability and a general trend toward greater self-reliance and heterarchical organizations.

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5

Heterarchy in Bronze Age Denmark: Settlement Pattern, Gender, and Ritual

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ABSTRACT

The social system of Bronze Age Denmark (c. 1500–500 BC) is analyzed from the perspective of heterarchy. Special emphasis is placed on archeological evidence from habitation sites, including direct evidence of economic activities and production control. The history of such research is reviewed to reveal the intellectual traditions of previous analyses. In addition, gender relations and the role of ritual in the social system are considered. The framing concept of heterarchy helps explicitly integrate evidence of domestic and ritual activities and emphasizes the importance of lateral as well as vertical relationships within the prehistoric society.

> Many of us have learned from one source or another (Marx, Gramsci, Mannheim, Orwell, etc.) to doubt that the political ideologies in which we are schooled tell us much about the nature of the power with which we must live. We are inclined to suspect that there is always (or at least generally) *more* power and/or domination extant in any given system of politics than is manifest or acknowledged. But I see no reason why this should necessarily be so. I suggest that it is equally possible (if not equally likely) that there are systems of politics in which less power exists than is manifest or acknowledged (Petersen 1993:339).

When I started thinking and writing about the Danish Bronze Age 20 years ago, I found a traditional chiefdom model for the prehistoric society reasonably satisfying. There were, after all, the many burials containing differing amounts of what were clearly wealth and prestige items (Randsborg 1974); and it turned out that the hoards (sometimes known as votive deposits and comparable to caches in Americanist terminology) were also quite hierarchical in appearance (Levy 1982). There was a problem with limited representation of Bronze Age settlements in the archeological record, but it had not stopped Danish scholars from reaching conclusions about prehistoric social structure, so I decided it would not stop me either.

Since that time, my specific interests in the Danish Bronze Age changed. Early on, I was especially concerned with typology, context, and symbolism of metal objects, particularly those from the hoards. Later, I became interested in the production of the bronze and gold objects; it turned out that there was considerably less scholarship about production than about dating, typology, and distribution (Levy 1991). An interest in technical production led to an interest in the possible locations of production, and this led, inexorably, to thinking about and worrying about the missing settlement sites.

More or less parallel with these intellectual developments, I began another career in southeastern U.S. archeology. These prehistoric cases share a number of characteristics: evidence of agriculture in a temperate climate, burial mounds, prestige goods, exotic materials, and hoards or caches. Researchers in the two regions are interested in similar questions of stratification, exchange, and interconnection between ritual and political power.

But there are also differences between the two areas, and it is these differences that further encouraged me to begin rethinking Danish Bronze Age chiefdoms. In particular, growing familiarity with the archeological remains of Mississippian societies began to disturb my vision of

the Bronze Age. Those Mississippian cultures were *chiefdoms*: fortifications, central places, and human sacrifices. It made Bronze Age Denmark look *skimpy*. In this chapter, I wish to reconsider the social organization of the Danish Bronze Age, explicitly integrating evidence from settlement excavations with older burial evidence, incorporating new interpretations of gender relations, and using the concept of heterarchy as a framing concept (after Small, this volume) to illuminate the material. I will begin with a review of the culture-historical background and a discussion of the history of research on these topics.

CULTURE-HISTORICAL BACKGROUND

Denmark in the Bronze Age is part of a larger South Scandinavian cultural area that includes southern Sweden, northern Germany, and southernmost Norway (Figure 5-1). The Bronze Age in Denmark is traditionally divided into six periods, labeled Periods I–VI. These, in turn, are grouped into the Early Bronze Age (c. 1800–1100 BC, Periods I–III) and the Late Bronze Age (c. 1100–500 BC, Periods IV–VI). A mixed agricultural and pastoral economy was practiced throughout the period, and there is evidence of craft activities in metallurgy, textiles, and woodcarving. No metal ores are found in or near Denmark; the flourishing local metallurgy was based on imported raw materials, probably coming from a minimum of 800 kilometers away.

The best known archeological remains are burials; mostly inhumations in the Early Bronze Age and exclusively cremations in the Late Bronze Age. These are often found in earthen mounds and accompanied by grave goods of bronze, gold, amber, and organic materials. The inhumations may be placed in wooden coffins or structures, while the cremations may be found in pottery urns. A second large category of finds are hoards and single finds, also mainly of metal artifacts (see Jensen 1982:129-190 for a good summary).

Of course, domestic habitation sites are not really missing. The first influential publication of excavations of Bronze Age settlement sites in Denmark was in 1919 (Müller 1919), and there has been a significant increase in both excavation and publication of these sites over the past 25 years (Rasmussen and Adamsen 1993). Nevertheless, the evidence from settlement sites has not yet been fully integrated into evaluations and debates about social organization in Bronze Age Denmark.

HISTORICAL BACKGROUND: SURVEY, SETTLEMENT PATTERN, AND SOCIAL ORGANIZATION

I review the history of survey and settlement research in some detail to illuminate the intellectual background that has yielded current interpretations of Bronze Age social organization and that shaped my early thinking on the subject.

Survey

Systematic, national surveys of archeological material were implemented as early as the late-sixteenth century in Scandinavia (Klindt-Jensen 1975:16-20). In Denmark, two episodes of parish-by-parish recording of archeological remains, in 1873–1920s and again in 1937–1956, have provided a large corpus of archeological information (Ebbesen 1985). The survey methodology resulted in a reasonably good record of visible monuments, such as burial mounds, megaliths, fortifications, runestones, rock carvings, and shell middens. In the more recent parish survey, the visible monuments were supplemented by records of surface collected artifacts, systematic and unsystematic excavations of burials, and other artifactual evidence turned up by plowing, road building, and other construction. In addition, Mathiassen (1948, 1959) conducted his own intensive surveys of two small areas of Denmark, one eastern and one western, with the goal of interpreting settlement patterns by various quantitative manipulations of the survey data.

These data formed the basis of several comprehensive reviews of Danish prehistory (e.g., Brøndsted 1957–1960; Broholm 1943–1949) in which the interpretations of land use and social organization are largely based on the distributions of material recorded during the national surveys. These data have also been used frequently for intensive reviews of segments of the material record: typological, chronological, and distributional examinations of particular pottery types, megalithic tombs, bronzes, and so forth (e.g., Becker 1947; Ebbesen 1978; Lomborg 1973a).

More recently, the survey data, including Mathiassen's, provided the foundation for several publications dealing explicitly with social structure in later prehistory (e.g., Randsborg 1974; Kristiansen 1980, 1982; Hedeager 1980; Larsson [1986] has utilized a similar approach with Bronze Age materials in southern Sweden). In these publications, the distributions of burials, hoards, and single

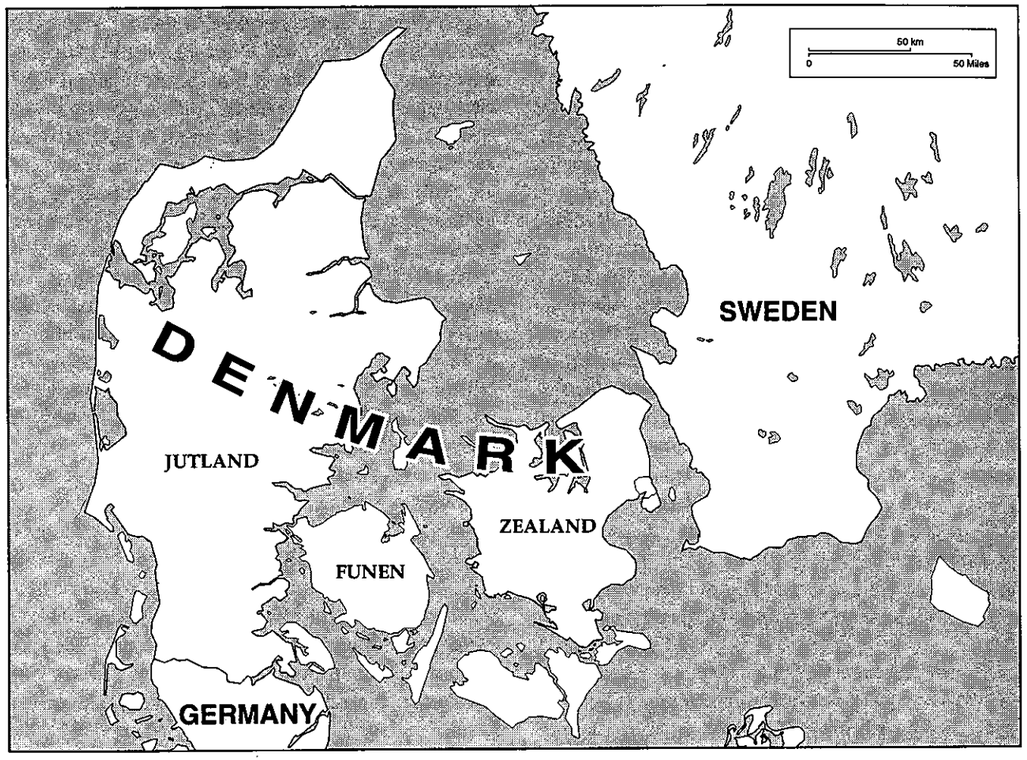

Figure 5-1: *Map of Denmark and southern Scandinavia.*

artifacts are analyzed through comparison with land quality and through various quantitative manipulations to illuminate settlement pattern and social structure, with an emphasis on the development and explanation of nonegalitarian social organization. In general, evidence from excavations of actual settlements is treated as peripheral in these publications.

Settlement Sites

Although there were scattered excavations of Bronze Age settlement sites at the beginning of the century, as noted above, such excavations did not become an important part of Bronze Age research until the late 1960s. It is important to our understanding of the role of settlement excavations in Bronze Age studies to recognize that the pioneering excavations of the late 1960s and early 1970s were explicitly focused on tracing morphology of house structure and village organization from the medieval period back to the Iron Age and then to earlier periods (Becker 1972, 1976, 1980). My reading of the literature suggests that the same focus is still strong and creates a major, perhaps excessive, emphasis in the research on details of house construction. The original intellectual goal, apparently still influential, was to discover the origins of the agglomerated medieval village. With that kind of focus, it is perhaps not surprising that the potential contributions of village excavations to answering questions about Bronze Age social organization have been relatively ignored.

The surveys and excavations associated with establishing the Danish national gas pipeline (RAS 1987) and other rescue contexts have significantly added to the sample of Bronze Age settlement sites. Recently, an interdisciplinary, multi-national research project has been established to investigate Late Neolithic and Early Bronze Age settlement patterns in northern Jutland (Earle 1994). Important contributions to Bronze Age settlement studies have also been made since the 1970s by Thrane and his colleagues through excavations (e.g., Thrane 1971, 1984) and a series of conferences specifically focused on issues of settlement pattern (e.g., Thrane 1976, 1980). Thrane proposed a research policy for Bronze Age settlements in 1982, noting in particular the lack of good floral and faunal data. Jensen's (1987) comments suggest that these gaps in the data had still not been ameliorated after five years. However, these are exactly the kind of data needed to analyze such key aspects of social organization as control of production, subsistence, and wealth. As Earle (1991:13) notes, analysis of chiefdoms requires understanding of household and community; the data from excavations of habitation sites is, thus, essential.

Social Organization

As noted above, traditional interpretations of Bronze Age settlement pattern and social organization in Denmark have relied heavily on evidence from the burials with additional information from distributions of hoards and single finds. The Early Bronze Age burials reveal considerable variability in quantities of metal grave goods (e.g., Randsborg 1974). There is also variability in the size and construction of burial mounds, but this has never been systematically related to the grave goods. Thrane (1984:154) points out that there is no regular correlation between the size of the mound and the wealth of the grave goods, although there are certainly individual cases in which the largest mound in a locality contains the richest grave goods. Although the Late Bronze Age cremation burials (most of which are secondary depositions in earlier mounds) generally contain many fewer artifacts than the Early Bronze Age burials, there is limited evidence of ranked variability within the cremations (Thrane 1981). Furthermore, there is significant ranked variability in size and complexity of Late Bronze Age hoards (Levy 1982).

Thus, it has been widely accepted that some kind of non-egalitarian social organization existed in the Bronze Age in Denmark and was reflected in the variable distribution of bronze and gold objects in burials and hoards. These data suggest some form of prestige goods economy associated with control of ritual activities. Kristiansen (1982, 1987) would make this a significantly stratified society and, as noted above, I have written about it as a classic chiefdom. Larsson (1986, 1988) suggests a similar chiefdom model for southern Sweden, although a flatter, more egalitarian social system for central Sweden. Malmer (1992) has recently suggested that south Scandinavian Bronze Age societies were comparable to Mycenaean Greece, based on his interpretation of certain small metal objects as standardized weights. However, even if the use of such weights is confirmed in Scandinavia, the fortified centers, centralized storage, and complex writing systems of Mycenaean Greece are evidence of a fundamentally different political economy than in Denmark and Sweden.

The analyses by Kristiansen, Larsson, and others are mostly based on burials, hoards, and single finds. However, the burials and other non-settlement survey evidence do not provide certain important information. In particular, the organization of production and the size and integration of regions are difficult to discern in these data and, yet, are critical to understanding non-egalitarian social systems (Service 1962:141-144; Shennan 1986; Earle 1987). The existence of regional centers has been proposed for Bronze Age Denmark based on overlapping distributions of wealth items: gold and imports in burials, hoards, and single finds (Jensen 1981; Levy 1982:88f). However, the physical nature of these centers (e.g., homestead, village, periodic fair), if they exist, and their relationships with surrounding communities remain to be clarified. I now have nagging doubts about the existence of regional integration and centralization in the Danish Bronze Age. I will return to these points below after reviewing the settlement excavation evidence.

SETTLEMENT EVIDENCE FROM EXCAVATIONS

Bronze Age settlements consist of several structures, most of which are post-built, long houses ranging in length from 10 to 35 meters (although mostly 18–24 meters) and in width from 5 to 10 meters (mostly 5.5–7 meters). In earlier phases, some houses apparently had log or plank walls; later, wattle-and-daub is standard. Smaller post-built structures and small, sunken-floored, turf-walled structures are also represented as are pits of various

kinds, hearths, and miscellaneous post holes, which presumably represent more ephemeral structures. Piles of fire-cracked rock, called "cooking stone mounds" are common features both inside and outside of houses. Bech (1993) recently reported the presence of small round post enclosures at one Early Bronze Age site and suggests that these could be corrals or storage facilities.

The small, sunken-floored structures are most common at the beginning of the Bronze Age. Through the middle of the Early Bronze Age, a single row of roof-bearing posts down the long axis of the structure split the building into a two-aisled house. From that time through the rest of the Bronze Age (and into the Iron Age), two lines of roof-bearing posts divide the building into a three-aisled house. The long houses are almost uniformly oriented east-west; the homogeneity on this point is startling. A few preserved clay floors are known and sometimes the long houses are divided into halves or thirds by a light post-built wall. A few fragments of painted wall plaster are known from an Early Bronze Age site (Lomborg 1973b) and a Late Bronze Age site (Berglund 1982). Jensen (1987) and Rasmussen and Adamsen (1993) provide summaries.

Most of the largest houses (c. 30 by 10 meters) date to the middle of the early Bronze Age and, so far, have been found only in Jutland, western Denmark (e.g., Ethelberg 1986). These large houses are a small part of the total sample, and I cannot agree with Kristiansen (1991:28) that house size, in general, declines from Early to Late Bronze Age. At least one equally large house is known from the Late Bronze Age, also in western Denmark (Boas 1991). Separate storage structures are found in some Late Bronze Age settlements (Boas 1991:134), so that evaluation of the size of households should consider both kinds of structures.

Virtually every excavated settlement has revealed overlapping post-hole patterns suggesting the rebuilding of structures. It has proven difficult to establish the size of the community at any one time, but almost all excavations have uncovered houses occupied at different periods. There appear to be several farmsteads in some excavations, each consisting of one to three structures, loosely associated in a community. A community may consist of two to ten structures at any one time. It is also the case that evidence of houses and cultivation alternate at some sites (Draiby 1984; Thrane 1984:115f), suggesting that people periodically took advantage of the organic enrichment of settlement sites for agricultural production. While individual houses are periodically rebuilt and moved short distances, all the evidence suggests permanent, year-round sedentism, although Earle (1994) suggests that some of the Early Bronze Age population occupied lightly built summer structures away from the communities of large post-built houses.

There are no fortifications reported from any settlement sites in Denmark or southern Sweden. One recently reported fortified site from central Sweden (Larsson 1993) is atypical in many characteristics and may represent a migration from the Lausitz area; in any case, it is unique. Tools and subsistence remains are quite consistent from site to site. Handmade pottery (largely undecorated), flint tools, and flint waste are ubiquitous. There is evidence for bronze casting at almost all of the Late Bronze Age sites. Such evidence also appears at some Early Bronze Age sites (Rønne 1989), although the overall excavation sample is smaller than for the later period. Barley and cattle are dominant in the subsistence record of most sites. Spelt, emmer, and chenopodium are also known (Rowley-Conwy 1984a), and fish, shellfish, and deer are fairly common as well (Winge 1919). Animal bones are apparently poorly preserved in many sites, and systematic flotation for plant remains is apparently infrequent (Rowley-Conwy 1984b:110)

There is some limited evidence for functional variability in the reported domestic sites. There is evidence for specialized coastal collecting sites (Winge 1919; Sø. Andersen 1976:52), and some sites contain extensive amber-working debris (e.g., Müller 1919). Specialized ritual structures are reported from a few excavations (Kaul 1985; Boysen and Andersen 1983). Thrane (1974) proposes that one site had a specialized industrial function of some kind, while Earle (1994) demonstrates that skin-working was an important craft at one Early Bronze Age site. The variable presence of clay floors in excavated houses is a result of post-occupational plowing rather than differences in construction; however, painted wall plaster is probably present in only some structures.

The relatively limited sample and the various excavation strategies make it difficult to evaluate this diversity. While the settlement evidence suggests variability, there are only a few candidates for central places. My reading of the evidence does not clearly support Kristiansen's (1991:28) statement about "chiefly settlements" and "ordinary settlements." The former are apparently identified by the presence of one large structure, while evidence from the number of structures, storage facilities, toolkits, and

other factors are not integrated into the argument. It is possible to see a site hierarchy in a few localities, but it is a limited and rather flat hierarchy.

In addition, the subsistence evidence has never been shown to differ substantially from house to house within a site or between sites. Despite frequent claims that control of cattle was the basis for elite wealth and competition in both Denmark and the European Bronze Age generally (Rowlands 1980; Jensen 1982:144,151; Kristiansen 1980, 1982; Larsson 1986:101,138), as noted above, little quantified analysis of subsistence remains has been reported. Cattle (as well as sheep and pigs) clearly had an important role in the economy, and there are pollen indicators of grazing (Sv. Andersen 1990), but the arable component has been, in my opinion, systematically underemphasized. For example, Jaeger and Laursen (1983:115) suggest that stock keeping was the dominant economic activity at the Early Bronze Age settlement of Lindebjerg, based on their interpretation of the site's catchment area. However, they recovered *33 liters* of carbonized grain from one burned house (Jaeger and Laursen 1983:104). Rowley-Conwy (1978) reports this as a store of cleaned grain, thus not animal fodder. While the excavators cannot be blamed for poor bone preservation, they seem to be ignoring direct evidence of a significant arable component in the economy.

In addition, Sv. Andersen and colleagues (1983:188) suggest that pollen of weedy genera, such as *Plantago* and *Rumex*, may indicate fallow fields and field borders as well as pasture. Recently, Bech (1993) has reported on excavations of a Bronze Age settlement in northern Jutland in an area of poor sandy soils and frequent wetlands, typically identified as the kind of locale exploited for pastoralism. Yet, Bech (1993:143) reports that along with cattle herding, "...there were fields for longer or shorter periods in practically every part of the area where it was not too wet." A recent analysis of wear and muscle markings on cattle bones from another site suggests their use as draught animals, presumably for plowing (Rasmussen and Adamsen 1993:140). Yet, while arable was important and ard furrows are ubiquitous, there is no evidence of field systems or field boundaries such as are known from Britain from comparable time periods (and from Denmark in the Iron Age). This suggests a less formal, less rigid, and less stable system of land tenure in the Bronze Age than later.

The craft of metallurgy is frequently claimed to be controlled by elites in Bronze Age Europe, but the direct evidence of metallurgical production in Denmark, although certainly incomplete, does not provide clear support for this claim. Virtually all Late Bronze Age settlements yield evidence of metallurgical production of a range of artifacts (Levy 1991). Many fewer Early Bronze Age settlements have been excavated, and fewer have yielded evidence of metallurgy (but see Rønne [1989]). A second location for production seems to be attested to by finds of stone molds for axes, sickles, and other utilitarian objects in bogs and other contexts outside of settlements. There is at least a third locale for metallurgy, implied by the lack of any direct production evidence for some of the most elaborate metal artifacts (e.g., elaborate belt ornaments, ceremonial trumpets). Rønne (1987) proposes that Zealand and its neighboring small islands were home to at least seven metallurgical production districts in the middle of the Early Bronze Age, based on analysis of the varying decoration on bronze objects including weapons and ornaments. These numerous production zones within this small area of around 9,000 square kilometers suggest dispersed control of metallurgy (the total region in question is noticeably smaller than the state of Connecticut, which is about 13,000 square kilometers). As with the general settlement evidence, we have here evidence for variability in metallurgical production, but (at least so far) no evidence for the monopolistic control of metal resources that Shennan (1986:139) suggests for Denmark because of its geographic position in relation to ore sources. I will argue below that this fits within a heterarchical model.

GENDER AND ICONOGRAPHY

The excavated settlement evidence, while certainly imperfect, is central to understanding Bronze Age social organization. Supplementary information comes from analyses of the gender associations and symbolism of the metal artifacts collected in older research about burials and hoards. For the purposes of this chapter, I will not repeat the background evidence for the discussion of gender and ideology. On the gender identification of certain artifacts, see Sørensen (1987, 1991), Gibb (1987), and Randsborg (1984). On the iconographic nature of engravings on metal objects and the ritual nature of the hoards, see Levy (1981, 1982) and Kristiansen (1982).

Evidence for differential status and activities of men and women in Bronze Age Denmark is also incomplete but suggestive (Levy 1992). Sørensen, Randsborg, and others have pointed out that, especially in the Late Bronze Age, a significant amount of metal wealth was devoted to objects apparently used by and symbolic of women. Metal wealth also went into male-associated items, and there is wealth invested in what I consider non-gendered items, including feasting equipment and horse gear. Most of these items are engraved with representational motifs with apparent ritual meaning and found in ritual contexts (e.g., burials and hoards). Thus, both men and women were seen to wear and control objects embodying ritual power. The arenas of ritual activity seem to have differed, with women involved in rituals that deposited artifacts in watery places (possibly related to fertility) and men involved in the kind of processions and combats pictured in rock carvings.

The most important source of iconography for Bronze Age Denmark are the engraved designs (and occasional three-dimensional figurines) on the metal objects deposited in hoards and graves. Important motifs include stylized boats, birds, horses, horned animals, snakes, suns, axes, and various abstractions of these (Figure 5-2). Human figures, star shapes, circles, spirals, and related motifs are also found. Some of the motifs have affiliations to central European Urnfield and Hallstatt cultures, but others have very deep roots in Denmark. The motifs can be combined and recombined in various ways: boats and suns; suns and horses; snakes (or dragons?) and boats; birds, boats, and suns, and so forth. The iconography can be called "multivocal," following Turner (1969), and encompasses *exegetical meanings* (the themes of water/sun/animal and fertility directly expressed in the decoration), *operational meanings* (the themes of status and gender expressed in manipulation of the objects by people of different social position), and *positional meanings* (the themes—difficult to disentangle—revealed by relationships between and among symbols in their different combinations; Levy 1995). The iconography thus provides a multivocal situation of potentially great ambiguity, with opportunities for social manipulation.

DISCUSSION—ENTER HETERARCHY

As described above, the social system of Bronze Age Denmark has frequently been described as a chiefdom, as hierarchical, or as stratified, based largely on evidence from burials, hoards, and single finds. The growing corpus of evidence excavated from habitation sites does not fit as clearly into these proposed models. Some evidence also suggests significant allocation of ritual power to both women and men. The framing concept of heterarchy provides a different way to look at this evidence, a perspective that integrates the various sets of evidence.

In her original description of heterarchy for archeologists, Crumley (1979:144) defines it as a system of relations "...in which each element possesses the potential of being unranked (relative to other elements) or ranked in a number of different ways, depending on systemic requirements...elements in a hierarchical structure are most frequently perceived as being vertical...whereas heterarchical structure is most easily envisioned as lateral, emphasizing the number and variety of connections among elements and the varying circumstantial importance of any single element." She also notes (Crumley 1979:145) that hierarchical systems are a subset of heterarchical ones. Crumley (1979; Marquardt and Crumley 1987:379) has utilized the concept of heterarchy in the analysis of state societies to emphasize issues of regional diversity and regional resistance to the centralizing cultural and political pressures of a state. However, I find the concept useful in interpreting those societies, such as Bronze Age Denmark, we label "chiefdoms," "ranked," or "middle-level." The significant points of the heterarchy framing concept are the emphasis on variability, context, and fluctuation of social relations, and the co-existence of hierarchical and heterarchical organizations within a region and/or polity. Social segments or units, including individuals, communities, households, and kin groups, may be involved in simultaneous vertical and lateral relationships. Finally, the heterarchy model does not privilege stratification or hierarchy as the hallmarks of complexity, order, or progress (Crumley 1987).

If we look at Danish Bronze Age society through the perspective of heterarchy, the settlement evidence, the iconography, and the gender evidence come together rather neatly. Clearly, some relationships of ranking, of differential wealth, or of domination and subordination existed and was reflected at least partly in wealthier and poorer burials, larger and smaller mounds, and variability in houses. But while some hierarchical relationships must have existed, the model of heterarchy—with its sense of diversity and fluctuation and its incorporation of *both* vertical and horizontal differentiation—enriches our perspective. In particular, it begins to make sense of the combination of rather more hierarchical-looking burials and rather less hierarchical-looking settlements.

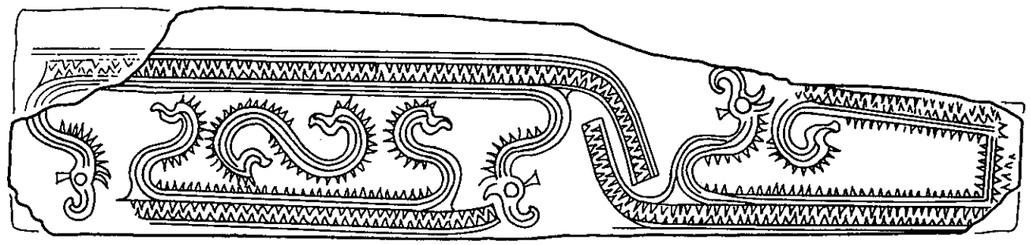

Figure 5-2: *Late Bronze Age razor with iconographic engraving (approximately 10 centimeters long). Redrawn by J. Hook, MASCA, based on Broholm (1953).*

In the case of gender relations, Sørensen (1987:100) suggests that it seems as if men and women in Bronze Age Denmark were parts of two separate social hierarchies. An alternative way of expressing this is to suggest the existence of multiple sources of power and status in the society, including control of agricultural production, craft production (which I am not willing to cede entirely to men, even in the case of metallurgy), trade, combat, and ritual power. Sometimes, these reinforced each other and created temporarily powerful chiefs; for example, the person buried in the rich cremation grave in the large mound at Lusehøj (Thrane 1984). Influence and authority were dispersed at other times to a number of parties, male and female, exploiting diverse means of control and legitimation. It is striking that Bennike's (1993:37) chart of male and female height through history in Denmark shows that females were taller in the Bronze Age than at any other period until the twentieth century and that sexual dimorphism in height was less in the Bronze Age than at any other period, suggesting more equal diets and health conditions in this period than in others (however, the sample of Bronze Age skeletons is much smaller than for other periods, so these data remain suggestive only).

In the case of iconography, the relations among and between iconographic motifs share the characteristics of fluctuation and of shifting between horizontal and vertical dimensions that are characteristic of heterarchical systems in general. Sometimes birds/boats contrast with horses/suns; sometimes, birds/suns contrast with horses. The motifs repeatedly change position and context.

For settlement pattern, we have the richest data base, even with all its gaps. Interpretations will undoubtedly change as new settlement excavations and further analyses are published. The existing information suggests that site hierarchy is minimal in Bronze Age Denmark, however, in contrast to Thrane's (1983:156) suggestion of up to a four-tiered social system, based on mortuary data. The archeological data lack evidence of field boundaries, fortification, centralized storage, and centralized control of craft production. Thus, there is currently neither systematic evidence of competition for subsistence resources nor differential control of subsistence resources. Individual sites seem to have served as low-level functional centers from time to time—for ceremonies or for shellfish gathering or for amber collecting or for metallurgy—but evidence of centralized decision-making or regional integration is lacking. Thus, while one site (community) may have been periodically subordinated to another, interrelations among both people and sites seem to have numerous complex lateral strands, as well as periodic vertical strands. The complexity of the social system remains, but it can be conceived in terms other than strictly vertical. A chiefdom model overemphasizes the vertical, while a heterarchical model illuminates both the vertical and the lateral.

The heterarchy model is also congruent with evidence about the cycling characteristic of chiefdoms (Earle 1991:13). In many cases, centers of influence shift from place to place, and degrees of both centralization and differentiation fluctuate over relatively short lengths of time. This has been demonstrated for Mississippian chiefdoms by Anderson (1994) and is clear in the Danish material as well (Kristiansen 1980; Levy 1982:86-91). This cycling is expected in a heterarchical model that emphasizes the normality and ordinariness of fluctuation and change in economic and political relationships.

The concept of heterarchical settlement pattern and social system also makes sense in the context of evidence that control of ritual ceremonies and esoteric knowledge (Levy 1981) had an important role in maintenance of prestige in Bronze Age Denmark (also Kristiansen 1982, 1987:43-45). As in a number of ranked but non-state societies (Earle 1987:298-300), both social status and the practical ability to influence the acts of others are bolstered by control of important symbols displayed at ritual occasions (e.g., burials, the ceremonies represented in rock carvings, and whatever ceremonies left the so-called hoards or votive offerings in the archeological record). In many ways, the status and prestige derived from these rituals appears to have come from control of esoteric knowledge and objects made of exotic materials (i.e., bronze and gold). This situation has parallels to that described by Helms (1979), who points out that the control and display of objects made from exotic materials (physically distant resources) reinforces prestige derived from esoteric knowledge (spiritually distant resources).

In fact, the ritual display—which we see in the apparently hierarchical burials and hoards—may represent the major reality, even the entirety, of power. Esoteric knowledge and ritual power are impressive, but as Rappaport (1971:71f) pointed out, one of the characteristics of religious discourse is that it is cryptic and ambiguous. Thus, it can be manipulated, negotiated, and reinterpreted as needed. The considerable abstraction and simplification of the Danish iconographic motifs, which are minimally realistic representations, contribute to this potential ambiguity, as do the changing combinations of different motifs. While Rappaport emphasizes changing ecological conditions as the spur for manipulating and reinterpreting ritual discourse, the same ambiguity will allow flexibility, negotiation, and adjustment of social relations by manipulation of ritual themes, motifs, and presentations.

Nevertheless, in the absence of effective elite control of productive resources, such ritual power is eventually (perhaps quite soon) limited. Thus, the existence of the hierarchical-looking burials and the non-hierarchical-looking settlements of Bronze Age Denmark. That is, ritual power and its associated prestige are real but frequently limited. Archeologically, the reality is expressed in the remains of ritual occasions, while the limits are revealed in the remains of settlement sites where evidence of stratified control of resources and people is sparse. It appears that households and communities controlled major subsistence and productive resources, including land, labor, and skill, with considerable independence and autonomy.

HIERARCHY AND *POTENTIAL*

Kristiansen (1980, 1982, 1991) has published some of the most complex and influential analyses of Danish Bronze Age social structure. When he analyzes Bronze Age social structure with reference to the preceding Neolithic, he emphasizes the degree of hierarchy in the Bronze Age: "...we are dealing with a hierarchical chiefdom structure with unequal access to prestige goods, characterized by intensive consumption of personal wealth in burials and hoards" and a "rather complex system of rank" (Kristiansen 1984:85-86). In comparing Neolithic and Bronze Age, Kristiansen (1984:85) argues: "The system's evolutionary potential was not released until the introduction of bronze." However, when analyzing the Bronze Age with reference to the succeeding Iron Age, he pictures the Bronze Age as somewhat less hierarchical, arguing "...the communal life characteristic of the Bronze Age chiefdom is evidently resistant to exploitation..." (Kristiansen 1991:40). He goes on to say: "The core components of Iron Age social organization were developed during the late Bronze Age, but their potential was constrained by the tribal rationality of Bronze Age society" (Kristiansen 1991:39).

Kristiansen's long time-frame is an important contribution of his extensive work, but these comments about potential being "constrained" or "not released" make the prehistoric societies sound like under-achieving children. The underlying implication is that there is a uni-directional development to be accomplished; that *good* societies are those that reach their full potential; and that this potential is reached in centralized, hierarchical systems—fundamentally, states, such as developed in Denmark in the Iron Age.

Furthermore, it is notable that the phase of "consolidation and decline," according to Kristiansen (1991:30-31, 38), is archeologically represented by increased investment in votive offerings deposited outside of graves in contrast to the earlier "expansion" phase, which is represented by investment in lavish military equipment deposited in graves. One might ask: decline for whom? Less militarism and expansionism in the society might make life more pleasurable for lots of people, while the shift to votive offerings of female-associated objects suggests a rise in the influence of women. This is certainly *different* than before, but it can only be conceived of as a decline if increased hierarchy is conceived of as the goal or if only male competition and hierarchy count as complex

and interesting. In contrast, the heterarchy model encourages us to consider the complexity of social systems where both vertical and lateral relationships and interactions are steadily being experienced and negotiated without privileging one kind of relationship as releasing potential while another kind of relationship indicates a decline, an implicitly bad state of affairs (Crumley 1987).

CONCLUSION

This brings us back to the quote that opened this chapter. Petersen (1982, 1993) describes a political system on the island of Pohnpei, which is theoretically based on a complex set of ranked positions with significantly differential power. But it does not work that way in real life, in part because of deeply held cultural values about secrecy, concealment, and verbal finesse (*kanengamah*):

> Members of a community may engage in egalitarian activities in one sphere and hierarchical activities in another; within a single sphere they may express egalitarian values at one moment and hierarchical values at another....Equality and hierarchy are not mutually exclusive categories; they must be described in their simultaneous profusion (Petersen 1993:338).
>
> No one can be sure of what has been agreed upon; no one can be sure that his or her views have carried the day. No one can convert the *structure* of power—chieftainship—into the *fact* of power, because in a society that discounts the likelihood of learning the truth, those with credibility are those who assert nothing (Petersen 1993:348; emphasis added).

Or as Fried (1967:33) put it: "...leaders can lead, but followers may not follow." Petersen's description of Pohnpei is of a distinctly heterarchical political system. The cultural specifics of the Danish Bronze Age are, of course, quite different (and we have no way of knowing if the values of *kanengamah* existed there), yet the description of Pohnpeian social organization rings true with my understanding of the Danish Bronze Age archeological record. That is, there is an ideology of hierarchy revealed in remains of ritual activities. But the facts of power, represented in the domestic remains of habitation sites, are complex without being exclusively or even mainly hierarchical.

As Petersen notes, this ethnographic case forces us to consider that in emphasizing the frequent concealment of power in egalitarian ideology (so familiar in our own contemporary political scene), we have ignored the concealment of egalitarianism in an ideology of hierarchy. The concept of heterarchy provides a tool to illuminate the *simultaneous profusion* of equality and hierarchy that characterized the Danish Bronze Age and is revealed archeologically in the superficial contradiction of hierarchical-looking burials and hoards and non-hierarchical settlement evidence. It is not that there are no chiefs in Bronze Age Denmark; rather the presence of chiefs is only one part of a more complex social organization, in which individuals and communities manipulated diverse sources of influence and authority and experienced fluctuating political realities.

Thus, the concept of heterarchy is illuminating in the study of chiefdoms or middle-range societies generally for several reasons. Working from a framing concept of heterarchy encourages us to the examine the complexity of everyday social relations, as revealed through archeological evidence of production, ritual, and other activities. Heterarchy acts as a balance to our biases in analyzing social systems; biases enculturated in extremely hierarchical societies and, thus, inclining us to see hierarchy in virtually all prehistoric situations, even where it is not obvious. Heterarchy emphasizes the normalcy of fluctuation and change within social systems, without forcing analyses of change into unilineal developmental paths. Finally, heterarchy encourages an understanding of complexity that does not privilege hierarchy as an *advance* and emphasizes the possibility of multiple bases of influence and power within a society.

ACKNOWLEDGMENTS

My first attempt to incorporate the settlement site evidence and the concept of heterarchy into a consideration of Danish Bronze Age social organization was in a 1985 Society for American Archaeology paper. This chapter is an attempt to explore these issues further. It is based in part on papers presented at the 1992 and 1993 meetings of the Society for American Archaeology, as well as that 1985 paper.

I hope my large debt to my Scandinavian colleagues is obvious from the references. Over the years, I have received hospitality, guidance, and intellectual stimulation from Klavs Randsborg, Kristian Kristiansen, Prof. C.J. Becker, Jørgen Jensen, Poul Otto Nielsen, Prof. Berta Stjernquist, Henrik Thrane; the staffs of the National Museum, Copenhagen; Lund University Historical Museum; the Funen Community Museum, Odense; Aalborg Historical Museum; Moesgaard Museum, Aarhus; Institute for Prehistory and Archaeology, University of Copenhagen; and many other individuals. I am also grateful for the hospitality, practical help, and intellectual stimulation of Anders Fischer and Elisabeth Pedersen. Financial support for research in Denmark at different times was provided by the Danmark-Amerika Fondet and by the Foundation of The University of North Carolina at Charlotte. The chapter benefitted from comments from the reviewers of the Archeology Division of the American Anthropological Association.

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6

A Case Study of Heterarchy in Complex Societies: Early Medieval Ireland and its Archeological Implications

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ABSTRACT

Early Europe provides considerable evidence of heterarchical organization. Early Medieval Ireland will be examined in this chapter. Both textual and archeological evidence of a chiefdom-type society will be evaluated, and the combination of the two will show that texts can provide details of sociopolitical organization that may be difficult or impossible to interpret from archeological evidence alone. The conclusions are couched in exclusively archeological terms, however, because the point of the exercise is to attempt archeological interpretations of heterarchy.

Although not explicitly in print, I have implied elsewhere (Wailes 1990:354) that early Europe provides considerable evidence of heterarchical organization. Most usefully, Europe also provides examples of *chiefdom*-type societies that were literate, thus providing native textual evidence about the workings of such societies and so affording the opportunity to evaluate the contemporaneous archeological evidence in the light of written evidence. One of these literate *chiefdom* societies was Early Medieval Ireland (Figure 6-1), the subject of this essay.

Both secular and religious sites are mentioned, even described, in the written sources of Ireland. Archeologically, they cannot only be identified but distinguished from one another in the field. As will be shown, this evidence permits a degree of heterarchical interpretation, although both categories of site show size and rank differentials consistent with hierarchy.

It will become clear, however, that (as so often) texts can provide information on sociopolitical organization that may be difficult or impossible to interpret from archeological evidence alone. For our purposes this particularly includes legal texts, for medieval Irish lawyers explicitly recognized that what we are here calling heterarchy was endemic in their own society. Thus, in his analysis of the legal text *Críth Gablach* (CG), which deals with social status, Charles-Edwards (1986:54) states that "CG is an attempt to understand a social system; it is not a mere recital of legal rules or customs." Citing Dumont (1970), he goes on to contrast medieval Irish status differentiation with the Indian caste system. The latter has "a single hierarchy of status in which wealth and power, skill and learning, all play their part." On the other hand, "[a]ll Irish texts on status...are...united in rejecting this approach. They prefer to divide society into a number of distinct hierarchies, each holding sway over its proper sphere....A central problem of Irish law was, therefore, the comparison of different hierarchies to establish their status relative to each other."

Before discussing the economic, social, and political order in Early Medieval Ireland, however, let alone considering the evidence for heterarchy, it is necessary to provide a brief synopsis of the archeological and historical evidence. Since the purpose of this exercise is to attempt archeological interpretations of heterarchy that might be applied elsewhere, however, we shall eventually offer conclusions couched in exclusively archeological terms.

As usual when dealing with prehistoric and historic periods, we have to cope with a mixture of conventional

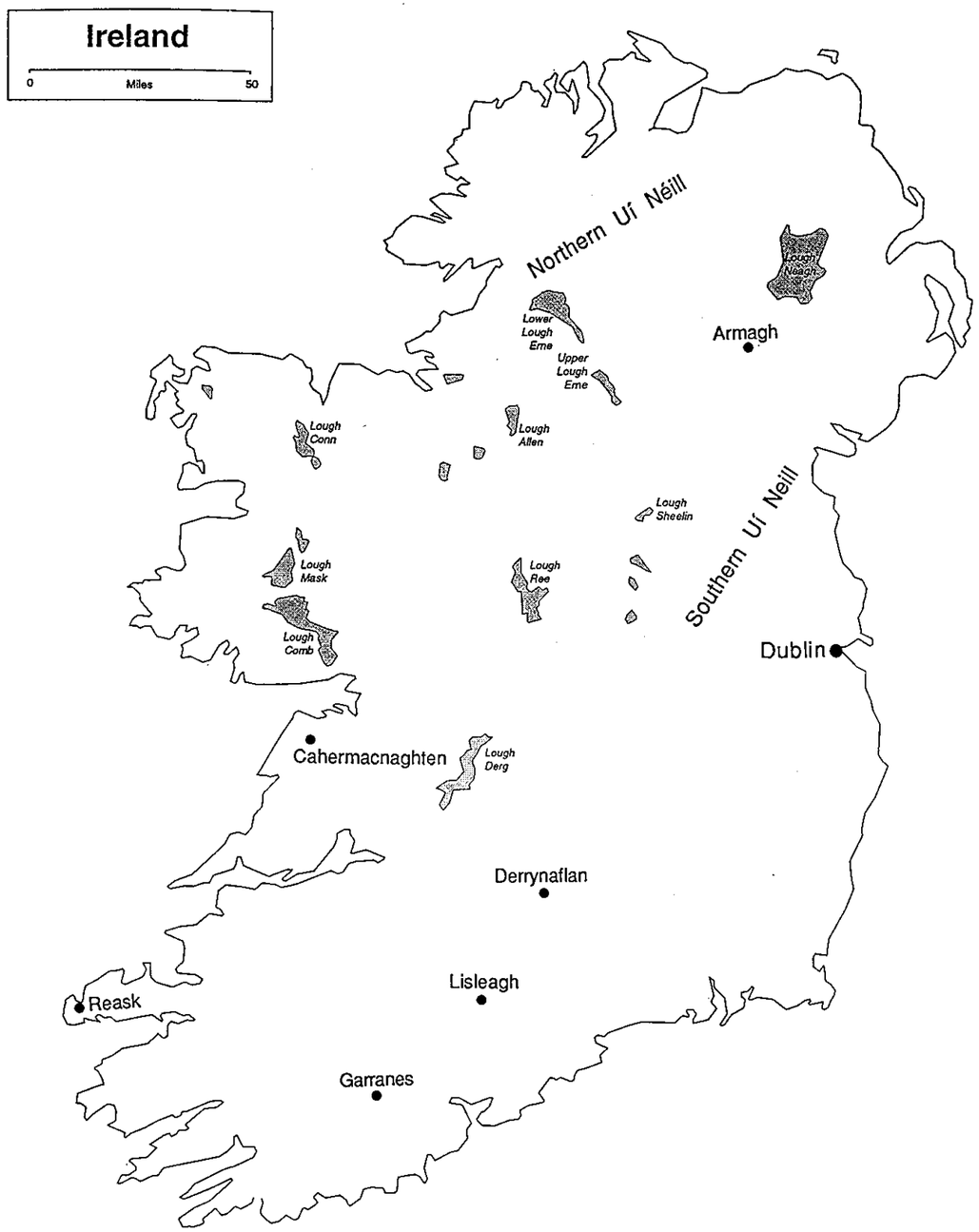

Figure 6-1: *Map of Ireland showing places mentioned in the text.*

historical terminology (e.g., Early Christian, Medieval) and conventional Old World archeological terminology (e.g., Iron Age). Figure 6-2 provides a guide to the alternative chronological terminologies commonly employed. The most general usage—although not the most logical—is to define the late prehistoric period archeologically as Iron Age (with or without sub-division) and the subsequent period as Early Christian or Early Medieval.

The Dowris phase, the last phase of the Irish Bronze Age, is dated to the eighth and seventh centuries BC but may have lingered longer (Eogan 1964:321-323). Because there is no convincing evidence that iron technology was introduced as early as the seventh century BC, we have a *dark age* until ca. 200 BC. The Iron Age (or Earlier Iron Age) ends in the fifth century AD with the historical evidence for the introduction of Christianity (see below). The subsequent *Early Christian* period ends ca. AD 800, and the succeeding period may be called either "Viking" or "Hiberno-Norse." The earliest recorded Viking raid on Ireland was in 795. Alternatively, both these periods may be combined as Early or Earlier Medieval. The latter terminology is followed here, since so many of the sites mentioned, and so many of the historical sources cited, either cannot be clearly defined as pre- or post-AD 800 or cover both sides of that divide.

The next conventional historical division is the later twelfth century, with the Anglo-Norman invasion of 1169-1171 and the assumption by Henry II of England of the title "Lord of Ireland." This is when English claims to political hegemony over Ireland began. *Native* Ireland and its institutions did not disappear overnight, and full English control was not established until ca. 1600. But 1170 is a convenient point at which to close our survey.

ARCHEOLOGY

The Iron Age in Ireland is poorly known. For example, hardly a single residential site can be identified confidently. The La Tène art style, initiated in the fifth century BC in central Europe, was introduced into Ireland in perhaps the third century BC and continued there right through into the Early Medieval period. Unfortunately, hardly any La Tène artifacts have associations with definable sites. Most are accidental discoveries made during bog drainage, agricultural activities, and so forth. Very little pottery was made in Ireland during this period, and none is distinctively diagnostic. Ireland was never incorporated into the Roman Empire but, considering its close proximity to the provinces of Gaul and Britain over a period of some four centuries, "the number of identifiably Roman artefacts seems remarkably small" (Edwards 1990:1). Indeed, the continued manufacture and use of La Tène-decorated artifacts in Ireland suggests a continuity at some symbolic level with the pre-Roman (or non-Roman), *barbarian* world of Celtic-speaking peoples with whom the La Tène style is so closely, although not exclusively, associated (Megaw and Megaw 1989:9-10).

The succeeding Early Medieval period, beginning in the fifth century AD, is a remarkable archeological contrast. Sites are abundant, with *ringforts* being the most prolific. Some 30,000 of these were identified on the first comprehensive map series of Ireland (Ordnance Survey), prepared and published in the 1830-40s. In fact, some of these are not ringforts but burial enclosures, smaller monasteries (see below), and other kinds of sites. On the other hand, many ringforts had been levelled before the 1830s, and recent intensive regional surveys have revealed as many as twice the number shown on the Ordnance Survey maps. The original total number of ringforts, therefore, may be closer to 50,000. Since the land area of Ireland is ca. 84,000 square kilometers, it can be seen that these sites are common indeed. The vast majority of the excavated examples were inhabited between the fifth and the twelfth centuries AD, and textual evidence also indicates that they were prominent in this period (see below). So, although only some 300 ringforts have been excavated, a minuscule sample of one percent at the most, we may regard them as typical of this period.

Ringforts are roughly circular enclosures, typically ca. 30 meters in diameter. Most have banks constructed from soil and stone excavated from a surrounding ditch. In areas where suitable surface stone is readily available, the enclosing banks or walls may be constructed entirely of drystone with no external ditch; this type of ringfort is known as a "cashel." Larger ringforts often have two (bivallate) or more (multivallate) concentric enclosing banks. Excavation shows most ringforts to have been residential, and the majority seem to have been farmsteads (Edwards 1990:11-33). A similar type of residential site is the *crannog*, a circular artificial island constructed in shallow water. Most excavated examples also date to the Earlier Medieval period (Edwards 1990:34-41).

The other well-known type of site in the Early Medieval period is the monastery. Alas, very few monastic sites have been extensively investigated. Indeed, com-

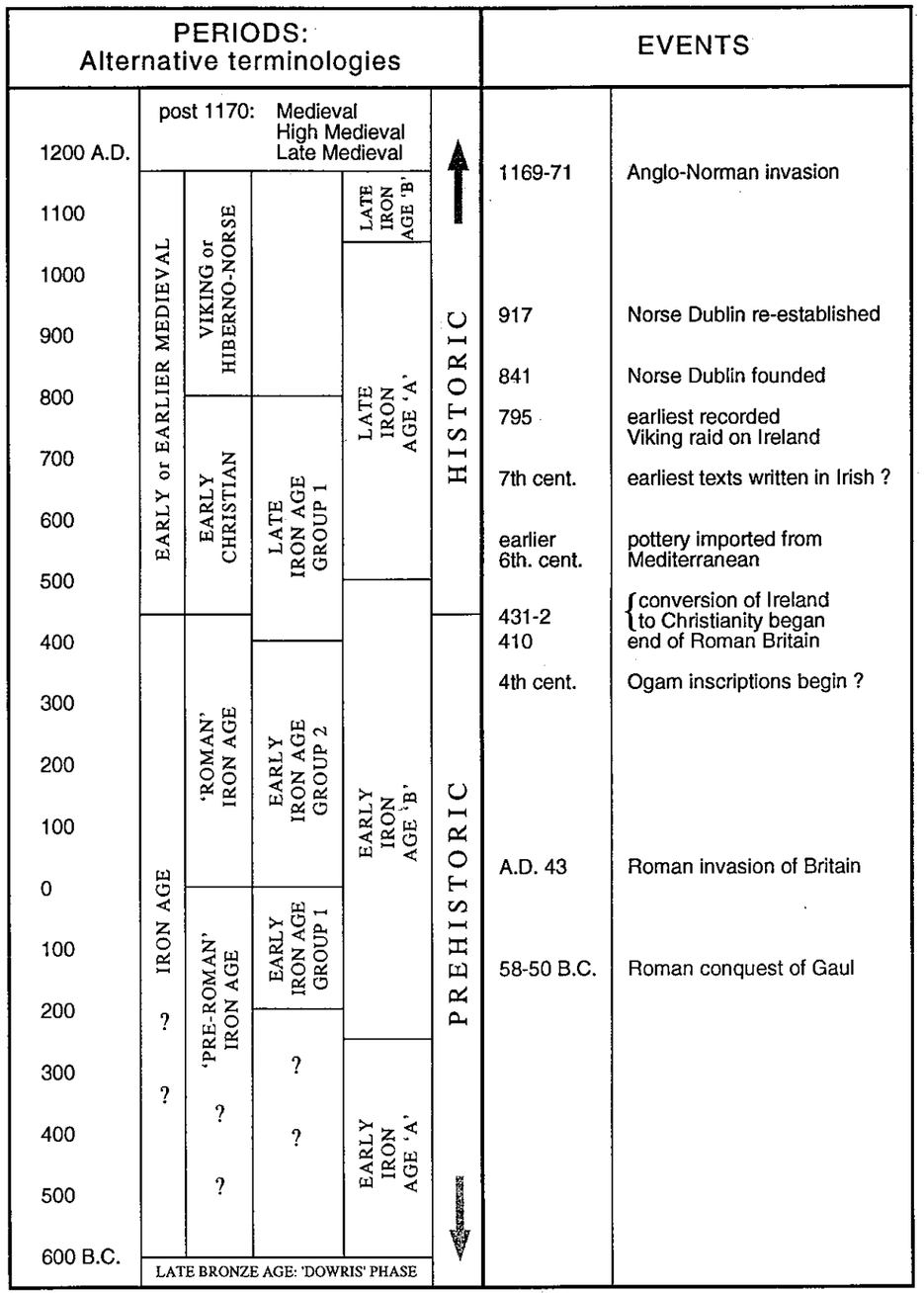

Figure 6-2: *Alternative chronologies for Late Prehistoric and Early Historic Ireland.*

menting upon the reconstruction drawing of an eighth-century Irish monastery that she published, Hamlin (1985:298-299) comments, "[i]t is a reflection of the present state of archaeological knowledge that the drawing is based mainly on the evidence from written sources rather than field survey or excavation." In consequence, the general chronology of monastic construction is poorly known. Despite this and the fact that, like ringforts, monasteries too are usually enclosed by a roughly circular earthen or drystone bank or wall, the two types of site can normally be differentiated. The larger monasteries are much larger than ringforts. The (probable) outer wall of Armagh, for example, enclosed an area some 480 by 360 meters (Swan 1985:84). Although smaller monasteries overlap in size with ringforts, the two can usually be distinguished from each other by differences in internal layout.

The most easily recognized categories of evidence that distinguish many monasteries are cross-slabs and high crosses, round towers, and the remnants of stone churches. Many monasteries had churches built of stone, at least eventually, although the general lack of diagnostic features makes them difficult to date. A very few wooden churches are known from excavation, but they are well known in the literature (Hamlin 1985). A substantial number of monasteries also had stone *high-crosses*. The often elaborate decoration of these crosses renders them more amenable to comparative stylistic dating than the buildings. While cross-inscribed slabs are likely to have begun earlier, the first free-standing high-crosses were probably erected in the eighth century; the most accomplished and elaborate ones date to the ninth to eleventh centuries. Most of the round towers probably date to the tenth to twelfth centuries (on monasteries see Hamlin [1985] and Edwards [1990:104-121]; on churches, see Edwards [1990:121-127]; on stone sculpture, see Edwards [1990:161-171]; on round towers, see Edwards [1990:127-128]).

The advent of Christianity affected burial in Ireland even less than in the rest of western Europe. Cremation had been dominant during the later Bronze Age and Earlier Iron Age A. During Earlier Iron Age B, inhumation largely replaced cremation. In the first century AD, crouched or flexed inhumation began and was in turn gradually superseded by extended inhumation, either *unprotected* or in stone slab cists. This last burial mode became increasingly frequent until, by the fourth century AD, it had become the prevailing rite. With the advent and spread of Christianity, east-west orientation became increasingly common. Conversely, some pagan burial practices continued to at least the seventh century. In other words, Christianity promoted neither a radical nor a rapid change of burial rite. Unfortunately for archeologists, few burials had any grave-goods from the later Bronze Age through into the medieval period; most had none at all. None of the burials could be called "rich" or "monumental" in the sense of involving large amounts of labor. Thus, differentiation in burial provides no satisfactory evidence for social differentiation. O'Brien (1984) provides a critical review and analysis of the evidence.

The larger monasteries may have functioned in some respects as towns (see, for example, the discussions in de Paor [1976] and Swan [1985]). They contained some substantial concentrations of people. In their later stages, at least, they contained (modestly) monumental structures, were sites of periodic regional fairs (markets?), were certainly the main centers of literacy, and additionally were centers of craft specialization. These last two were combined most obviously in the monastic *scriptoria*, which produced some of the best-known and magnificently illuminated manuscripts of Earlier Medieval Europe. Hodges (1982:47-49) concludes that they were not towns in the sense that they did not operate "within...an interlocking central-place system which is fully commercialised." Clearly, some differences of opinion depend upon definitions, but there is certainly no evidence that even the largest monasteries did *double-duty* as centers of civil administration. Towns in the more conventional (economic) sense were first founded no earlier than the ninth century. These were Norse foundations, however, not Irish. Dublin, the largest and the most extensively excavated, became a substantial manufacturing center in the tenth to twelfth centuries and an important node in the extensive trading networks that were developing apace around northern Europe and the North Atlantic during the later first millennium AD.

Despite the considerable evidence for craft specialization in both everyday and luxury products, manufacturing appears to have been conducted at the individual or *household* level, even in Dublin. Production shows no evidence of having been either centralized or standardized. Overseas contact during the Earlier Medieval period, even after the advent of the Norse in the ninth century, is not demonstrated by any substantial quantities of imported materials or artifacts. In this respect the Earlier Medieval period resembles the preceding Earlier Iron Age B when,

as noted above, surprisingly few *Roman* objects seem to have found their way into Ireland. The presence of imported goods probably does indicate status differentiation (see, for example, the site of Garranes, below), however, because access to such goods is likely to have been restricted to elites and because indeed they are found mainly on sites that can be regarded as *elite* on other grounds as well. Ceramics, alas, are largely non-existent over most of Early Medieval Ireland outside the northeast, and even these show little indication of status differentiation (Edwards 1990:73-75). There are, however, small quantities of imports. These consist of tablewares and amphorae from the Mediterranean in the sixth-century and kitchenwares and tablewares from Gaul in the sixth to eighth centuries (Edwards 1990:68-73). Although sparse, these pottery imports indicate some direct overseas contacts, at least on the part of some elite groups.

Archeologically, then, external contact in the Earlier Medieval period is demonstrated more by the introduction of new stylistic traits than by any great quantity of imported objects. First, Christian iconography appears in the form of stone slabs bearing crosses, etc. This is also echoed on some metalwork (Edwards 1990:161-162). On historical grounds, such items are unlikely to date prior to the fifth century, and in fact none can be confidently dated even that early. Second, Ireland contributed to the seventh-century development of the *Insular Style* (or *Hiberno-Saxon*) of writing and decoration (Laing 1975:339-358; Spearman and Higgitt 1993). This phenomenon coalesced in Ireland and northern Britain as an amalgam of Late Antique, *Germanic*, and late La Tène elements; the last, as noted already, was certainly perpetuated in Ireland and very probably in some areas of Britain too. In the eighth century, the Insular Style expanded to the continent, where it is best known from the numerous continental manuscripts written in a script of Insular style. Third, Scandinavian elements appeared in Ireland in the ninth century, and a distinctive *Hiberno-Norse* style of decoration developed (Graham-Campbell 1987:150-151). This style continued into the twelfth century, although Romanesque elements appear starting in the eleventh century.

Briefly, then, the archeological evidence is that Ireland during the Earlier Medieval period was a rural society in which the ringfort and crannog appear to have been the characteristic residences. Their variation in size, while sufficient to form a ranked series, cannot be used to claim a convincing *settlement hierarchy*. Settlement hierarchy could be argued for the monasteries, however, since the larger ones are a great deal bigger than the far more numerous small ones. Moreover, the more substantial stone buildings and high crosses are concentrated at the larger sites. Thus, even without the historical evidence for their importance, archeology alone would suggest some *central place* function, even if urban status is questionable (see above). Only the coastal towns of the ninth century and later can be labelled "urban" with some conviction, and these were not only modest in size but were an intrusive innovation.

HISTORY

The earliest manifestations of literacy in Ireland are the Ogam inscriptions (McManus 1991). Ogam was alphabetic, an idea that may have been borrowed from Latin, and was employed for memorial inscriptions on stone from perhaps as early as the fourth century AD. It provides our earliest direct evidence of the Irish language, but the inscriptions are short, rarely fully comprehensible, and of limited historical value. Fuller literacy may be presumed to have begun in the fifth century with the earliest evidence for Christianity in Ireland (see Hughes 1966), because of the Church's liturgical requirements for books of the Psalms, the Gospels, and so forth. It is to the fifth century that the earliest stratum of plausible historical information may be assigned: the writings of Saint Patrick (for a discussion see Thomas [1981]). It is the fifth century, therefore, that is usually taken conventionally as the beginning of Irish history, although the earliest surviving manuscripts (Christian and in Latin) that can be attributed to Irish scribes date to no earlier than ca. AD 600.

The major categories of Earlier Medieval Irish texts include the Lives of Saints, commentaries upon the Bible, martyrologies, literature, poetry, various learned compilations such as the *Dindseanchus* (which is roughly translated as "the lore of ancient places"), genealogies, and monastic Annals. Few survive in versions earlier than the eleventh century, but these not only may include materials relating to the past but are often linguistically archaic for the time of their writing. On this basis, the earliest stratum of *secular* texts (that is, texts not overtly religious in nature) are considered to have been written probably starting in the seventh century (Richter 1988:68, 85-86, 87). For present purposes, the most important of these

were the legal texts (Hughes 1972:43), because it is from these that much of our information about the structure and workings of Irish society is derived. This will be discussed more fully below.

From what has been said above, it will be clear that starting in the fifth century the usual frame of reference for both historian and archeologist is historical: Early Christian, Early Medieval, and so forth. As is usually the case, textual evidence becomes both more frequent and less difficult to evaluate as time goes on. The earliest strata of entries in the monastic Annals, for example, were probably written retrospectively, while most entries were probably more or less contemporary from the later seventh century, although they survive only in later copies (Hughes 1972:145).

DISCUSSION

Textual Evidence

Early Medieval Irish society is particularly interesting, then, because it was one of the very few pre- or non-state societies for which there is substantial internal, native documentation over several centuries. It is possible to construct a quite detailed ethnohistoric picture of the society from the various textual sources identified above. Not only that, but some aspects of the archeological record can be identified in the textual sources, too. The basic polity identified in the Laws was the *túath* (normally translated as "people" or "tribe"), headed by its king (*rí túaithe*). Anthropologically, the *túatha* were small chiefdoms. In terms of Early Medieval *realpolitik*, however, the *túatha* appear to have been insignificant, for few of them are identified or even mentioned outside of the law tracts, and there is no real idea as to how many of them there may have been. Estimates vary between 80 and 200, so they would have had an average territory of no more than ca. 1,000 square kilometers at most, or a little more than 30 by 30 kilometers, and could have been considerably smaller.

Each *rí túaithe* acknowledged the overlordship of a *rí túath* (overking); few of the resultant groups of several *túatha* (*mórtúatha* = large or great tribe/people) seem to have been of much political importance in the wider sphere, however. In turn, each overking acknowledged a High King (*rí ruirech*, *rí cóicid*), the numbers of whom fluctuated between perhaps six and eight during the Early Medieval period. They may be regarded as powerful paramount chiefs. Certainly the dynasties of High Kings were the main political players in Early Medieval Ireland and were increasing their real political power throughout the period, at the expense of overkings and petty kings.

Ranking below the petty kings were the several grades of noble, the free commoners such as the *bóaire* (lit. "cattle-lord" or "cow-freeman"), and so on down the scale to slaves. All these *lay* grades of society made their living either by engaging in stock-raising and agriculture themselves or, in the case of the higher grades, by receiving rents from those who did. As Figure 6-3 shows, the clergy formed another ranked series, as did various categories of "professionals," such as lawyers, poets, and craft specialists.

As noted earlier, the indigenous Irish texts include a number of legal tracts. Most were published with English translations in the later nineteenth century (Hancock et al. 1865-1901). This was not a highly critical publication by modern standards of scholarship, however, and it was not until 1978 that a diplomatic edition was published (Binchy 1978), although this does not have an English translation. Kelly (1988) provides an invaluable review of the subject. The law tracts of particular interest to us here are those containing what are known as the Laws of Status: *Críth Gablach*, *Uraicecht Becc*, and *Míad s lechta*. It is in these that most of the information on social ranks or grades can be found, because the status of the individual was an essential ingredient of Irish law.

Early Medieval Irish law stipulated compensatory payments for trespass, injury, or death. As in the more familiar Germanic *wergeld* system, the amount of compensation depended upon the social status of the injured party. In essence, the Laws of Status are concerned to define the *lóg n-enech* (honor-price) for each grade of society, so that the compensation due (*díre*) for trespass, injury, or death could be calculated in any given case. Thus, social status had to be defined very carefully, and the Laws of Status consequently contain a wealth of information on the structure of Irish society.

Figure 6-3 is a compilation drawn from the Laws of Status that shows the several distinct hierarchies in Irish society together with the range of specified *lóg n-enech*. In the interests of space and simplicity, Figure 6-3 does not show the manner in which *lóg n-enech* was defined, but a brief and selective discussion will be useful in order to amplify this brief ethnohistorical sketch. Perhaps the most important factor in determining status was possess-

EARLY MEDIEVAL IRELAND: LEGAL DEFINITIONS OF STATUS

Lóg n-enech ('honor-price') in *séts* [1]	'Lay' grades of society [2]	Church [3]	*Aes dána* (men of skill, art): Assorted 'professionals' [4]	Craft specialists [5]
84	*rí ruirech* (high king)	archbishop, *coarb* (abbott) of major monastery		
48	*rí túath* (over-king)			
42	*rí túaithe* (king)	*epscop* (bishop)	*ollam filed* (chief poet)	
30	*tánaise ríg* ('heir-designate')			
25	*aire forgaill*			
20	*aire tuisea*	*sacart* (priest)		chief expert wright, skilled builder
15	*aire ardd*		*brithem* (judge)	
10	*aire desa*			
8	*fer fothlai*			
7		*liachtróir* (lector)	*brithem*, physician	*gobae* (blacksmith), goldsmith, etc.
5	*bóaire*		harpist	
3	*ócaire*			carpenter, chariot-builder, engraver, etc.
1 1/2			*fochloch* (lowest grade of poet)	
1/2				turner, leather-worker, comb-maker, etc.
1/4	*fer midboth*			
	fuidir ('semi-free' tenant) [6] *bothach* (cottier) *senchléithe* (serf) *mug* (male slave)			

1. 1 *sét* is a unit of value. 2 *séts* = 1 milch cow; 6 *sets* = 1 *cumal* (female slave)
2. Nobles down to *aire desa*, a sample of free commoners below that (*fer fothlai* is in the process of upward transition to noble status). Rough modern translations: *bóaire* = 'strong farmer'; *ócaire* = 'small farmer.'
3. Again, many grades are omitted; only a sample is given here.
4. The numerous categories of 'professionals' (lawyers, poets, bards, musicians, entertainers, etc.) are here collapsed into one column, for simplicity, and only a very small sample is shown.
5. Usually considered as one 'profession', despite their very varied skills. Again, only a sample is shown.
6. These lowest grades appear to be legally dependent upon their lord, and their legal value to have been a proportion of the lord's *lóg n-enech*.

Figure 6-3: *Definitions of status for Early Medieval Ireland.*

ing clients and/or being a client, for, as in the (suspiciously similar) *feudal system* so widespread in Europe, everyone was a vassal (here client) of someone else. A loan or *fief* (*taurchrecc*, lit. "fore-purchase") was granted to a client who, of course, had obligations in return. The nature of these obligations depended upon whether the client was a base client (*céile gíallnae* or *dóerchéile*) or a free or noble client (*sóerchéile*). Both paid annual repayments or rents, but the free client paid more than the base. On the other hand, the base client had to perform specified manual services and provide food-rent, whereas the free client instead attended upon the lord and provided labor instead of performing labor service. Most critical, though, is that the base client was provided with the equivalent of his *lóg n-enech* by the lord, who thereby assumed legal responsibility for the client and collected at least a portion of any compensation due for injury. The free client, on the other hand, remained legally autonomous.

As already noted, numerous archeological identifications can be made in the textual record. There are the references to craft-specialist activities, for example, and these have been employed routinely by archeologists in their evaluations of Early Medieval Irish material culture (e.g., analysis of early Irish ironworking; Scott 1990). More conventionally, many sites mentioned in historical sources can be identified certainly or probably with actual sites still visible on the ground. Of particular importance to us here are the legal identifications of residences appropriate to the various ranks of society. Little is said of where the lower orders lived, alas, and it has to be admitted that there is little archeological evidence for this to date.

Críth Gablach (CG 45; Binchy 1941:22-23) specifies that one appurtenance of a king is his *dún* (ringfort), so ringforts were clearly appropriate residences for the top end of the social scale. The archeological evidence, however, shows that ringforts cannot have been restricted to kings, for to suppose that each of the 50,000 or so ringforts was occupied by a king would stretch credulity. If we allow that most ringforts were occupied between the fifth and the twelfth centuries and that each was occupied for no more than 100 years (a conservative estimate), there would still have been some 6,250 ringforts occupied simultaneously. A maximum of 200 *túatha* gives us at least 36 ringforts occupied concurrently in the average *túath*. Fewer *túatha*, of course, would give us more ringforts per *túath*. With 6,250 ringforts in operation, each would control a notional average area of 166 hectares. Since this includes all land (e.g., mountains, bogs, and other minimally productive terrain) the average notional territory of each ringfort would be much less than 166 hectares. Thus, it is commonly assumed (e.g., Ó Corráin 1972:49-50; Warner 1988:50) that ringfort occupation was not restricted to kings but extended to the nobility and probably the upper ranks of prosperous commoners (*bóaire*) as well.

Amongst its definitions of status, *Críth Gablach* specifies the household and farm equipment appropriate to each grade of society. The *mruig ḟ er* (highest grade of *bóaire*), for example, should have amongst his possessions "...tubs, a candlestick, knives for cutting rushes, a rope, an adze, an auger, a saw, a pair of shears, an axe...a whetstone, a billhook, a hatchet, a spear for killing livestock..." (Binchy 1941:7). This gives the flavor of the often mind-numbing detail and shows clearly the potential for correlation with the archeological evidence. CG also specifies the number and size of buildings appropriate to each grade. The *mruig ḟ er*, again, should have a house of 27 feet and an outhouse of 17 feet. Compiling the specifications from CG and comparing these with house sizes from excavated ringforts, K. Ryan (1978) shows that the latter do indeed display a range of sizes, although they are smaller than those defined or prescribed by CG (assuming that the *foot* measure of CG is not wildly different from the modern foot).

Early Medieval Ireland, then, was certainly socially and politically complex. Irish polities, however, were not states but chiefdoms. There is no evidence for centralized bureaucratic management (although some classes of official did exist), and towns, however defined, were not central to political organization. Increasing political centralization may be discerned through this period (Ó Corráin 1972:28-32), and one might argue that state formation processes were operating. Yet none contends that any Irish polity actually *attained* statehood, let alone that the whole of Ireland became one state during this period.

Historical evidence, then, makes it quite clear that Irish society was hierarchical. Analysis of this evidence makes equally clear, however, that Irish society was also heterarchical. This can be seen both in the multiple sources of social status and in competitive sociopolitical relations. It would neither be an exaggeration to say that recognition and evaluation of these heterarchical elements is essential to a proper understanding of fundamental structure of Early Medieval Ireland nor would it be going

too far to propose, more generally, that such lateral competition occurs within the vertically structured sociopolitical organization of all complex societies.

Heterarchy in Irish society was expressed in three ways.

1. The Law Tracts are quite explicit that there were several, parallel, hierarchies.
2. The Law Tracts imply, and narrative history confirms, that the political hierarchies contained structurally heterarchical elements.
3. Analyses of narrative history show that these heterarchical elements in the political system were exploited at both the inter- and the intrapolity scale.

Multiple Hierarchies

The multiple, parallel, hierarchies are sketched in outline in Figure 6-3. There was the *lay* hierarchy, from high king down through the grades of nobility to nonnoble farmers and slaves; the hierarchy of the Church, from archbishops down to deacons; the hierarchy of poets; the hierarchy of lawyers; and the hierarchy of various types of craft specialists. Legal status or rank was expressed in honor-price, ranging from 84 *séts* down to one-quarter of a *sét*. Thus, a high king and an archbishop had equal status at 84 *séts*. A king, a bishop, and the highest grade of poet also had equal status at 42 *séts*. Below these, the *aire tuísea* (lit. "freeman of leadership") grade of noble had an honor-price of 20 *sets*, as did the highest grade of craft specialist. Various skilled craft-workers and the *aire ardd* (lit. "high freeman") grade of noble shared equal *lóg n-enech* at 15 *séts*, as did one of the grades of lawyer. And so it goes on down through the lower ranks in all these hierarchies to low-status persons with honor-prices of a half or a quarter *sét*.

As emphasized already, it is critical to understand that equal honor-price meant equal status. Indeed, there is some discussion in the law tracts of how and for what reasons not only the distinctions between grades should be determined but also of how and for what reasons equivalencies should be determined. Charles-Edwards (1986:73) goes so far as to argue that *Críth Gablach* "...is far from confining itself to the usual triad of those who pray, those who fight, and those who labour. It is not too much to claim that it is one of the few outstanding pieces of social analysis in Early Medieval Europe." We need not go further here, for the point is made sufficiently that these several parallel hierarchies were documented.

Structural Heterarchy within Hierarchies

This heterarchical element is essentially segmentation operating within a hierarchical system and is a common aspect of sociopolitical organization: competition for the *top position* in a hierarchy between various factions within that hierarchy. In the Irish case, this is best known in the succession of kings. Theoretically, a successor was selected from the suitable adult males within the descent group of four generations (*derb ḟ ine*) or later the three-generation descent group (*gel ḟ ine*). So there were normally several potential successors, a situation exacerbated by polygamy. Even when one kin group did manage to monopolize succession, however, segmentation took place with each generation, providing additional competition. The frequently occurring titles of *tánaise* and *rígdamna* ("heir-designate" and "eligible for kingship," which meant the same thing, in fact) seem at face-value to represent devices for stabilizing succession. It has been argued persuasively, however, that these titles were usually honorifics in reality, granted by way of consolation prizes to contenders for kingship who, although unsuccessful, were still sufficiently powerful to require placating (Ó Corráin 1971:31-37; Charles-Edwards 1986:59-60). Several regnal lists show that kingship alternated between two or even three competing segments; inferentially, this may have been by agreement (Ó Corráin 1972:39-40).

Exploitation of Heterarchy Within and Between Hierarchies

The third arena in which heterarchy can be seen is particularly interesting. It will be recalled that only two hierarchies go right to the top of the *status scale*: the secular nobility and the clergy, with high kings and archbishops of equal status and likewise kings and bishops at the next level below. An important complication to this scheme is that the abbots of the most prominent monasteries also had honor-prices equivalent to those of high kings and kings. This is comprehensible not only in terms of appropriate status, but because monasteries were founded by noble and royal kin groups on kin land, and the abbacies were hereditary within those lineages (Hughes 1966:75-78). Indeed, one common title for the abbot of a monastery was *coarb* (heir).

What is particularly intriguing, however, is that the lineages who founded monasteries were commonly those who were unsuccessful in the competition for kingship and that abbacies were disputed between lineages in a parallel manner to the disputes over regnal succession (Ó Corráin 1981:328-31). From this it appears, then, that *discard* segments of royal lineages attempted, often with considerable success, to compensate for their failure in secular politics by investment in the alternative arena of religious organization. Indeed, control of at least the more prestigious monasteries was often disputed, and mutually supportive alliances between royal dynasties and major monasteries are well attested. The best known example of the latter was the alliance between the Uí Néill dynasty and the great monastery of Armagh, a tale too long and involved to recount here. Suffice to say that Armagh's (dubious) claim to supremacy over the Church in Ireland was so successful (Hughes 1966; Sharpe 1982) that it holds that position to this day.

Having made the point that heterarchy was endemic in Irish society, the question now is how does this Irish textual evidence appear in the archeological record?

The Archeological Evidence

As seen above, the ringfort may be identified as the appropriate residence for the aristocracy and the more prosperous commoners. Clear differences may be seen in the size of these ringforts, the size of the houses within the ringfort, and the residual evidence for *wealth*. Thus, hierarchy may be inferred in the usual archeological manner. The larger sites are usually rather more elaborate, have more relict artifacts, and tend to have *luxury* goods; they are higher-status sites in conventional archeological terms (and, in a few cases, the archeological interpretation of sites as *high status* can be confirmed by textual evidence). Gibson (1988:52-57) reviews and summarizes this evidence and compares it to the equivalent evidence from excavated monastic sites as well. Status differences are clear enough in the archeological record, but these are differences of degree rather than kind. One cannot identify the specific social grade of the owner, as known from the legal texts, with specific types or quantities of artifacts recovered in excavation. For example, the *mruig ḟ er*'s household and farm equipment would be held also by higher grades. Similarly, while larger houses are appropriate to higher social grades, K. Ryan's (1978) analysis shows that the correspondence between legally specified house sizes and archeologically attested house sizes is far from exact.

One would like to claim that the *professional classes* could also be identified archeologically, but this does not seem possible. It seems likely that those of appropriate rank in society were entitled to live in ringforts, and literary evidence may be adduced that this was the case. For example, in the epic tale *Táin Bó Cuailnge* (*The Cattle Raid of Cooley*), Culann the smith lived in a ringfort (Kinsella 1970:83). The legal texts are unfortunately silent on this matter, however. On archeological evidence, the different occupations of residents known from the law tracts (e.g., lawyers, poets) cannot be perceived. Excavated ringforts show evidence for mixed farming, and indeed perhaps lawyers, poets, etc. were also farmers. The majority of excavated ringforts show some evidence of manufacturing (Proudfoot 1961:115-117), but much of this can be interpreted as domestic production, such as spinning and weaving. Manufacturing debris does occasionally suggest specialist production rather than household production, but we cannot assume axiomatically that this indicates the residence-cum-workshop of the craft specialist, as the two examples below, Lisleagh and Garranes, will show.

Lisleagh, Co. Cork (Monk 1988), had the remains of a bowl-furnace for smithy work and much debris (ca. 1 tonne) from ironsmelting, which surely indicates a craft-specialist at work. The site does not show any indication of having been occupied by the top echelons of society, however. Although it is a relatively large univallate ringfort (ca. 63 meters in diameter), it has no relict high-class metalwork, imported pottery, etc., and the house sizes fall around the middle of K. Ryan's (1978) range of excavated examples. The smelting might have been conducted for the occupant by a visiting *independent* or *attached* (resident?) specialist, but one might well wonder whether that occupant would really want a noisome and prolonged industrial activity such as ironsmelting carried out right on the very doorstep, as it were. On balance, then, the Lisleagh ringfort (specifically, that occupation phase of the site) seems appropriate as the residence-cum-workshop of a specialist ironworker/blacksmith.

The much less obtrusive working of bronze, enamel, and glass, was commonly practiced at high-status residences. Gibson (1996) argues that this indicates attached craft specialists, partly because elites would have controlled access to materials not widely available (unlike iron, which was widespread). His arguments are very

plausible, but, on the other hand, the data (Gibson 1988:figs. 3-5) show only small quantities of manufacturing debris at most of these sites. Few sites have more than two crucibles, for example. This evidence does not seem to favor even one attached craft specialist (however under-employed) at these sites, let alone over any period of time. An alternative explanation might be that contracted work was carried out on the customer's premises by an independent specialist, perhaps indeed using materials supplied by the customer, as Gibson argues. The site of Garranes, Co. Cork, exemplifies these interpretative problems.

Garranes (Ó Ríordáin 1942) is a large trivallate ringfort, ca. 75 meters in internal diameter (Figure 6-4a). It contained some relatively *high-status* metalwork and sixth century AD pottery imported both from the Mediterranean and from Gaul. The site is, thus, a very plausible candidate for a high-status noble residence, except that no evident house foundations were found (although the interior was not fully excavated, and there were certainly postholes). However, it also has abundant evidence for bronzeworking and glassworking, including crucibles (39 more or less complete, plus more than 2,500 fragments) and casting debris, which are concentrated in the southern side of the interior. So, was Garranes a non-residential workshop site, the residence and workshop of a high-status craft specialist, the high-status residence of one who maintained attached craft specialists, or the high-status residence of one who patronized visiting independent craft specialists? The evidence does not permit an unambiguous interpretation.

The legal evidence places the status of craft specialists below the grade of king, but the higher grades of specialist might well be of equal status with many another patrons. Moreover, the legal evidence gives no hint of any distinction between what we would call attached and independent specialists. Indeed, attachment to a well-heeled patron might have materially assisted the specialist to acquire higher status, so it would be unwise to suppose that independent specialists might have been of higher status than attached specialists. It seems entirely possible that independent specialists did some, perhaps most, of their contracted work at the customer's home, and this might be particularly likely if the customer provided the raw materials, especially silver and gold. However, the socioeconomic implications are different for the two postulated cases. Irrespective of social status, the *attached-specialist hypothesis* implies a greater concentration of economic power in the hands of the elite than does the *independent-specialist hypothesis*. The former tilts toward a more hierarchical interpretation, the latter toward a more heterarchical one. As Mytum (1992:227) succinctly puts it, "[o]rganization of production is still unclear."

If the vexed question of craft specialist residences cannot be analyzed satisfactorily, the distinctions between secular and religious sites are clear enough. This is true on archeological grounds alone even if, in an effort to render the evidence as broadly comparative as possible, we leave aside the fact that we can read the writing and that we understand the iconography. Even when no overt signs of *ritual status* are apparent, monasteries often show a layout distinct from that of ringforts. Commonly, a rough chord formed by a low bank divides the site into approximately two unequal parts, a feature not known in ringforts. The excavation at Reask, Co. Kerry (Fanning 1981), showed that the slightly smaller, southeastern, division of the site contained the foundations of a tiny church, some burials, and some small cross-slabs (Figure 6-4b). The larger, standing cross-slab at Reask had always identified the site as a probable monastery, and such features (including inscribed stones and of course high crosses) identify many more unexcavated sites as monasteries, too. Except in areas where cashels are common (see above), stone buildings are very unusual in ringforts, so stone building foundations often indicate a monastic site.

Alas, few monastic sites have been excavated, and none of the large ones have been extensively excavated. Some are so large that extensive excavation would be a major, multi-year, project; some are largely underneath modern towns; and nearly all have been used as burial-grounds until the recent past, which poses obvious problems. Gibson lists only seven excavated monasteries, although his tabulations (1988:figs. 3-6) show that monasteries have, if anything, slightly more *high-status* artifacts than the richer secular sites. Moreover, the *wealth* of at least the major monasteries is archeologically attested by considerable quantities of high-quality artifacts that can be unequivocally identified as religious by their iconographical elements, even when (as is usually the case) their provenance is unknown or uninformative. One of the few monastic hoards that does have a context is that from Derrynaflan, Co. Tipperary (M. Ryan 1983). This was discovered within a monastery in 1980 and consists of a very fine set of church plate: a chalice, a paten with its stand, a strainer (presumably for wine), and a metal bowl

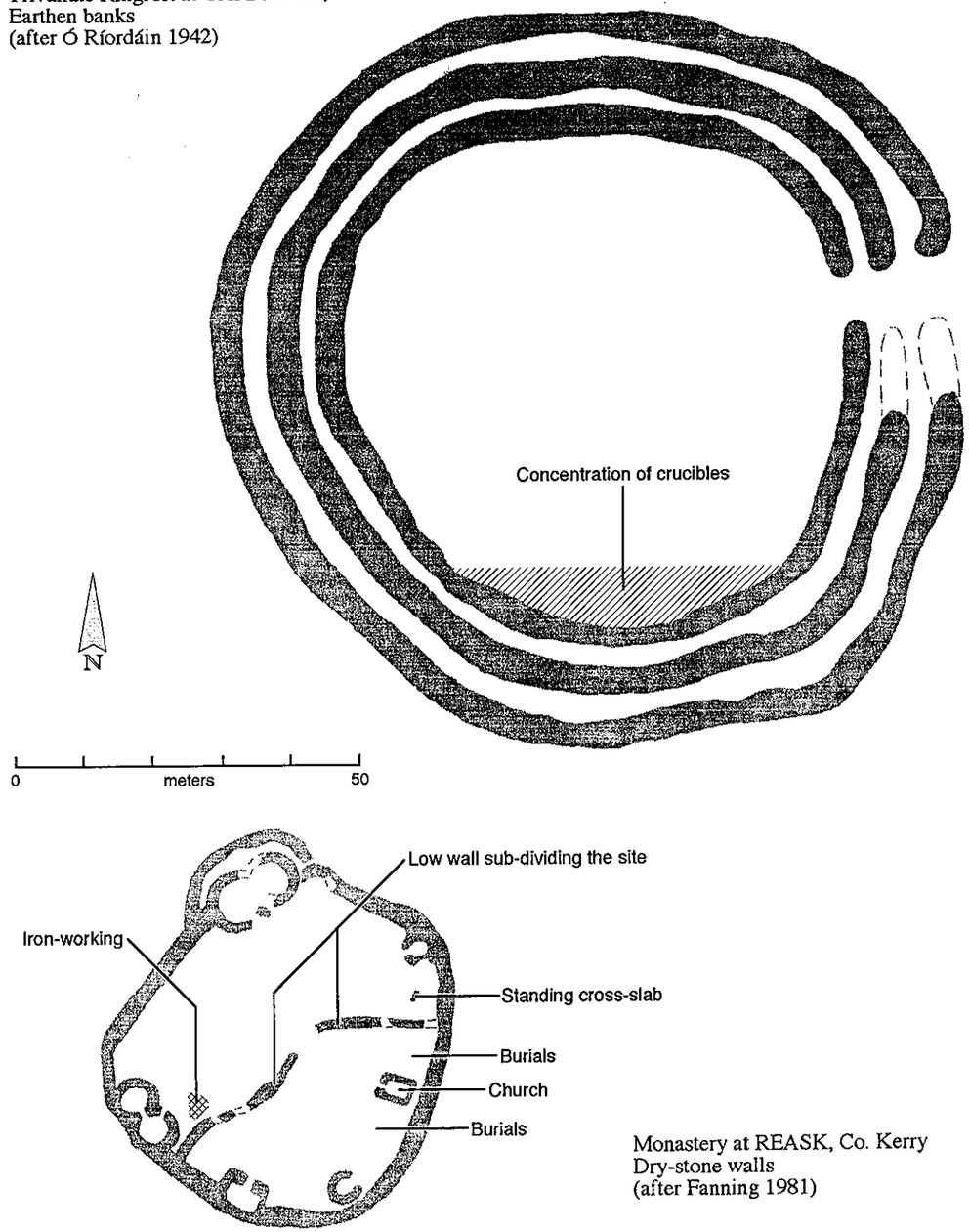

Figure 6-4: *(a) Plan of trivallate ringfort at Garranes, Co. Cork (after Ó Ríordáin 1942); (b) Plan of monastery at Reask, Co. Kerry (after Fanning 1981).*

covering the other objects. The bowl and strainer are bronze, while the chalice and the paten and stand are silver with elaborately decorated gold panels. Derrynaflan was neither a particularly large monastery nor one of the most illustrious, yet the hoard must surely indicate substantial wealth.

CONCLUSIONS

The two main types of site, ringforts and monasteries, provide archeological evidence for a heterarchical structure within Irish society. These sites are morphologically distinct in layout, in typical buildings, and in the burials and monuments peculiar to the religious sites alone. Although Warner (1988:57) states that "we find a close physical association of royal habitations and major early church sites," he does not pursue this claim. While kings were certainly closely involved with the Church (for example, the Uí Néill and Armagh, noted above), one could not argue for a *palace-temple complex* and, in general, ringforts and monasteries are not found in significantly close proximity. Both have residential occupation, both may show evidence for at least some limited manufacture, and both may have relatively *rich* artifacts, however. In other words, they share one and perhaps two functions, and the larger, *richer*, sites in each category have roughly equal archeological claims to high status. This provides an archeological argument for heterarchy, in the sense of a comparable range of wealth, status, and importance for two functionally distinct types of site. Textual evidence, of course, substantiates this conclusion. In the absence of texts, it is possible that the archeologist might interpret larger monasteries as small towns with both religious and secular functions. But then there would be a problem in identifying the residences of secular rulers within these *towns*, and the problem of interpreting the *elite* ringforts would remain.

Within the range of ringforts, one must admit that archeological evidence alone cannot support a heterarchical interpretation for secular society. Lawyers, poets, bards, etc. may have lived in ringforts in Early Medieval times, as some certainly did in much later times. For example, the cashel of Cahermacnaughten, Co. Clare, was occupied until the late seventeenth century by the O'Davoran family, who maintained a school of traditional Irish Law there. But in archeological terms, how would we identify the residence of a lawyer, a poet, or a bard? If they farmed or were supplied with food-rents by base clients, their ringforts would appear no different from those occupied by farmers or nobles. Even the residences of higher-status craft specialists cannot be demonstrated satisfactorily, because, as we have seen, unequivocal residues of specialized manufacturing cannot be translated into one or another unequivocal social context of manufacturing. We must regretfully conclude that most, perhaps all, of the variability in ringforts (size, complexity, *wealth*) could be attributed to gradations within a single hierarchy.

We must close, then, on a note of qualified rather than unbridled optimism. This case study suggests that *hierarchically equivalent* sites may be differentiated by function (i.e., ringforts versus monasteries), thus strongly supporting a heterarchical interpretation. Between *functionally equivalent* sites (i.e., within the category of ringforts), on the other hand, heterarchical differentiation will be difficult to substantiate because of ambiguities in the interpretation of archeological evidence, whereas hierarchical differentiation—quantity and quality of artifacts, site size and elaboration—will be far more evident.

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7

Heterarchical Paths to Evolution: The Role of External Economies

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ABSTRACT

Heterarchy is a useful paradigm for reanalyzing aspects of social evolution. It supplies a fresh perspective on the concept of hierarchy and complexity. This study examines the effect of external trade on local social development. The Trobriands and the Yapese empire of the Carolines supply examples of the relationship between the evolution of hierarchy and centrality and the capture of external trade. If external trade is not captured as an economic armature for evolutionary development, external trade can serve as an alternative power base that works against the development of a strong hierarchy and centrality in evolution at home. The city-states of ancient Greece, the Maya, and Mesopotamia supply archaeological examples of social development that did not capture larger regional external trade networks. These archaeological analyses question the assumed inherency of taxation and tribute in state level evolution.

To me, heterarchy finds its greatest utility as an analytical concept. I do not think we are going to go out and suddenly discover a host of societies that perfectly match a model of heterarchy. However, the use of a paradigm that looks for examples of relative or fluid ranking, temporary hierarchy, and counterpoised power (as defined by Crumley [1979, 1987a, 1987b, 1990]) in societies that we normally label complex and hierarchical, opens up some tired structural analyses to reveal some important, yet overlooked, issues in social evolution.

Asking anthropologists and archeologists to accept the notion of heterarchy as a framing concept for research is a radical request. For example, despite some recent alternative thoughts on the unitary nature of social evolution (Sanders and Webster 1978; Yoffee 1979, 1993; McGuire 1983; Kirch 1984, 1991; Paynter 1989; Earle 1991; Crumley 1994), our current understanding of this process is still very much predicated upon the assumption that societies will change from lesser to greater degrees of hierarchy as they evolve to more complex social forms (Service 1962; Fried 1967; Friedman and Rowlands 1978; Johnson and Earle 1987; Gledhill, Bender, Larsen 1988; Maisels 1990; Nassaney 1992; Hirth 1992; Spencer 1994). In denying that complex societies can always be understood in paradigms of hierarchy, heterarchy also asks us to question the very premise of this model of social evolution.

The focus of this chapter is the role of past external economies in the process of social evolution. The issue of the correlation between economies and social change has always been an important theoretical focus (Polanyi 1957; Earle 1977; Renfrew and Shennan 1982; Brumfiel and Earle 1987; Halstead and O'Shea 1989), but the assumption that the evolutionary development of a political economy is embedded in hierarchical growth is hardly ever denied. For example, the issue of the correlation between economies and political structure is currently being rethought in that most difficult of evolutionary concepts: the chiefdom (Earle 1991). Several scholars have now questioned the dominance once given to economic structure in the appearance of chiefdoms. While the role of redistribution, once thought to be a hallmark of chiefdom political structure, is now questioned (Earle 1977; but see Halstead 1981, 1988; Halstead and O'Shea 1989; Small 1990), others are taking the issue further and asking if the force of ideology might also be just as important in the develop-

ment of these *intermediate* (used here not in a developmental sense) societies (Bradley 1991; Drennan 1991; Feinman 1991; Steponaitis 1991).

Yet the conclusions of these skeptics can be summed up as agreeing with the precept that "political stability ultimately depended on the ability to tie alternative sources for power to controllable aspects of the economy" (Earle 1991:8). There is an assumption that the success of any of these societies is tied to the capture of key elements of their economies into an overarching political economy. In an evolutionary perspective, as Kristiansen (1991) affirms, the evolution of any one of these societies to a state must be predicated on the political formalization or the capture of economies, witnessed in the institution of formal taxation and tribute-collection or the formalization of political control of land tenure instead of a reliance on social rights and obligations.

The concept of heterarchy, with its search for alternative bases of power and its implied paradigm of weak centrality and temporary hierarchy, does not fit into these assumptions of social evolution. If we claim that heterarchy is a viable avenue into the study of ancient complex societies, we are left to seek alternative paths for social evolution. This search is the purpose of this chapter.

I will argue that ancient states can develop along lines that do not fit the assumed hierarchical model and that a key to understanding this alternative evolutionary path is an analysis of the role that external economies play in political development. My argument is that external economic systems, which—according to varying historical circumstances—are never captured into an evolving political economy, represent important alternative bases for power that challenge the development of hierarchy in social evolution and create forms of social structure that could better be analyzed with a heterarchical paradigm than a hierarchical one. I further argue that a benefit that stems from this analytical paradigm is the development of questions that, as I stated in the opening of this chapter, open up some tired structural analyses to reveal some important yet overlooked issues in social evolution.

To develop this argument, I am giving five examples that show the effect of external economies on the development of internal social structure. Two of the examples are ethnographic, coming from the islands of Melanesia and the Caroline Islands of Micronesia. Three of the examples are archeological, coming from ancient Greece, which is my own regional specialization, Mesopotamia, and Maya Mesoamerica.

OCEANIA

I have chosen ethnographic examples from Oceania because it provides one of the best laboratories for the study of external trade and its correlation with development in participant societies. In fact, recent research into cultural change (Friedman 1981; Kirch 1984, 1991) has underlined the important effect that external trade had on the evolution of societies on different islands. It is generally agreed that inter-island trade in this part of the world had a long past (Mackay 1971; Egloff 1978; Irwin 1983) and that the very survival of several island groups depended on their economic contacts with other island societies. Because of periodic changes in food output due to natural disasters (e.g., storms, high waves, and droughts), the more susceptible low islands were dependent upon high islands for an assured supply of food.

The Trobriands

In presenting these ethnographic examples, I am not interested in taxonomic questions, such as "are the Trobriands a chiefdom, simple chiefdom, or big-man society" (*à la* Sahlins 1958, 1963; Goldman 1970; Friedman 1981). I am instead interested in the operational relationship between the development of social structure within these societies and the important influence of external economic systems.

The Trobriands are part of a larger exchange system that incorporated at least 16 islands approximately 120 miles off the northeast coast of New Guinea (Figure 7-1). They became anthropological superstars after Malinowski's seminal ethnographic studies (1920, 1922, 1927, 1932, 1935; see also Seligman 1909; Fortune 1932). Successive scholars (Leach 1958; Powell 1969; Uberoi 1971; Leach and Leach 1983) have reinterpreted much of his writings, bringing further light on the role of inter-island exchange and the nature of specific social relations. My own analysis is yet another interpretation, based on these important works, but highlighting an essential fluidity in ranking and the presence of alternative contexts for power rather than a concept of fixed hierarchy. By way of analysis, I will first describe the external exchange system and then outline internal (i.e., localized within the communities on the islands) social and political structure. My final analysis focuses on the effect that this external frame has on the internal structure itself.

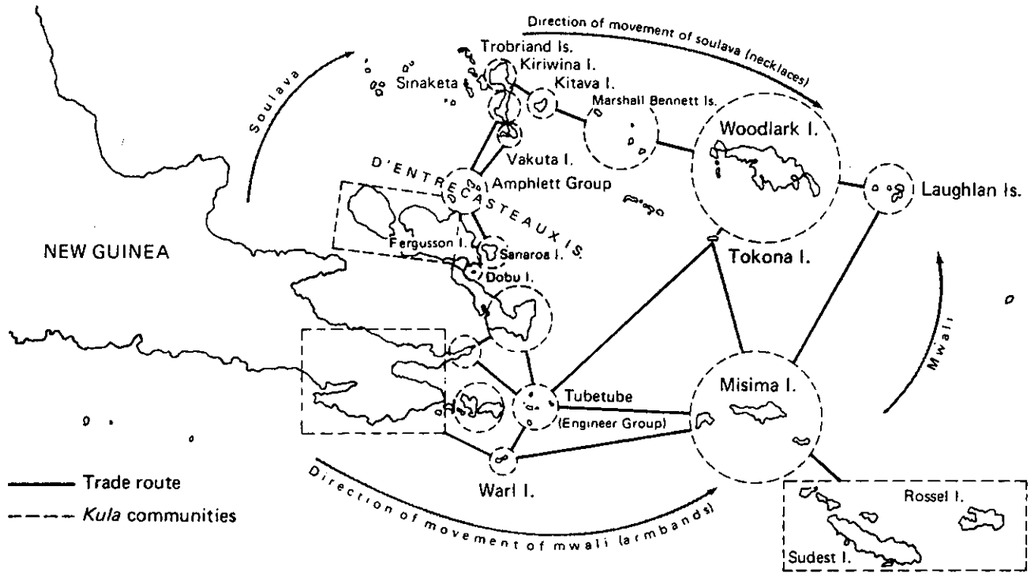

Figure 7-1: *Kula communities and trade. Source: Ember and Ember, 1973:127.*

The Kula Ring

There were many levels of inter-island exchange among the Trobriands, but the most obvious and prestigious was the *kula* (see also *Kune* exchange on southern islands; Seligman 1910; MacIntyre 1983) or *vaygu'a* exchange: armshells in a clockwise direction and *mwali* necklaces in a counter clockwise path (recently described as a Marcov ring [Hage and Harary 1991]). These items were exchanged between exchange partners who could be commoners and those of elevated rank. Not all island communities were participants in this network, but for those that were the practice was essentially limited to men who would be introduced to prospective partners by either their fathers or mothers' brothers. Naturally, those of higher rank would have more trade partners than others.

While the armshells and necklaces were definitely representative of prestige exchange, there was a wider exchange taking place on the same expeditions. The tokens, in fact, appear to have established a system for trade in more mundane manufactured goods and food (summarized in Uberoi [1971:148-57]). This type of exchange was very important for some islands, such as Tubetube and Amphetts, which were not self-sufficient in food and had to trade with other islands to obtain such goods as yams, coconuts, and betelnuts. In return, islands such as Tubetube would supply other islands with large clay pots. In essence, this inter-island trade effectively evens out regional specialization and agricultural fluctuation due to the whims of nature.

The process of the *kula* ring appears to have been essentially the same between participating parties. As described by Malinowski for Kiriwina (1922:195-349), the expeditionary party is collected by a local headman. The expedition is made in large ocean-going canoes and can be as large as eighty vessels. After the travelers have set sail, they make an initial stop shortly thereafter where the headman distributes food to the participants in a ceremony and magic rites are performed to ensure the success of the voyage. Having set sail again, the group halts once more before making contact with their *kula* partners to perform magic and decorate themselves, for the purpose of both making their partners succumb to their attractiveness and coaxing their partners into giving them the greatest amount of valuables possible. The actual exchange is dyadic, with each traveler sitting before the house of his *kula* partner and opening the negotiation with solicitary gifts, such as combs, lime pots, or lime sticks. After-

wards the actual *kula* transactions take place with the appropriate exchange of armshells and necklaces. The travelers depart after a few days, having also accepted parting gifts. Before they officially return home, they stop once again at an island to conduct a ceremony (the *tanarere*) in which the valuables are displayed by each family and the relative success of each unit is negotiated.

Internal Social and Political Structure

The Trobriands are divided among four clans, but the effective social units are actually the local smaller lineages: the *dala* (Malinowski's subclans). Villages are composed of numbers of *dala*, with the leader of the highest ranking lineage in the village as the village head. There might also be village clusters, where a number of villages are tied together by a dominant local lineage. Positions of power were established through marriage patterns that could be used to build economic power through the manipulation of the *urigubu*, which was the annual gift of the major portion of a man's harvest to his sister's household.

Yet rank was not very fixed among the Trobriands. The power of the *chiefs* within this society was impermanent and fluid. Within the subclans, the power of the chief basically stemmed from his manipulation of the *urigubu*. The more wives that he could garner, specifically the more wives from families with large landholdings, the more economic wealth and power he accrued. Yet this carefully constructed position of power quickly collapsed upon the chief's death.

Although there was a normative recognition that the *dala* called Tabula held the highest rank, the relations of the subclans were really fluid and not fixed. Different lineages were in constant competition with one another; leaders or *chiefs* of these segments have been described as *primi inter pares*, more on par with big men than fixed leaders. Because the position of a lineage was not firmly fixed and because many villages or village clusters were coterminous with recognized *dala*, village ranking was fluid as well. In addition, an obtained village rank might easily change over time. For example, Brunton (1975:63) raises the issue that two villages exhibited quite a degree of vertical mobility. Surviiyagila rose from a very low rank to one of Guyau or prime rank, while the village of Vilaylima, which was once a commoner village, enjoyed the position of Tabula rank for two generations but returned to its former position when the last Tabula woman failed to bear children. Rank or hierarchy in this case was only temporary. My interest lies in this uncertainty in ranking and position among these peoples.

Effect of External Exchange

For the Trobrianders, the reason for this fluidity lies in the *kula* system. In a sensitive reanalysis of Malinowski's original observations, Uberoi (1971:97) has successfully correlated social position at home to activity and participation in the *kula*: "...kula activities constitute an arena of struggle between the corporate units of Trobriand society for the working out of their relative ranks. The kula does not simply symbolize status relations, it is also the sphere wherein there continually occur the challenge and adjustment of collective status and influence."

The "uvalaku expedition is a contest" (Uberoi 1971:106). Canoes were outfitted by village units (prestige and success at home due in the main to participation in the expedition), which were often coterminous with *dala* and in competition with one another. Individual canoes were occasionally filled by two competing lineages, such as on the island of Dobu, which had a bilateral lineage pattern. Although the chief could ceremonially bind the groups together for the voyage by forcing them to accept his gifts of food, his control was weak. Even though the expedition leader might retain a position of primacy, the *tanarere* (the last stopping off point before returning home) was an open competitive display and negotiation for *kula* position that could be transferred back to the home district.

Prestige within the community was to a great extent dependent on participation in the *kula* exchanges, with the number and elaborateness of the gifts giving temporary rank to the person in possession of prestige exchange items. In addition, survival and economic success back home were in part dependent on *kula* partnerships, where shortages or agricultural inequities could be evened out through *kula* exchange. What external trade in the Trobriands supplied was an external base for the construction of power, a base which could present challenging counterpoised power and did weaken the effectiveness of any ranking system, resulting in a fluid, relative negotiation of position rather than a fixed hierarchy.

The Carolines

The West Caroline Islands comprise some 30 islands and are located approximately 750 miles north of New Guinea (Figure 7-2; Lessa 1950; Alkire 1975). Inter-island trade in this part of the ocean was necessitated by a great mix of high and low islands, with the low islands often dependent on the resources of the high, such as Yap and Truk, for basic survival. Unlike the Melanesian case, however, this inter-island trade had been effectively captured into the evolution of a larger political structure, the *Yapese Empire*, that controlled the West Caroline islands (Lessa 1950).

The control exercised by this political entity over the flow of goods between islands was localized in tribute and the incorporation of patron/client relationships into governmental structure. For tribute, goods sent to Yap consisted of such items as textiles, mats, rope, and foods, such as coconut or turtles. Goods flowed to Yap through a rigid hierarchical network (Figure 7-3), with islands at different levels acting as intermediate gathering stations for the collection of tribute from their own subordinate islands. The Yapese control structure was such that the different islands were organized according to a set hierarchy. Each island could claim tribute from islands below its station, as well as provide tribute for Yap itself.

Besides this visible tribute system, there existed a very powerful system of patronage that was based upon land tenure. Lineages on Yap could and did own parcels of land on subordinate islands, such as Ulithi for example. Fictive kinship was employed in this relationship, with those people in the position of patron referred to as parents and the renters or tenants as children (although Lessa [1950] is probably right to identify this type of relationship as not classically one of renter/rentee, since gifts were exchanged between the parties basically to keep the channels of exchange open). There appear to have been two primary purposes for this relationship. First, it gave those on the superior islands a degree of authority and power. Second, it gave those working the lands both a source for food and an opportunity to request it in times of crises (Lessa 1950; Alkire 1975). It would appear that this economic relationship existed as well between other islands, for residents of Ulithi also held lands on subordinate islands.

In contrast to the Trobriands, it appears certain that the flow of inter-island trade in the Carolines had been incorporated into a developing evolutionary trajectory,

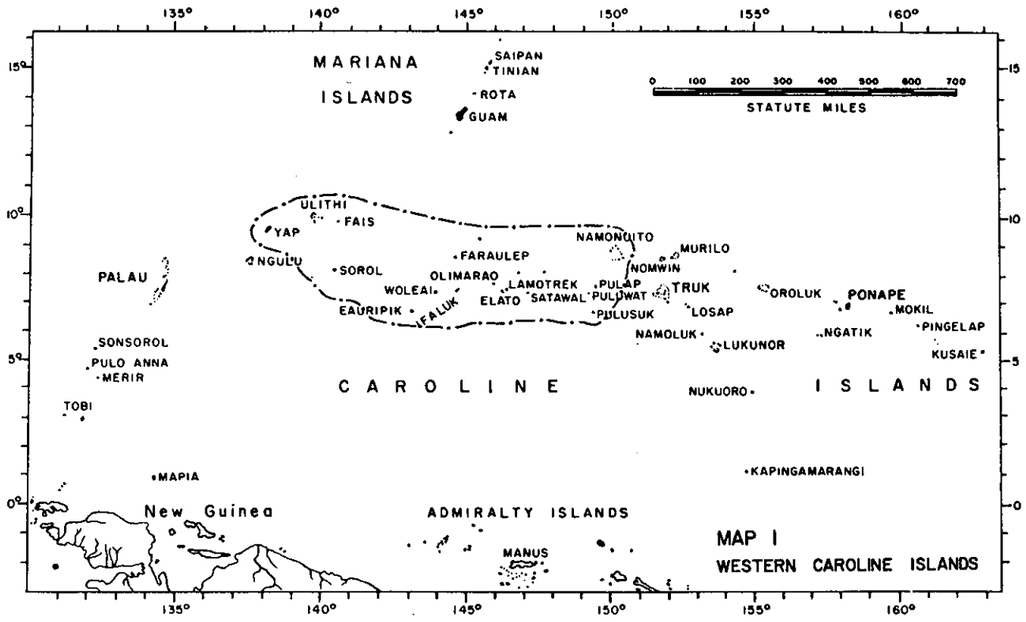

Figure 7-2: *The Caroline Islands. Source: Alkire 1965:5.*

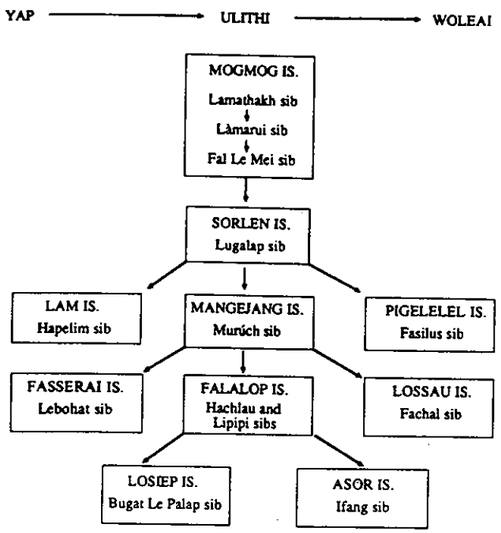

Figure 7-3: *Yapese tribute hierarchy. Source: Hage and Harary 1991:107.*

whose economic base was not limited to the villages of individual islands but built upon the incorporation of numerous islands. This incorporation did two things: it denied effective exterior contexts for the construction of power—the bases had been effectively absorbed—and it provided the basis for a developing political economy that engendered the rigid hierarchy witnessed in the Carolines.

Discussion

The previous examples have shown the relationship between inter-island systems of exchange and the development of hierarchy. For the Trobriands, the fact that inter-island exchange was never a captured monopoly created alternative contexts for power and inhibited the development of hierarchy. Just the opposite occurred for the Carolines. The incorporation of inter-island exchange into the developing *Yapese Empire* actually provided a hierarchical armature for the development of fixed ranked relations between communities within the larger political entity of Yapese control.

Several analyses have elaborated on the relationship between external trade and developing hierarchy in Oceania. Brunton (1975), for example, has proposed that the limited ranking of the Tabula lineage on Kiriwina in the Trobriands was a direct result of Kiriwina's more limited participation in *Kula* exchange. As he sees it, the flow of *kula* items through this district was precarious and limited, especially in relation to that documented to have flowed through other parts of the *kula* chain, such as the Dobu. In essence, this more limited flow of goods was more susceptible to monopolization by a small group, thereby engendering hierarchy, while the Dobu, who witnessed a greater exchange of goods, were not able to monopolize this exchange and were more acephalous.

Brunton would appear to be on the right analytical path, but there are some caveats that do suggest that the issue is somewhat more complicated than a simple equation between the quantity of the flow of goods and the ability of a society to generate and maintain a hierarchy. In the first instance, Hage and colleagues (1986, 1991:156-76) challenge Brunton's equation by arguing that Tubetube, which was dependent on inter-island trade for its very existence, was hierarchical. But it should be pointed out that their argument, which has a measure of logical plausibility, is only weakly supported by their example. They assume that Seligman's account of "men of wealth" (1910:453) on Tubetube automatically indicates some type of hierarchy. It could very well be otherwise. In the second instance, the strongest caveat to this type of analysis has come from Persson (1983), who has successfully demonstrated that the system among these islands is dynamically more uneven than Brunton's assumption. At the time of Malinowski's observations, Kiriwina was receiving little by way of *kula* exchange, but, as Persson has demonstrated, the flow of goods was never even and changed according to local conditions, such as bride purchase or funeral celebrations. The correlation that Brunton assumes was probably only good for the duration of Malinowski's visit. The issue then is not as clear cut as we would assume.

Friedman (1981) has also supplied an interesting analysis of the effect of inter-island trade on local development of hierarchy. Drawing upon the work of Ekholm (1978), he argues that the original Oceanic society was hierarchical and that an increase in prestige goods exchange provided alternative power bases for elites, thereby resulting in a devolution to a big man society in areas such as Melanesia.

Overall, these ethnographic examples highlight the importance of external trade to the development of hierarchy. Archeologists often assume that interaction between groups leads to increased hierarchy (Price 1977; Renfrew and Cherry 1986). Such examples lend support to suggestions (Schortman and Urban 1992; Edens 1992) that we really need to consider the channel of interaction and its correlation to particular groups within interacting communities before we can fully determine the effect of trade on local development.

ARCHEOLOGICAL EXAMPLES

Having seen how an internal structure that fits a heterarchical model can be the result of the effect of external economies, we can now turn to some archeological examples of similar internal structure and explore how their own peculiar makeup is the result of a failure to incorporate significant external economies fully. My point in presenting these archeological examples is to argue that, as opposed to destroying an existing hierarchy in society, external trade can be a preexisting condition to the development of complex society—a preexisting condition that produces a noncanonical type of social evolution, more amenable to heterarchical analysis than to paradigms of hierarchy.

Greece

What follows is a much condensed version of longer essays on Greek political and economic structure (Small 1994, n.d.), to which the reader is encouraged to refer for greater elaboration. Politically, Greece was dotted with two types of political systems in the Archaic (c. 650–475 BC) and Classical (c. 475–325 BC) periods: the *ethnos* and the *polis*. The *ethnos* generally was a non-urban form of state that was represented by a confederation of several polities. Most *ethne* (pl.) were located in the northwestern regions of Greece, specifically the area around Thessaly. I am going to focus on the *polis* or classic Greek city-state for this exercise, however.

Estimates for the number of city-states in Classical Greece (Figure 7-4) vary from 600 (Jameson 1990) to 750 (Snodgrass 1986). Many were small, with territories ranging from a few square kilometers to regional expanses (e.g., the Attic peninsula), and populations from under 5,000 to a possible 120,000 to 150,000 (Garnsey 1988:90) Much of our evidence for the internal working of the Greek city-state naturally comes from Athens, which has supplied the greatest amount of written information. Although Athens might have been the most noticeable and analyzed of the Greek city-states, its basic internal operation was not that different from others.

As exhibited in Athens, the internal structure of the Greek city-state was characterized by a fluid, flexible ranking system and a very low level of integration between social and political contexts. Like the Trobriands, the internal structure of the Greek city-state was marked by a fluid ranking of different contexts rather than a more fixed one. In their developmental paths, Greek city-states often oscillated between oligarchic, democratic, and tyrannical forms of hierarchy. Each hierarchical arrangement was different, with different contexts alternatively positioned at different ranks. For example, in democracy, the assembly would often dominate and organize the internal structure of the state; in oligarchies, it could have been the symposium or funeral celebration; in tyrannies, the public festival or the army.

This was accompanied by a low level of integration of important community contexts. Humphreys (1978) first accurately identified the unique features of the Greek city-state. She focused on a study of structural evolution that outlined how Greece, specifically Athens, was unique in its evolutionary trajectory and was characterized more by an increasing articulation of roles and contexts than a developing integration, as we would expect in a more traditional model of cultural evolution. As the Greek city-state developed, it witnessed the creation of separate decision-making contexts, such as the assembly and the marketplace, which were only minimally integrated into a larger political structure. In addition, there was a strong barrier between important contexts of political decision-making with obvious homosexual frames (e.g., the elite symposium or the gymnasium) and public assembly.

Again, although much of our information does come from Athens, this model also applies to city-states in Greece in general. The fluid ranking and oscillation between temporary hierarchies was a hallmark of the history of the ancient Greek city-state, with changes often correlated to an internal fluid contest between established rich, newly rich, and the poor (Lintott 1982). We thus have a situation, on a complex social level, that parallels the heterarchical internal structure of a society such as the Trobriands. Weak integration of contexts appears to have been widespread as well. An example of this comes from the far flung distribution of the theater, the primary context for political public assembly (Small 1987). The spatial structure of the theater, which did not single out any

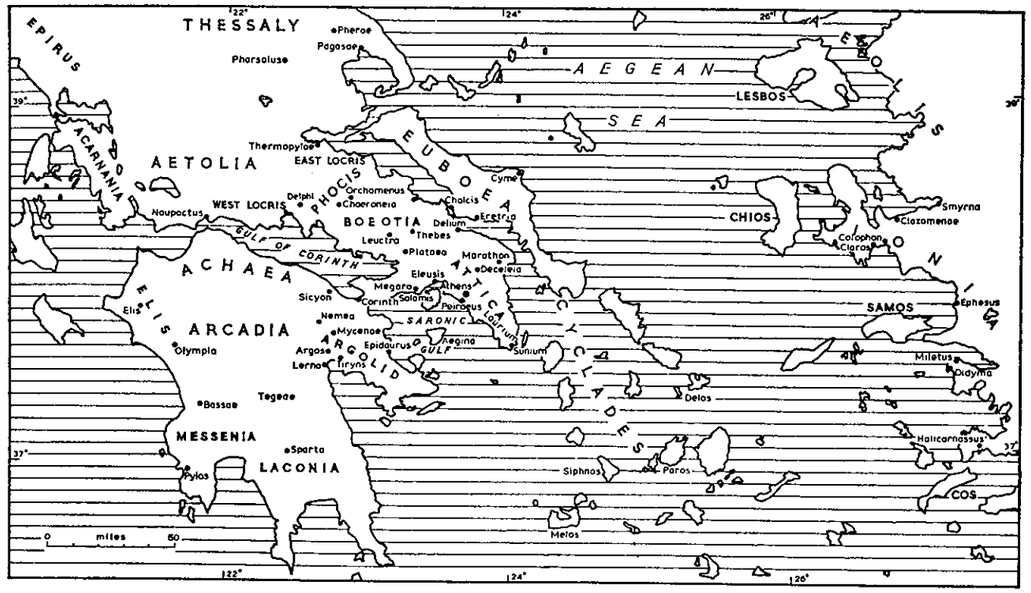

Figure 7-4: *Ancient Greece and major city-states. Source: Andrewes 1971:11.*

one group for seating distinction, framed public political gathering within an ideology of egalitarian values of equal say and opportunity. But these public settings appeared in numerous states where there existed a political hierarchy that was anything but democratic and were quite often just the opposite: oligarchic and tyrannical. This is a clear example of the ubiquitous disjunction of contexts within Greek city-states.

The reason for this internal similarity is much the same as the Trobriand case. An external economy existed that was never captured into the developmental trajectories of the small Greek city-states. From at least the Mycenaean period (c. 1400–1100 BC), Greece has been characterized as a region with a vital regional economy that is tied to its ecological frame. Because Greece is semiarid, the risk of agricultural failure is acute (Halstead 1981, 1988, 1989; Halstead and O'Shea 1982; Gallant 1989, 1991). Harvest yields can vary considerably from year to year in different regions (Gallant 1989). Halstead (1981) has demonstrated that there was some variation in the response to climatic fluctuation that correlated with different smaller regions in Greece. But it also appears (Gallant 1989) that large sections of Greece were on a similar wavelength in fluctuation, with selected areas (e.g., Thessaly and the Black Sea region [Garnsey et al. 1984; Garnsey 1988]) on a different cycle and therefore famous for supplying the rest of the Greek world with needed grain.

Thus, a parallel can be seen between the economic character of the larger region of Greece, with its variable agricultural uncertainty, and the inter-island territories of Oceania. Like the situation among the Trobriands, this larger regional economy supplied important external bases for the construction of power within local communities. Greek elites were actively involved in the transfer of grain from one region of Greece to another, which often resulted in the creation of important bases of power in their home states. The elites dominated all long distance trade at least as early as the Archaic period (Garnsey and Morris 1989:101) and arguably even earlier. This control extended into the Classical and Hellenistic (c. 325–50 BC) eras, with documentation showing that the city-states looked to elites to furnish surplus grain from other regions in Greece during local shortfalls. Failing to actively incorporate this external economy into their own internal structure, Greek city-states never established a state controlled merchant fleet; instead they established a widespread institution, the *sitonia*, that put the state in the hands of enterprising elites to secure needed extra grain.

Participation in this external economy provided bases for power that were outside the current internal state hierarchy and could be used to challenge their authority. Much of the power base for the elite came from the construction of dyadic patron/client relations that were based on the ability of an elite to supply extra grain in an agricultural emergency (Gallant 1991; Millett [1989] for the position of patronage in Athens). The contexts for these relationships were decidedly outside the aegis of the state. Such patron client ties were localized in corporate groups (e.g., gene [*clans*] phratries, demes, and thiasoi [religious organizations]) that were either outside the interests of the state or sat at an intermediate level between the state and the village (Gallant 1991:174).

The leverage that these relationships gave the elite has been amply demonstrated in epigraphical evidence, where the state is even put into a position of clientage to an elite using surplus to challenge its authority. A famous case (Gallant 1991:184) is that of Erythrai in Ionia, where Polykritos, one of its wealthy citizens in the third century BC, was able not only to challenge the authority of the state but even become its patron. As the inscription recounts, Polykritos was appointed the *sitonios*, or grain official, by the local polis during a local food crisis. Upon his appointment, he supplied money to middlemen (who must have gone to Polykritos' external associates) to buy external wheat for the polis. He then advanced money to the community, with interest, for a reserve fund to buy future grain. He subsequently sold grain from his own reserves to the community at an inflated price. Thus, by being able to lend money to the community, control the distribution of surplus grain, and control the importation of extra grain, Polykritos was able to challenge the state authority structure and eventually dominate it.

Xenia and Sanctuaries

Like the institution of the *kula* ring, regional institutions existed in ancient Greece within which this interregional economy was embedded. The principal social institution for the acquisition of external grain was ritualized friendship or *xenia*. *Xenia* was a form of fictive kinship that established a reciprocal bond of obligation between elite households from different states in Greece. Historical documentation shows that elites would not seek grain from strangers during the Classical and Hellenistic periods (and with logical extension to the Archaic and earlier) but from their ritualized friends or *xenoi* (Herman 1987:82-88).

Interstate athletic festivals (at first funeral games and then panstate gatherings, such as the games at Olympia) were the contexts for the initiation of this friendship and its reactivation when the need should arise. As many have documented (Kyle 1987; Kurke 1991) these festivals were showcases for elite honor and were framed by an overarching concept of *xenia* and reciprocal relationships between small elite lineages or *oikoi* (households). In addition to this ideological frame, the festivals themselves would have served as natural meeting places for exchange of important information on harvests between elites. Unlike the states themselves, these festival contexts were mainly neutral in interregional conflicts, thus providing unique opportunities for elites to gather, even during times of interstate warfare. A truce was often proclaimed for the festivals, which allowed opposing Greeks to meet on neutral ground. The scheduling of the festivals was such that attendance could be more frequent than once a year. There were others besides the famous *periodos*, which made up the festivals at Olympia, Delphi, Nemea, and Isthmia and was scheduled so that at least one and sometimes two of its festivals were held each year. Some of the more famous were those at Dodona, Delos, and Mt. Mykale. The timing of the festivals would also have worked in favor of information exchange. We know that Olympia was set for the second or third full moon after the summer solstice, which would have given attendees an opportunity to learn what the summer's harvest had been in different parts of the Greek world.

In sum, Greek city-states, although more complex than the Trobriand communities, exhibit striking similarities to the Trobriands in weak hierarchical structure. Since the regional economy in both its ecological and social configurations existed before the rise of the Greek state and was never captured in the evolutionary developments of the polities, it affected the evolution of the small state in Greece. The polities suffered from weak integration of different community contexts and an internal oscillation between different temporary hierarchies.

Comparative Examples

While much of the archeological argument for the effect of external economies on cultural evolution has so far come from the case of ancient Greece, it does appear

that such preexisting economies, when not captured into the trajectory of the state, produced similar results elsewhere. In many significant ways the development of the Maya polities parallels our previous examples. Maya city-states evolved within an active region of trade that was not captured by the developing polities but lay outside their control. As early as the late Preclassic (c. 200 BC-AD 100), the highland and lowland regions of the Maya were witnessing a dramatic trade in items such as jade, pottery, cacao, obsidian, stone vases, salt, and cotton (Rathje 1971, 1972, 1975; Brown 1984; Clark and Lee 1984; Graham 1987; Hirth 1992; McAnany 1993). Yet the Maya polities failed to capture this economy in two very important ways. First, settlement studies (Rice 1987; Ball 1993; King and Potter 1994) show that centers of manufacture of ceramics and obsidian were not centered within the evolving polities but retained their more rural loci. Second, the elite prestige economy (e.g., jade, pottery, stone vases) remained closed within lineages rather than captured by the paramounts. This is clearly seen from investigations in Copán, where interstate prestige economy can manifest itself in foreign artisans who appear to have been localized in a non-royal elite compound and were apparently working under patron/client obligations (Webster and Abrams 1983; Sanders 1989). It should also be noted that the local prestige economies of these compounds at Copán were also probably not captured by the state. Items such as textiles and worked shell and stone were produced by members of individual elite compounds for use by their own elites. Elsewhere, like the Greeks, Maya elite also traveled to other sites (Schele and Mathews 1991) where they had additional opportunities to engage in an interstate prestige goods economy.

I would argue that the effect of this *non-capture* of prestige and utilitarian goods production and distribution was the same as that which we have seen in the Trobriands and among the Greeks. Hierarchy was weak and often unstable, as seen by both Sharer (1991) and Marcus (1993) for Tikal and elsewhere. The power of the paramount was also actively challenged by those very elites who were from those lineages who exhibited such closed prestige economies and were participants in the regional economic system. Copán gives a clear demonstration of this in the use of royal propaganda by the subelites in compound 9N-8. These elites were the ones employing foreign artisans and also using royal propaganda in their decoration of a hieroglyphic bench with symbols that would have been limited strictly to the royal lineage in other societies (Webster and Abrams 1983; Riese 1989; Fash and Stuart 1991). To this evidence can be added altars T and U in Group 9, which were erected for persons other than the usual paramount ruler.

The situation with the rise of the early state in Mesopotamia also appears similar. Mesopotamian city-states evolved within a region that was economically interactive. Regionally exchanged commodities were items such as obsidian, lapis lazuli, pottery, foodstuffs, copper, wool, and textiles (Yoffee 1979, 1981; Larsen 1987; Edens 1992). Once thought to have been an example of a temple or palace controlled society (Schneider 1921; Deimel 1931; Wittfogel 1957; Falkenstein 1974), the early state in Mesopotamia is now seen to be quite like the Greek and the Maya, with a great deal of its domestic and regional economy remaining within the confines of elite family control and not that of the emerging state (Zagarell 1986; Stone n.d.). These non-state controlled goods represented non-state access to prestige goods and therefore economic power and status, since they could either be exchanged for increased land tenure or serve as powerful tools in the creation of social position in their own right.

The results of emerging within this economic network, one that was never fully captured in the development of the early state, can be seen in the internal composition of the states themselves. Developmentally, the internal structure of many Mesopotamian small states again paralleled the developments elsewhere. These states exhibited pronounced features of a weak hierarchy (Diakonoff 1969; Gelb 1969; Yoffee 1979; Zagarell 1986) and hierarchical challenges to central power, seen independently and in the institution of consensual political operations (Jacobsen 1957; Stone n.d.).

DISCUSSION

Although each of the archeological societies discussed has a distinctly different historical frame within which it developed, some important features have been similar in their development. Each reached a level of recognized statehood and evolved in a region that was economically interdependent and active before the threshold of statehood was reached. In their development, these polities failed to capture sufficiently this external, often lineage-controlled mode of production and distribution. Without this economic armature for complex social evolution, these states were often characterized by weak hierarchies,

accompanied by poor integration and centrality. Their true nature can only be effectively understood if we utilize a heterarchical paradigm for their organization.

An Overlooked Issue in Evolution

As I argued in my introduction, using the heterarchical paradigm questions some of the basic assumptions that have haunted the study of social evolution for years. I shall discuss below what I consider the most important issue that this type of analysis raises: the assumed presence and role of taxation and tribute within archaic states. This study calls into question the issue of economic control or the capture of preexisting economies into the developmental path of evolving states, and it also forces us to reconsider the presence of taxation or tribute as a hallmark of state level society as is currently assumed (Earle 1991:18). Ancient Greece never developed a system where the states directly taxed their citizens. Funds for the running of the state came either from taxes placed on foreigners living in the state or from an indirect tax, the liturgy, which called upon the rich to contribute to the running of the different organs of government or the construction of various elaborate public buildings. The liturgy was only weakly controlled by the state, however, if even at that. Such assessments often allowed enterprising elites to use the liturgy for flamboyant personal aggrandizement (e.g., those who paid for festivals would parade around in the theater in flamboyant clothes; see Kurke [n.d.] for summary) rather than serving the interests of the state anonymously.

This lack of formalization and state identification with taxation left many Greek states in a weakened position when it came to incorporating conquered territories into an empire economically. A classic case comes from ancient Athens. When Athens had established itself as the controlling state in the Delian League (commonly known as the Athenian Empire), it was not capable of economically rearranging the conquered territories to create a new regional economic structure. It limited its interests to securing grain from the Black Sea to feed its urban populace. It neither imposed any type of navigation acts nor attempted to reorder the flow of goods in the territories. Athens was so blind to any form of economic restructuring that it even acted against its own economic interests. It established a harbor tax on all harbors in the empire in 413 BC to help pay for the cost of imperial defense. In doing so, however, it levied a tax indiscriminately, laying a burden not only upon ships that were owned by those it controlled but also upon Athenian ships.

If the situation in Greece were one where the state did not tightly control taxation or tribute leveling, then we are forced to ask whether or not this situation was equally evident in the other societies discussed here, which appear similar in their internal structure. This certainly appears to have been the case among the lowland Classic Maya. Like ancient Greece, the Maya states—although they could expand and subjugate neighboring states—could never permanently hold onto the territory that they conquered and transform it into a larger regional polity (good overview on subject in Marcus [1993]). In light of the evidence of ancient Greece, I would argue that here too the state did not capture and formalize its economic base through the control of taxation or tribute collection. As Freidel (1981) has already argued, taxation of the commons through the agency of the state was only weakly identified as a means of economic power. Like Athens, Mayan states were able to capture other states but did not have the structure within which they could economically incorporate them into a large polity and thereby retain control over these territories for anything more than a limited time period. Approaches, such as that of Montmollin (1989), that assume that the state was drawing tribute and that we can outline the structure of this control by analyzing the size of monuments at different sites, are therefore in serious need of reexamination. Already, Abrams (1984, 1987) has effectively demonstrated that the labor and hours needed for many of these monuments were not as great as initially assumed. Could their presence be due more to outlay from private households than state collected tribute or tax, much like the presence of the magnificent temples in Greece? My analysis asks that we question this assumption.

CONCLUSION

The study of cultural evolution is entering a new phase. Critics of unitary models of evolution have always existed, but archeologists (Sanders and Webster 1978; Kirch 1986, 1991; Yoffee 1991) have recently taken up the anthropological cudgel and earnestly argued that we not only abandon the concept of a paradigm that sees societies as sharing a common teleology towards a state level society but also even envision different societies having their own individual goals.

Incorporating the concept of heterarchy and reframing the way in which we analyze ancient societies and their correlations with past economies, allows us to enter into this debate. A heterarchical analytical frame has given us the opportunity to isolate an alternative path to social complexity, one that does not assume it is measured on a scale of increasing fixed hierarchy. Friedman (1981) would see the effect of external exchange as corrupting the normal path toward hierarchy, but my analysis indicates that heterarchical formations can be a path to complexity themselves, the social outcomes of evolving in a situation where important economies were not captured in complex social evolution.

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8

Hierarchy and Heterarchy: The Unity of Opposites

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ABSTRACT

The significance of the concepts of heterarchy and hierarchy are discussed with reference to the first and second millennium AD cultures of the Nilgiri Hills of southern India. The nineteenth century ethnographic evidence of multiple, ethnically defined, isolated communities is compared with archeological evidence of earlier, more-stratified and more-centralized polities. Archeological evidence includes inscriptions, megalithic tombs, and carved pictorial representations of warfare, armed horsemen, and other figures. A linear, evolutionary model cannot account for the complexity seen in the Nilgiri Hills, while heterarchy better illuminates the socio-political developments in this region.

Carole Crumley (1992) has called upon us to open our minds to the possibility of relationships other than hierarchical ones. She points to the prevailing notion, emanating from our own experience with state bureaucracies, that order and regularity in society are correlates of rank hierarchy. She asks us to reevaluate the common view that social complexity simply corresponds to the degree of administrative and social hierarchy. As opposed to the static category of hierarchy, Crumley proposes that more attention should be given to the more plastic concept of heterarchy. Heterarchy, which she defines as structures in which each element is either unranked relative to other elements or possesses the potential for being ranked in a number of different ways, offers us greater opportunity to view and elucidate structural changes. It allows us to focus upon the process underlying structural transformations. Crumley does not see hierarchy and heterarchy as directly opposed but rather emphasizes the play between hierarchy and heterarchy: "...across space, through time, and in the human mind" (Crumley 1992:163).

Although Crumley's interest has often focused upon settlement patterns (e.g., Crumley 1979; Crumley and Marquardt 1987), hierarchy and heterarchy are not only to be seen as functions of settlement hierarchies but also as relationships among people, institutions, and environment. In its indeterminacy of order, heterarchy represents the multiplicity of historic possibilities as opposed to the static, pseudo-evolutionary scheme that flows from band, tribe, chiefdom, to state typologies. It implies the unpredictability of actual history and the interplay of individuals and institutions. It suggests the differential effects of institutions on one another, dependent upon historical conditions and human decisions rather than in pre-determinable, ahistoric pathways. On the other hand, hierarchy invokes order and predictability and implies determined ranked relationships between people, social institutions, and their environment. Hierarchy denies, or at least limits, arbitrariness and randomness of events. I believe these two concepts—hierarchy and heterarchy—are closely connected. It is the interplay of the two that provides insights into events.

Some have seen the unfolding of history as characterized by increasing hierarchical social-organizational relationships (e.g., Johnson 1978; Flannery 1972; Wright and Johnson 1975). I will argue in this chapter that this is not the case. Indeed, real history (as opposed to our models) often provides for cases of decreasing levels of socio-organizational hierarchy in context of increasing regional complexity. This is the lesson of Fried's (1975) concept of the development of tribes after the emergence of states. Similarly, cultural anthropologists have suggested that many egalitarian societies are relatively recent constructs, emerging out of interaction with historically constituted state societies (see for example Fox [1969] and Headland

and Reed [1989] for the emergence of hunting-and-gathering communities). Therefore, a decline in social-organizational hierarchical levels in particular localities does not necessarily connect to a social collapse. Indeed, declines in apparent levels of social control are often a consequence of more complex relations of interaction.

HIERARCHY AND HETERARCHY IN A SPECIFIC CONTEXT: THE NILGIRI MOUNTAINS

The Nilgiri Mountains of southern India are a region in which the interplay of hierarchy and heterarchy occurs; hierarchical, centrally organized systems coexisting with, interacting with, and creating more egalitarian, dispersed systems of authority. The region periodically experienced centralized state rule and periodically experienced more egalitarian, symbiotic relationships between communities. I will argue that an understanding of the relatively recent ethnic social organization of this area, its system of *tribal* ethnic symbiosis, is impossible without an appreciation of the historic processes that shaped it. I contend that it is impossible to understand the dynamics of this region's historic construction without focusing on the interplay of these two coexisting forms: hierarchy and heterarchy. It is the historic interplay of the two that shaped ethnographically known communities reported by historians and anthropologists. The complexities of social structure are not the consequence of communities on the road of evolution to more hierarchical societies but the result of unique, often hierarchical relationships that gave rise to high levels of decentralization.

The Nilgiri Mountains of Southern India (Figures 8-1 and 8-2) are one of the extreme high points of the Western Ghats and rise majestically above the surrounding plains of Tamil Nadu. The region's precipitous cliffs are often shrouded in dark clouds, and its loins clothed in dense jungle. Its privacy is protected by malarial zones along its base, and the fierceness of the wild fauna inhabiting its slopes appears to give evidence to the relative isolation of the *tribal* peoples that occupy its many environments. Indeed, this region has been historically viewed as peopled by communities only marginally and intermittently affected by the multiplicity of the states of civilized South India.

The Peoples of the Nilgiris

The peoples of the Nilgiri Mountains were for a time a classical region for anthropological thought (Rivers 1906; also see Hockings 1978). The apparent isolation of the Nilgiri inhabitants and their unique adaptations seemed to promise a rare view of communities largely untainted by state-organized societies. Nonprofessionals and scholars alike were particularly fascinated by the buffalo-herding, buffalo-worshipping, and polyandrous life-styles of the Todas or by the relationships of the various other local *tribal-groups* to one another. These groups included the crafts-group known as the Kotas (who were also engaged in subsistence cultivation), the cultivating, Hindu latecomers known as the Badagas ("northerners"; i.e., peoples from Karnataka), and the slope-dwelling, slash-and-burn, extensive cultivator/hunter/gathers of various Irula and Kurumba communities.

At the time of early ethnographic reports, all of these groups had only limited systems of internal authority. For example, the Todas had no formal headman or authority figure higher than the household. The decision making process whereby intra-community disputes were resolved consisted of meetings of all of the male members of the community (on the hamlet and/or regional levels). Community property (the pastures and the community's sacred herds) and private productive property (privately held, non-sacred buffalo herds) coexisted within Toda communities. These societies were largely characterized by low levels of hierarchy but not its total absence. Kin-based and caste-like differences in status helped organize the community. Older brother had authority over younger; male had authority over female. There was also a status hierarchy among the Toda divisions (Tordas versus Towfily) and clans. Moreover, there were status differences based upon herd size. These hierarchical status relationships certainly had consequences for community organization, but the hamlets and clans were largely autonomous units that made their own life decisions. Despite some degree of internal hierarchical structure, no coercive institutions existed within the Toda community that could enforce decisions or compel groups of lower status to do anything they did not want to do (Walker 1986:Chapter 3).

Similar, largely egalitarian relationships could be found among the Kota craftworkers and agriculturalists. The limited number of Kota craft-villages similarly had

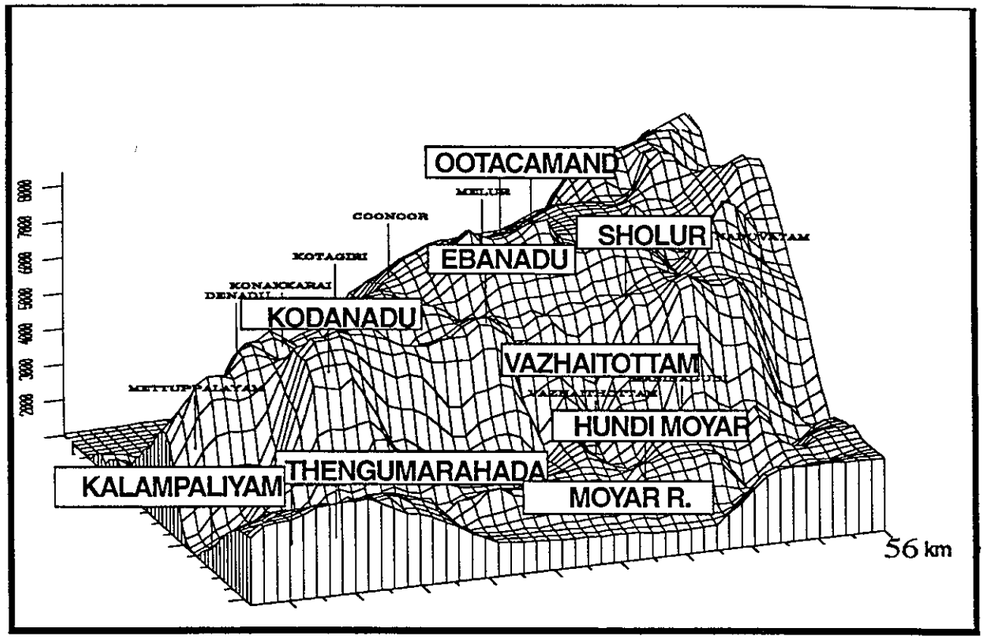

Figure 8-1: *Surface map of Nilgiri Mountains from the north.*

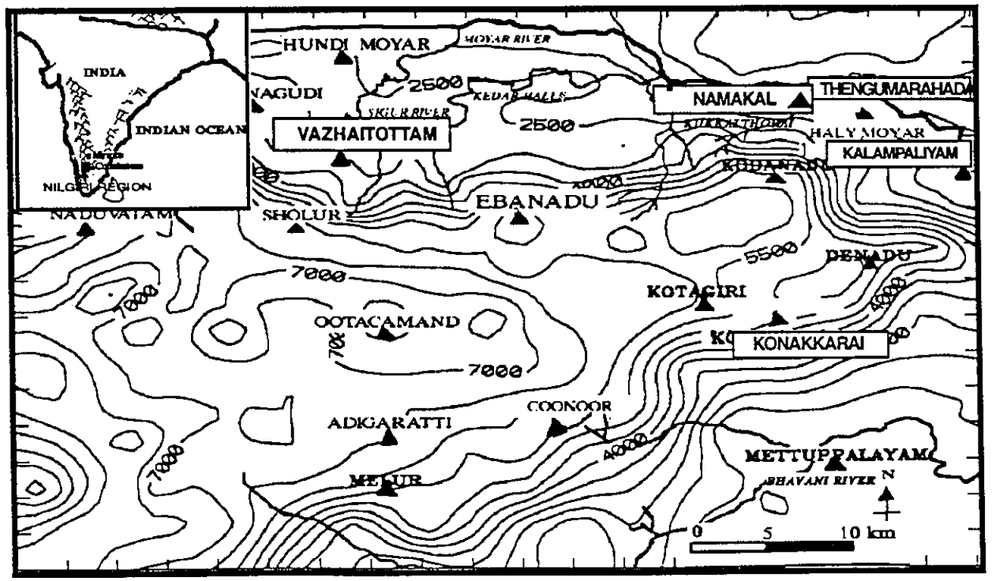

Figure 8-2: *Topographical map of Nilgiri Mountain region.*

relatively weak authority figures (priests), and village (male) councils regulating the community. There was no centralized system of intervillage Kota community control, although certain villages had higher statuses than others (e.g., Kol Mel). These rankings appear to have had few consequences, however. Indeed, the individual Kota communities operated as corporate units with high levels of intra-village solidarity at the time of early ethnographic reports (Mandelbaum 1989).

The agricultural Hindu Badaga community had more extensive authority networks and a classical, if weak, chieftain-like structure, however. Each Badaga village had a headman, and there was a system of headmen over groups of Badaga villages. The villages were ranked, with the headman of the village of Tuneri recognized by the various Nilgiri communities as the premier chief of the region. Nevertheless, the ethnographic reports suggest that even in this case authority was limited (e.g., Hockings 1980:Chapter 8).

Each of the constituent Nilgiri ethnic communities was independent and autonomous. They were united by systems of ritual and contingent status, however. Who had the highest status in this system was to some extent determined by context (i.e., heterarchical in nature). Unresolved Toda disputes, for example, were submitted to Badaga headman for arbitration, and the Badaga Tuneri chief sat on the Toda-wide community council where decisions were taken. Moreover, Todas treated the Badagas with high levels of respect. On the other hand, Badagas made certain traditional payments to the Todas. Furthermore, when the British took over the region, they generally considered the Todas to have been the dominant caste/tribal group in the region.

The Kotas and Kurumbas, in contrast, were not treated as well by the higher-ranked ethnic communities and were often regarded as inferiors. These groups did not accept their low status designation without resistance. Indeed, the Kota countered attempts to belittle them by claiming aboriginality, which symbolically made them equals to the Todas and Kurumbas since they all shared an equal aboriginal right to the land. Moreover, they also emphasized their generosity towards the Badagas upon the Badagas' escape from their oppressors in the plains and their pitiable arrival in the mountains. Moreover, some Kotas claimed earlier possession of broad regional authority based on an earlier possession of regional chiefly symbols that were later usurped by the Adhikari Badagas (Zagarell 1994). These claims were not contested by neighboring Badaga groups, but the ability to exert any authority, even in relation to these lower status groups, was limited by context. For example, disputes between ethnic communities were frequently settled by joint community councils (Rivers 1906:550). In another context, Kurumbas, who were feared and despised because of their reputed ability to cast magical spells, were often hired to serve as ritual watchmen and to perform certain priestly activities. Similarly, the Irulas, a hunting-and-gathering/extensive-cultivation community, occasionally served as priests at some non-Irula temples. Moreover, the Irulas, who generally do not possess a high community status, were indeed well regarded by the Lingayats, a south Indian, Badaga-connected, priestly caste. Many Irulas from the northern Moyar region in fact consider themselves closely allied with the Lingayats. Thus, traditional Nilgiri society was characterized by relatively high levels of heterarchy.

To varying degrees, all of the Nilgiri groups were bound together by a symbiotic network of mutual responsibilities. The Todas delivered milk products to Badagas and Kotas and provided buffalo carcasses for Kota consumption. The Kota carried out crafts activities (e.g., pots, iron tools, jewelry) and played music at festive occasions for the Badaga and Toda communities. The Badagas in turn paid out traditional amounts of grain for those with whom they had these relationships. The Kurumbas and, more locally, the Irulas provided jungle products and various services for established payments. This system of reciprocal obligations is similar to the so-called *jajmani*-like relationships of the plains, tieing together village occupational and status groups. However, the system in the plains is largely reinforced by potential violence against the subordinated, low-status groups. In contrast, although ethnically based services were expected in the Nilgiris, the relationships between the various groups were largely voluntary, and mistreatment often resulted in the omission of services by the aggrieved party. Within the Nilgiris there were no means to force compliance with this system. Moreover, all groups were politically autonomous and economically self-sufficient. The apparent lack of coercive force in connection with the Nilgiri symbiotic *jajmani*-like system has impressed many scholars dealing with the region (see Mandelbaum 1989; Fox 1962) who suggested that these were proto-*jajmani* relationships. Thus, it initially appears as if we are dealing with so-called acephalous or weakly ranked societies, so-called non-complex societies with, strangely enough, multiple ritual and economic ties (*jajmani*-like) that are characteristic of state-organized societies in the plains.

Are we then seeing evolution in the making, as relatively isolated communities become increasingly complex and mutually interdependent and move from tribes to chiefdoms? Is this nothing more than the slow, continuous, ramp-like transition from egalitarian, heterarchical structures to the more hierarchically ranked structures pictured by Fried, Service, and many others after them (Fried 1967; Service 1975)? The evidence, part of which I present below, suggests just the opposite scenario.

Archeological Evidence

The archeological evidence for earlier periods, compiled since the nineteenth century from the Nilgiri plateau, initially appears to suggest some previous system of centralized authority. The archeology of the upper Nilgiri region has largely consisted of two major megalithic complexes: an earlier megalithic grave complex and a later complex consisting of dolmens[1] and often connected with hero-stone reliefs (e.g., Breeks 1873; Noble 1976, 1989; and Leshnik 1974; for my views of the Nilgiri megalithic grave complex see Zagarell [1995]). The dolmens and particularly the hero-stones, which are illustrated with reliefs commemorating heroes dying bravely in battle, indicate more-ranked and centralized polities. These depictions vary from highly skilled renderings to crude outlines, but many show armored warriors mounted on horses themselves bedecked in armor. Moreover, some representations show several of the individuals considerably larger than others, usually interpreted by archeologists to symbolize the high position or status of that individual in relation to others. In the case of the reliefs from Betlada (Figure 8-3; also see Noble [1976, 1989] for a discussion of the reliefs and their distribution and sketches of the Betlada reliefs) on the eastern edge of the Nilgiris, the central larger figures also wear headdresses that differentiate them from the other individuals illustrated. Several reliefs from other Nilgiri sites display figures riding in chariots and/or covered by umbrellas held by subordinate individuals (e.g., at Tudor Muttam to the southeast of the Nilgiri plateau). Such representations normally convey the idea of major authority figures. Indeed, being covered by an umbrella is often a symbol of rule or domination.

There are several Nilgiri tales that emphasize the connection between umbrellas and authority. The relationship of umbrella and authority is a concept that is accepted throughout much of India. Moreover, although there was an apparent lack of coercion when the Nilgiri highland groups were studied, many of the individuals depicted carry weapons, including swords, knives, spears, lances, and bows. They are engaged in organized warfare. Nilgiri scholars might therefore have been expected to draw the conclusion from all this that the upper Nilgiri Plateau was under some system of authority, at least during much of the second millennium AD prior to the late nineteenth century ethnographic reports.

The commonly accepted position was quite the contrary, however. Despite these depictions of organized military confrontation and systems of authority, these reliefs were often interpreted as local products produced by weakly ranked communities, because the region was presumed to have been isolated. Indeed, to a significant degree, the discussion about the archeological remains among those who have dedicated much of their life to Nilgiri research has been given over to discovering which of the contemporary *tribal* groups might have produced this art (e.g., the excellent discussion by Kapp [1985]). The interpretation of relative isolation seemed to be confirmed by the reported lack of testimony of state domination of the upper Nilgiri region by the indigenous inhabitants, despite the reliefs (e.g., Hockings 1989; Mandelbaum 1989). In fact, Allchin (1963) compared the ethnographically known Toda to pastoralists of an earlier Neolithic period, intimating a fossil-like existence preserved in the South India mountains.

Inscriptions and Local Tradition

There were inscriptions and traditions known even in the nineteenth century that suggested hierarchical authorities had penetrated and dominated the Nilgiri region. These reports indicated that some of the ethnic communities were dwelling in the high mountains for extended periods. There were reported invasions, including attacks by the first-millennium Keralite King Senguttuvan, the early-second-millennium Hoysalas (Karnataka rulers), and the Cholas (Tamil Nadu rulers; e.g., Arokiaswami 1956). Inscriptions told how the mountains were conquered under the medieval Hoysalas, and a fort, Dannayaken Kotai, was constructed at Bhawani Sagar to control access into the Moyar basin. Moreover, the Todas were reportedly

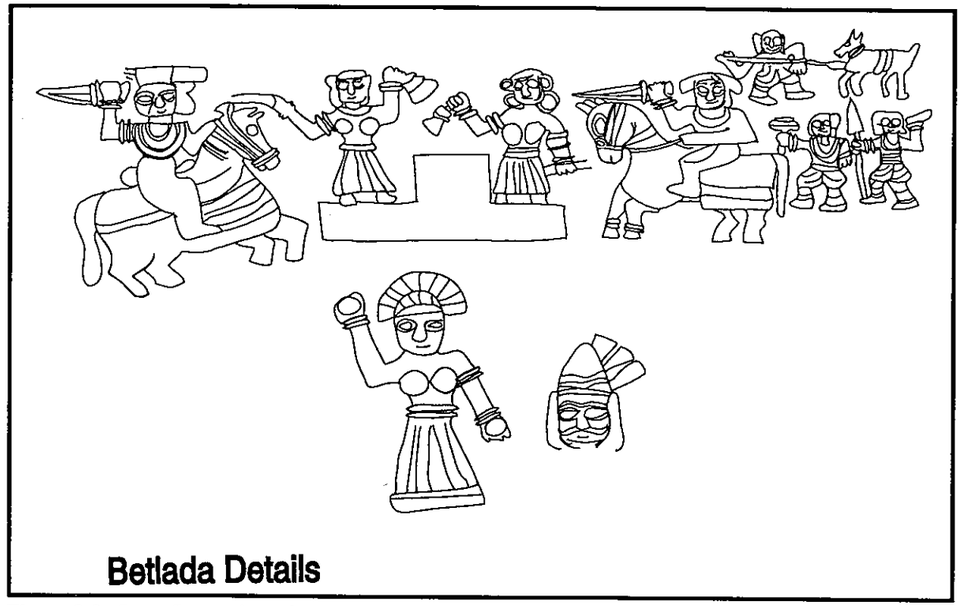

Figure 8-3: *Some figures from the Betlada reliefs.*

chased away by the attacking Hoysala armies. The Cholas were also said to have defeated a ruler in the heart of the mountains. Several other reports indicate other rulers controlling the nearby surrounding regions.

An important early report about the Nilgiris comes from Finicio, a representative of the Church who entered into the Nilgiris in 1603 searching for lost Christians. He briefly describes the Toda and discusses the symbiotic relationship between them and the Badaga agriculturalists, clearly indicating that some Badaga cultivators were already in the highlands by the late sixteenth century if not before. Along with the medieval Hoysala documents, Finicio's report clearly suggests the long term settlement of the Nilgiris by its present inhabitants. His report does not indicate any system of authority within the highland interior and seemed to support the concept of regional isolation (all this despite the fact that the region appears to have been administered by state-level societies shortly before his arrival; see below). Thereafter appear the extensive, although sometimes romantic, descriptions by the British of Nilgiri life from the nineteenth century on. The descriptions by scholars thereafter perpetuated the illusion of isolation.

My own ethnohistoric and archeological work was carried out along the northern fringe of the Nilgiris in the region known as the Moyar River Ditch. It has traditionally been viewed as an extension of the Nilgiri region. This is the home of Irula, Kasuva, and Kurumban communities. Although it lies at the foot of these steep mountains, local *tribes-people* scale its sides with relative ease and regularly walk to the top rather than spend money and considerable time traveling the circuitous public bus routes. Except for *tribal* groups, the British described this region as largely abandoned, desolate, and infested with malaria-causing mosquitoes and wild animals. It remained largely archeologically unexplored because it was difficult to access and seemed to promise little information. But, in sharp contrast to its condition in the mid-nineteenth century, I discovered that the Moyar Ditch must have been an important center in previous periods.

While in the region, I collected stories, myths, and traditions relating to the Nilgiris from the local peoples and was able to locate many early inscriptions. In contrast to what was earlier suggested, these traditions and literary evidence strongly indicate the existence of states in the region (this evidence is fully described in Zagarell [1994]). A series of inscriptions, which date from as early as the end of the first millennium AD but are concentrated in the Vijayanagar period, describe what is clearly a very

different sort of society than that reported upon ethnographically. Rather than autonomous, self-sufficient tribal groups, they describe a more hierarchical system. The inscriptions note the collection of taxes by or through state functionaries. Land was apportioned to important dignitaries for their control and sustenance. Indeed, the entire lower region of the Nilgiris is reported to have been under irrigation cultivation under the direction of Lingayat priests, a system common in the state-organized sector of India. Cultivators from the outside were being imported into the area. There was a degree of hierarchy of administrators, including influential village/regional headmen. Temples were established and then funded by the ceding of taxes of particular villages. The entire Moyar Ditch and the upper reaches of the Nilgiris were apparently divided into administrative districts. Indeed, there are the remains of many non-tribal villages distributed throughout the Moyar Ditch. Thus, this region was certainly under state authority just shortly before Finicio's report of *jajmani*-like conditions within the Nilgiris.

Others and I collected Information from members of the Irula, Kota, Lingayat, Toda, Kurumban, and Badaga communities that suggested that hierarchical relations existed in the Nilgiri region during earlier periods. Irula informants from the Moyar Ditch region clearly indicated to me that they were once under state rule. While the details may be faulty, borders and rulers were noted. Moreover, they reported the Moyar Ditch was once an important area for long-distance trade. The area contained larger urban centers, where porters and smiths hired the Irulas to guard their houses and goods. One might suspect that strongholds must have existed along the upper reaches of the Nilgiris, as the lower sites are quite vulnerable if the slopes are not secured. Indeed, not only do the inscriptions suggest the collection of taxes from the upper-level plateau communities, but local stories also describe such collections, although they tended to be ignored by scholars working in the region. Local ethnic community members were involved in collecting and paying taxes to state authorities and enforcing state rules.

Archeological Evidence of Hierarchical State Organization

The entire region contains surprisingly strong archeological evidence of hierarchical state authority inserting itself into the supposedly isolated Nilgiris. A small portion of that evidence will be presented here. The earliest evi-

Figure 8-4: *Detail from Totinali rock painting.*

dence of centralized authority-figures dates to at least circa 500 BC, the Megalithic period of Southern India. A series of painted rock shelters are found on various Nilgiri slopes, including those on the northern fringe. They illustrate *organized* warfare, with disciplined armies and soldiers often mounted on horses and elephants. The armies were led by prominent figures, who were frequently depicted as significantly larger than others (Figure 8-4). Literally thousands of graves dating from the same period are concentrated in large cemeteries along the Moyar Ditch. Each of the cemeteries consist of several hundred megalithic graves. I have argued (Zagarell 1995) that the layout of the cemeteries and the significant differences in cairn size and elaboration suggest a degree of ranking or stratification that already characterized the communities living in the Moyar region at that time. For a somewhat later period, the region around Thengumarahada, a village in the eastern Moyar zone, contains strong indications of state-like social organization. Present day Thengumarah-

ada is located at a narrowing of the Moyar Ditch, known locally as Geddapatti, "the irrigation area." In fact, there was not only evidence of earlier intensive irrigation cultivation but of relatively large-scale settlement. There is an ancient temple and statuary dating to the latter half of the first millennium AD in the area where the Ditch narrows and that directly controls access through the Moyar trough. The statuary, including a very well carved Pallava Vishnu (eighth-ninth century) and an eight-armed goddess, clearly reflect the existence of highly skilled artisans in the vicinity. Moreover, the surrounding cultivated soil is full of bits and pieces of baked brick and medieval pottery, suggesting earlier large-scale architecture. In the immediate vicinity of this temple is a series of reliefs and several inscriptions dating to the beginning of the second millennium. These reliefs (hero-stones) are only a small selection of those discovered covering the Moyar region. The reliefs are skilled renderings of warfare: warriors, mounts, and fallen heroes (Figure 8-5). The inscription, next to one of the more skillfully rendered hero-stones in the Thengumarahada area (Sita Rampatti) is written in Tamil and mentions traders operating in the region, indicating local merchant guild communities. This corresponds with the existence of a place nearby called Yomona tabalam, which should be Yavana tavalom, "the storage depot of the foreigners" ("Yavana" being a term generally used for Greeks or Romans; Zagarell 1994). Moreover, overlooking these fields is a steep, stony rise known as Ali Rani Kotai, which was transformed and utilized as a stronghold by medieval inhabitants. This fort clearly controlled valley utilization. No through-traffic was possible counter to the wishes of those controlling Ali Rani fort.

Nearby sites similarly suggest strong state-level authority in the region. This is particularly true in the case of the thirteenth century AD hero-stone burial site of Namukal (Figure 8-6). This memorial site suggests either state level or complex chiefdom levels of organization, along with sizable expenditures of labor. There are a series of features at Namukal that indicate the importance of the figure who died there. A small stone vat inscribed in thirteenth century Kannada script lies to the south, and there are several reliefs in this location honoring the fallen hero. The major relief is contained within a dolmen at the center of the site; the only decorated dolmen of several found at the site. A hero is shown in this relief killing a large cat, most likely somehow related to his death (Figure 8-7). Nearby is another relief of a mounted warrior with sword in hand, while another relief contains horses standing head to head. Perhaps the most interesting detail is the existence of a relief carving containing two incised feet. Such renderings are known from other sites (Sontheimer 1982:figs. 21-23) and are stated in those cases to represent a saint (Sontheimer 1982:272). There are remnants of several sculptures, all presently stacked alongside the relief within the dolmen. One of these is the ubiquitous bull figure (Nandi) that is found at many sites, but others are remnants from larger statues and more anthropomorphic in form. Indications that the site was previously much richer in plastic arts is suggested by assertions that some of the artwork had been carted off to other sites. I was told that a statue of a human figure had been brought to Thengumarahada. The statue itself was reported to have been swept away into the Moyar River during a major flood. There remain, however, several hero stones at the same crossing, which may have, indeed, been taken from the Namukal area. Moreover, a grinding stone with the remnant of a hero-stone relief was found in the village of Thengumarahada, which is also said to have been taken from Namukal.

The site itself was certainly more than just a place where an important figure was buried. It appears to have been an area where some form of ritual activity took place. There is a rectangular raised area, the outer edges of which are surrounded by small boulders and which may have been a foundation for a small structure. Similar mounds are found in connection with several upper Nilgiri relief sites. There is also a tall, raised, stelae-like stone to the northwest of the area. There are several dolmens at the site, most of which are undecorated. Dolmens are usually used for various ritual purposes in the region, and this appears to be true in this case as well. Moreover, sherds are scattered about the site, suggesting the area had been utilized for some time. Cults revolving around fallen heroes are a well-known South Indian phenomenon and were apparently also part of Nilgiri life (e.g., Kasinathan 1978:1; Krishnan 1974).

Evidence for such cults can also be found at the site of Kane appuchi moolai, at the foot of Ali Rani fort (Figure 8-8). Stone pilings and small numbers of baked bricks can be seen strewn about the area, indicating that structures of some sort were in the immediate vicinity. The site itself consists of a hero-stone dating to the tenth century with an inscription in a mixed script of Tamil and Kannada (K.V. Ramesh, personal communication). The relief is divided into three levels. The first two levels show the hero accompanied by female figures. The third level depicts warfare between bowmen. In the immediate

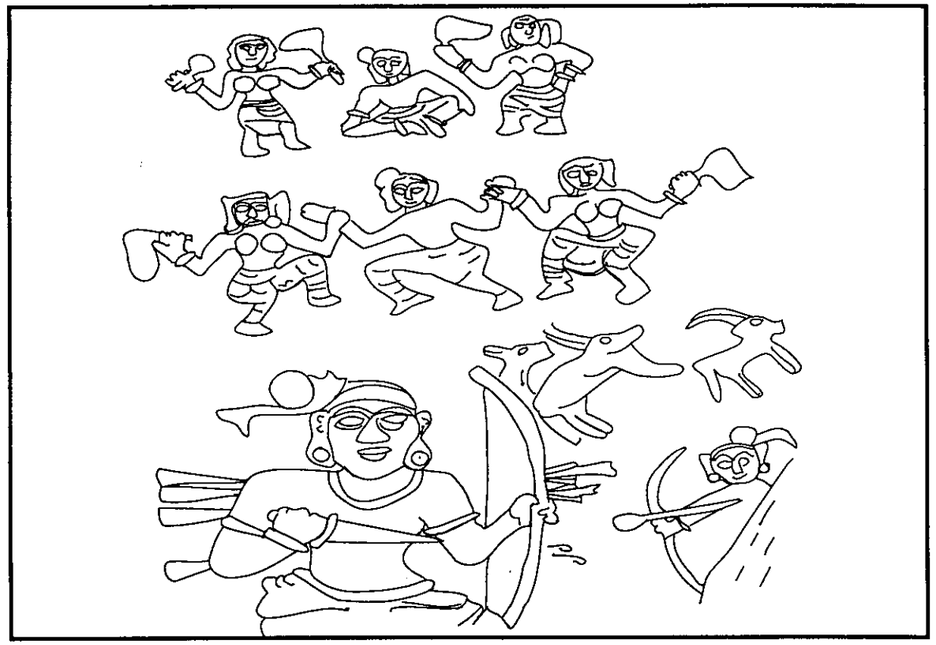

Figure 8-5: *Relief from Siddharampatti.*

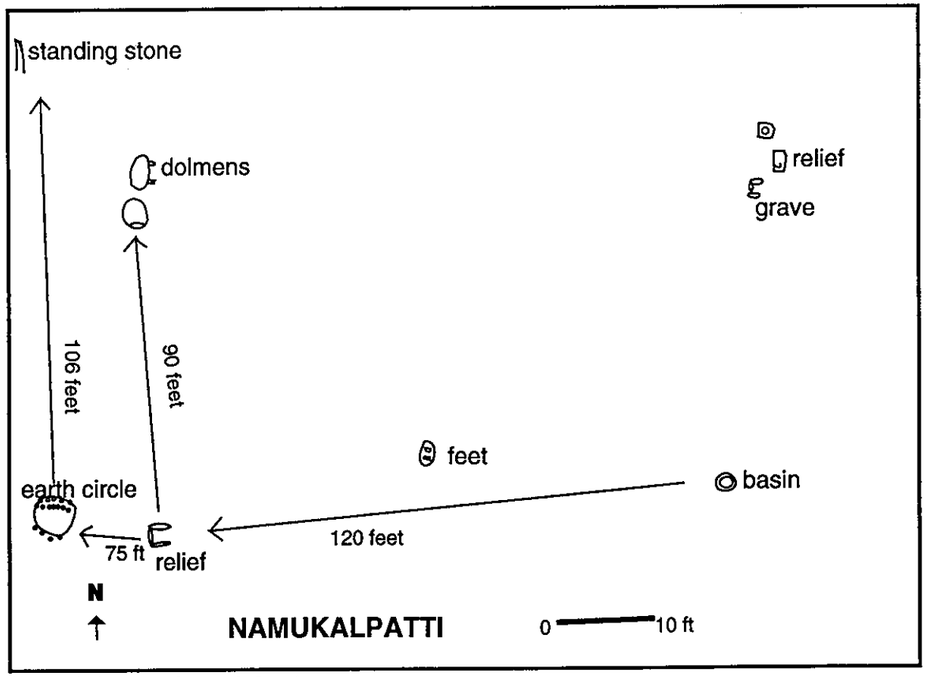

Figure 8-6: *Map of Namukalpatti.*

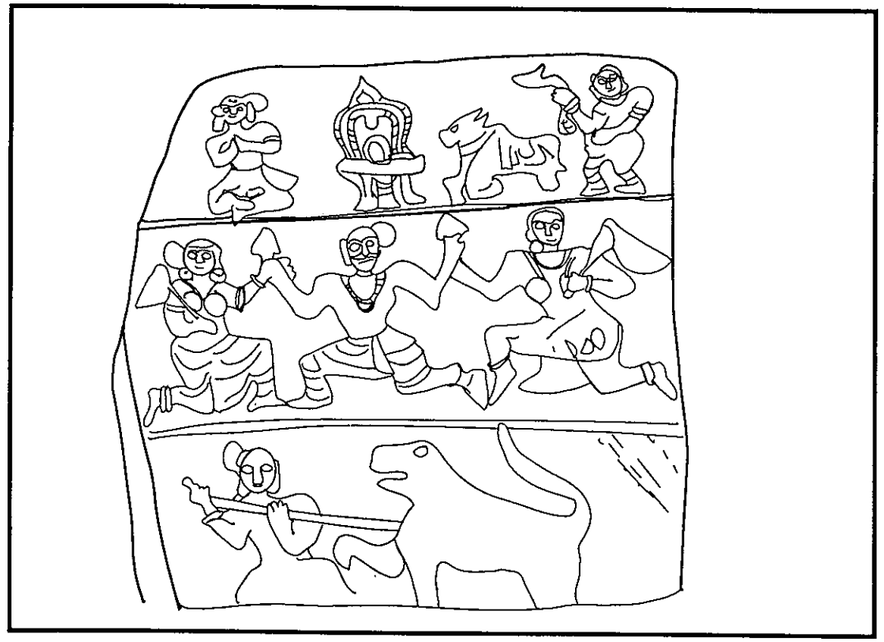

Figure 8-7: *Relief in Namukalpatti Dolmen.*

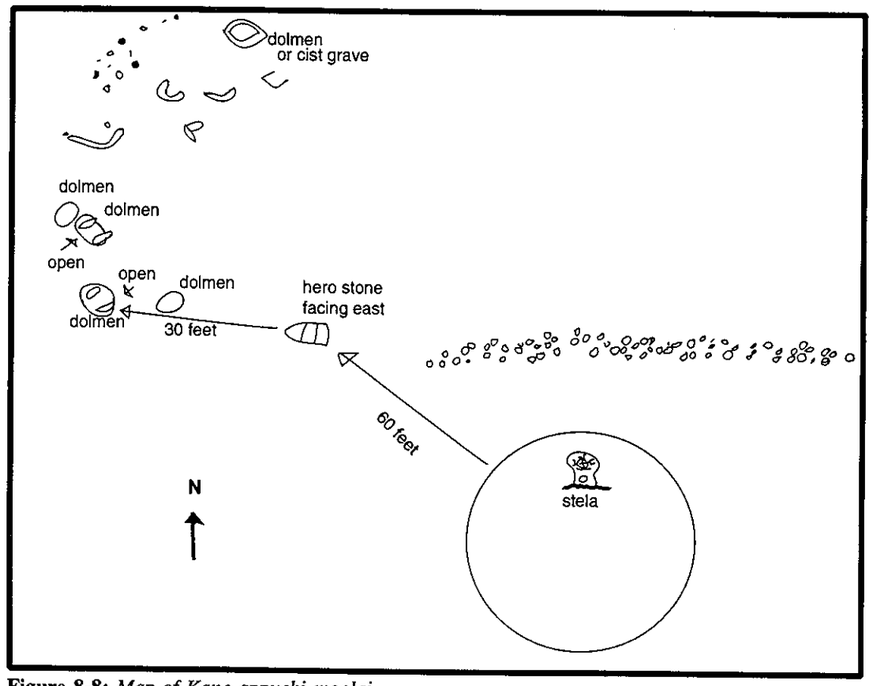

Figure 8-8: *Map of Kane appuchi moolai.*

vicinity is a stelae inscribed with several letters. Although the stelae looks vaguely Buddhist-like in appearance, its date is unconfirmed. To the west, in the immediate vicinity, heading up the slope towards Ali Rani is a complex of undecorated dolmens that form a kind of semi-circle. The similarity of this complex to the cult center of Bokkapuram near Masinagudi that is still utilized for ritual ceremonies strongly suggests such ritual activities in the Thengumarahada, Ali Rani fort area. Such expenditures of labor, wealth, and glorification of important individuals continues into the Vijayanagar period (sixteenth and seventeenth centuries), where there was apparently a memorial to a significant figure at the western Moyar site of Vazhaithottam. This too must have represented a burial. Similar complexes can be found at Anekatti, where there is the remains of a large fort, hero-stone, reliefs, and statuary relating to another important individual (reportedly Chamaraya). Although the archeological data for state/hierarchical rule in the region are too numerous to document fully here, the evidence is clear. State-dominated sections of the Nilgiris existed at least through much of the first and certainly the second millennium AD.

One might ask, however, is it certain that the Moyar Ditch materials are closely related to those of the Nilgiri Plateau. The answer is an emphatic yes. The constant movement of peoples from the Ditch up the slopes indicates that the mountains were no barrier. Moreover, one Moyar inscription mentions both the Moyar administrative district (*sime*) and the Nilgiri administrative district. Others mention taxes being collected from Toda Nadu, one of the current divisions of the high mountains. Community stories connect the two regions, and texts mention populations from below that eventually move up into the hills (e.g., the Lingayats). Moreover, the relatively uncommon practice of constructing multiple dolmens at sites (regularly used as part of the ritual life of Kurumba and Irula groups) and the inclusion of reliefs as part of those dolmen complexes unites the two regions. All this provides a strong indication that the present weakly centralized Nilgiri communities coexisted with and were incorporated into a more centralized hierarchical system of state rule for an extended period of time.

HIERARCHY AND HETERARCHY UNITED

How then can both state-organized societies and what are *now* relatively egalitarian communities coexist? Is this just a stage in the evolutionary development or a moment of uneven development that presaged the emergence of more differentiated communities on the upper hills? The answer must be no. The relationship is already complex. It is the consequence of evolutionary developments. The integration of state and *tribe*, or ethnically based community, represents the emergence of complex systems, based upon principles of ranking and heterarchy in the context of South India.

Contrary to the assumption of many and in contrast to oft repeated truisms about states, state polities in South India possess centralizing tendencies as well as heterarchical ones. Burton Stein and Richard Fox have suggested that Indian state societies are essentially segmentary states, similar to those described for Africa by Southall (Southall 1956, 1988; Fox 1977, 1971; Stein 1977, 1989). Rather than arrogating all administrative and military power within the center, these state societies reproduce the administrative center, its taxing ability, and its military power at various societal organizational levels. The constituent units of segmentary states are not simply hierarchical levels of organization. These units are reported to be smaller versions of the entire state system. These units are largely kin-based segments whose leaders have some legitimate support within their community. The regional subdivisions of South Indian states thus had significant power and influence, experiencing relatively little direct interference by state authorities. Even the smaller regional units had judicial, tax-collecting, tax-granting, military and various other collective community action powers. The constituent units are largely autonomous, these authors suggest. That is, we are dealing with a system with ranks, with authority, and even with a system of elements of hierarchy, but not with a singular administrative hierarchy. Moreover, much of the authority was in the hands of often autonomous priests who controlled the real economic resources. While such priests were occasionally state officials, usually they were not.

The state foundations were based on a relatively dispersed set of supports, not all of which were under the direct control of the center. State structures clearly changed over time, but the centers of power remain decentralized. By Vijayanagar times, Burton Stein argues, conditions were changing. Kin based chieftaincies were replaced by local fiefdoms, whose *chiefs* were responsible for providing military support. These new *chiefs* gained legitimacy from their relationship to the Empire but were only marginally controlled by Empire administrators. The

chiefdoms subsumed the various kin-based units below them into regionally based, state-like societies. Even under these conditions, commands did not move automatically up or down in an orderly basis. There was not one center but many, and hierarchical relations were often unclear with the centers of control varying dependent upon context.

How did these segmentary *state-agencies* influence Nilgiri ethnic development? Did states have any effect on what are now largely egalitarian, ethnically based communities? There are indications that state contact influenced the organization of labor and functioning of the highland communities. For example, the Kota craft settlements were non-randomly dispersed throughout the plateau at the time of ethnographic description. They are, in fact, optimally dispersed to serve all the various Nilgiri districts. The Kota explain this by saying they were always widely dispersed, and the Badaga clients distributed themselves around them. One wonders whether it is likely that the Kotas naturally dispersed themselves in the ideal pattern. The Toda tradition that the Kotas were placed in the Nilgiris to provide their services to others might not be very far from the truth. Similarly the Todas are not evenly distributed throughout the pasture lands but are concentrated to the north of the Plateau overlooking the Moyar Ditch. This suggests that some of the groups were settled or moved either into the Nilgiris or within them to *establish* the caste-like relationship between groups. Such resettlement of ethnic groups by state authorities was a common occurrence in earlier South Indian history.

As stated above, the communities had communal responsibilities towards state authorities, including tax collection and, at least occasionally, organized labor input, as noted by the inscriptions and traditions. In the case of the Toda, apparently some sort of herding on behalf of state authorities was expected. Nevertheless, caste-like rendering of services must have demanded, in the past as it does historically, only relatively low levels of state administrative intervention. This encouraged the non-hierarchical, heterarchical tendencies within the region. Communities operated autonomously but within certain guidelines set by states under threat of periodic violence. However, the segmentary forms of the state typical of South India meant that there were multiple centers of authority and not just one. Even on the economic front, merchants throughout South India operated as semi-independent bodies; they made their own rules, established their own military and administrative organs, organized forts and depots, and were active in town and community life, drawing around them individual *tribal* laborers and engaging some in the production of commodity items (e.g., Mines 1984). Within the Nilgiri region (Kongu nadu), this involved the mining and collection of semi-precious minerals, costly woods, perhaps gold, and elephants (Arokiaswami 1956:Chapter XI; Malathi 1990; Manimegalai 1990). The multiplicity of centers of authority was also encouraged by the coexistence of intersecting modes of production and exchange. Subsistence activities coexisted with non-commodity ritual exchange and production. Community property and group cooperation coexisted with the emergence of wealth differences. High levels of community autonomy coexisted with state taxation and states influencing social interaction. Non-commodity production coexisted with commodity production.

I am suggesting that the relatively egalitarian structures presently found among the Nilgiri ethnic communities is to some degree the result of periodic segmentary state intervention in community affairs. The intervention of state authorities both created community authorities and periodically destroyed them. Various state authorities were responsible for the periodic truncating of emerging and existing systems of authority among the ethnic hill communities to limit these communities' ability to resist. Although some individuals must have emerged to provide accountability and to facilitate control and tax collection (e.g., Khazanov 1984), the emergence of such figures apparently elicited suspicion by those same authorities since they might become centers of resistance to external rule.

I have collected Nilgiri community narratives detailing individuals being made responsible for the collection of community taxes and functioning as both ethnic *representatives* and state authorities. Thus, the segmentary state helped create, or at least support, a limited system of authority within the hills. But I have also been given narratives about state authorities periodically taking captive and executing trouble-makers, those members of the various ethnic communities who were amassing considerable wealth and power for themselves and who were developing their own power bases. Thus, in the process of limiting potential resistance in areas difficult to administer directly, the segmentary state also limited the degree of centralization internal to the Nilgiri communities (Zagarell 1994).

Certainly, the hierarchical structures of the segmentary state in this region are predicated upon the control of

relatively weakly ranked structures of the hill communities, which cannot contest the decentralized authority of segmentary states. The structure of the segmentary state limited the emergence of systems of hierarchical control in the highlands, as indeed it did in other regions, allowing the state to rule by balancing the various centers of power, thus limiting the high administrative costs of more centralized systems. On the other hand, I have argued, the relatively weakly ranked, ethnically organized communities of the Nilgiris and their symbiotic ritualized relationships are, at least to some degree, the consequence of periodic segmentary state intervention in areas not completely controlled by that state. Thus, the ethnographically known egalitarian relationships are not *aboriginal*, or traditional, but rather the consequence of relatively recent conditions and events. The new construct of symbiotic relationships between ethnic communities, the multiple ties between state and communities, and the diverse adaptations are certainly the result of evolutionary development and are not collapses except in the sense of a typological fantasy. Complexity in this case is not the number of formal levels of administrative hierarchy posited by information theorists but the intricate, historically determined relationship of institutions and people in motion, allowing history to strike out in new directions not always predeterminable and creating forms of integration not previously existing.

ACKNOWLEDGMENTS

I would like to thank The Fulbright Commission, Smithsonian, and American Institute for Indian Studies for variously funding aspects of my research during the years 1983, 1984, 1988, and 1991. I am grateful to Western Michigan University for providing me with equipment and research grants and for putting at my disposal computer facilities adequate to handle my data. Most of all, I would like to thank my Indian colleagues and friends who helped me carry out my work within the Nilgiris. Dr. Gururajarao, Professor of Archaeology at Mysore University, has been an important source of advice and inspiration. Dr. K.V. Ramesh has given me invaluable help in the gathering of inscriptions and providing translations of texts. Special thanks goes to my dear friend Professor Basavalingham of Ootacamand College, who inspired me with his dedication to Nilgiri history and on whom I could always rely. I would also like to thank friends and colleagues Mr. Kuruvilla and Mr. Pungadan, as well as the people of the Moyar and Nilgiris, without whose help this work would have been impossible. Thank you.

NOTES

[1]Noble (1976) suggested that the Kurumbas created the Nilgiri dolmens and the Badagas created the sculptures. He also separates the dolmen complex from the megalithic graves complex. Dolmens, he writes, are the likely products of farmers or hunter/gatherers, and graves are the work of higher-altitude herders. The evidence from the Moyar Ditch does not seem to support these conclusions. Dolmens are found at several Megalithic sites in conjunction with graves (e.g., Chokanali, Sedapatti, Makupati; Zagarell 1995). Dolmens also occur in connection with various ritual sites. Reliefs are found at some of the sites, such as Kane appuchi moolai, that date to approximately the tenth century AD. These sites are earlier than the normally proposed dates for Badaga settlement of the Nilgiris (although northern/Karnataka influence certainly is there). Other reliefs, not discussed here, would also argue for a pre-Badaga sculptural influence.

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9

Incorporating Heterarchy into Theory on Socio-Political Development: The Case from Southeast Asia

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ABSTRACT

As archeological research in mainland Southeast Asia progresses beyond the pioneering stage, the emerging data pose a number of challenges to theories of socio-political development. Attempts to apply models assuming nested, conical, hierarchical progressions derivative from the band–tribe–chiefdom–state continuum often seem inadequate and somehow unable to account for the significant socio-political dynamics that are increasingly evident from the data. This chapter proposes that a shift in modeling the region's socio-political trajectory away from a step-progression, hierarchical approach toward a dynamic, heterarchical approach will advance understanding of this region's distinctive social development and will contribute to broadening and refining theory on the formation of states and the development of social complexity.

> *...a conceptual framework determines how social relations are perceived...a shift in that framework can result in a very different impression* (Kemp and Hüsken 1991:8).

Certain commonalities of socio-cultural development are becoming increasingly evident across the core area of mainland Southeast Asia comprised of the drainage basins of the Chao Phraya, Irrawaddy, lower Mekong rivers, and the central and southern coastal zone of Vietnam (Figure 9-1).[1] Two observations are often made concerning the development of states in this core area.

1) The region's *late* development of states (Winzeler 1976) relative to other Old World indigenously generated states. This *lateness* (not until the mid-first millennium AD) seems striking as prehistoric archeology has demonstrated the long term presence of two technological and economic factors sometimes considered important in state formation elsewhere: i) cultivation since the fourth millennium BC of a cereal (rice), probably in inundated permanent fields (White 1995); and ii) specialized production of copper-base metals dating at least from the first half of the second millennium BC (White 1986, 1988; Muhly 1988:16).
2) The overwhelming evidence that, although the players in state formation seem to have been the indigenous inhabitants, Indian conceptual models were massively yet selectively adopted and adapted as an ideological superstructure (Wheatley 1983). If the local forces were so primed for the development of states, why did legitimizing models not develop indigenously? Why was it necessary to borrow so massively from the ideology of another quite distant culture? Wheatley (1979:295) has suggested that the borrowing indicates that the pre-state societies must have lacked the legitimizing models to support sustained institutionalization for supra-village rule. Archeological evidence from the prehistoric pre-state period has yet to be examined with this issue in mind, however.

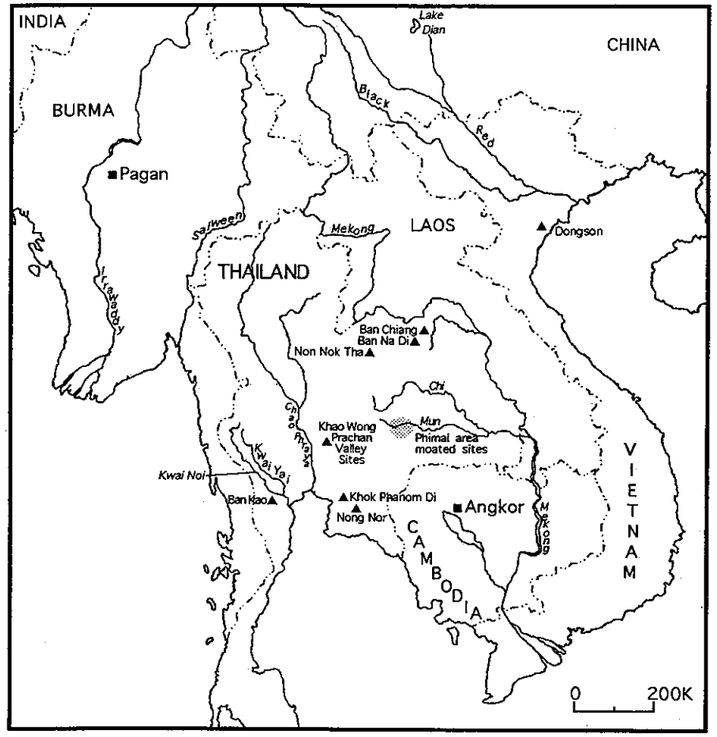

Figure 9-1: *Sites in mainland Southeast Asia mentioned in the text.*

These observations on the pacing, techno-economic background, and legitimizing strategy for indigenous Southeast Asian state formation suggest that examination of the socio-cultural trajectory in the region holds perspectives of interest to general theory on the development of social and political complexity. However, the coincidence of the formation of states with the beginning of the historic period means that archeological evidence from the prehistoric period will be key in addressing the issues raised.

Limitations of the Chiefdom Paradigm

Particular attention is paid in an examination of social complexity to a region's pre-state societies, presumably *chiefdoms* if the *band–tribe–chiefdom–state* model is followed for development of social complexity. The preface of a recent anthology devoted to chiefdoms (Earle 1991a:xii) notes that Asia is not represented in that compendium in part because "the chiefdom concept has been little used" in this region. The lack of a coherent and influential literature applying the chiefdom concept to pre-state societies in Southeast Asia can be attributed to at least four reasons.

1) Disciplinary paradigms—Much of the scholarship on early states in Southeast Asia has been undertaken in disciplines outside of American anthropological archeology. Historians, art historians, and epigraphers of predominantly European training having conducted most of the primary research, data interpretation, and synthesis. Most of these scholars feel little compulsion to frame their discussions in terms of the theoretical paradigm of cultural evolution (Taylor 1992:181).
2) Lack of archeological data—There is a paucity of archeological data for the immediate pre-state period (c. 200 BC–AD 800), which is largely prehistoric.

3) Anomalous data—Those data that do exist for social development prior to state formation, while somewhat sparse, do not *fit* easily into the discussion being defined on the basis of data from other parts of the world (Bentley 1986).
4) Unsuccessful applications of evolutionary models—Attempts to explicitly frame the discussion of pre-state societies in terms of *chiefdoms* and evolutionary models have been judged *inadequate* because either evidence for commonly accepted *correlates* has not been identified in the expected sequence, combination, or context or because the models fail to address many salient aspects of the emerging evidence (Christie 1992; Bayard 1992).

In stating that "[c]hiefdoms are intermediate societies, neither states nor egalitarian societies," Earle (1991a:xi) implies a very general category that encompasses nearly every society between the early neolithic and states. Despite the attempt of Earle's volume to clarify and differentiate the concept, however, *chiefdom* has become a paradigm that assumes the *centrality* of "economic control, military might, and ceremonial legitimacy" in "intermediate" societies (Earle 1991b:14). The centrality of all three variables is difficult to demonstrate in the pre-state societies in Southeast Asia, and economic control and military might are not necessarily central to the region's earliest state societies.

The struggle to apply the band-tribe-chiefdom-state progression by regional specialists is evident in the lack of a clear consensus on which early societies can be unambiguously identified as *chiefdoms*, or even which entities can be considered true *states*. Many of the entities widely labeled as "early states," such as Angkor, have strikingly *chiefdom-like*—even *big-man-like*—qualities, particularly in their irregular succession and emphasis on charismatic leadership (Wolters 1982; Hagesteijn 1986). On the other hand, marked chiefdom-like qualities have been attributed to the much earlier site of Khok Phanom Di (2000–1500 BC). The evidence from this site has been described as documenting a "highly ranked echelon" whose "leaders" assumed "increasing control over the regional distribution of prestige goods" among its "dependent communities" (Higham 1989a:251), even while the site's economy has been described in terms of a hunter-gatherer community undergoing incipient domestication (Higham 1989b:84).

Regional specialists are probably in closer consensus that some chiefdom-like entity developed during the mid-to-late first millennium BC, based on the appearance of settlement hierarchies in areas such as the Mun-Chi valleys (Higham and Kijngam 1982; Moore 1988, 1990; Welch and McNeill 1991). However, concrete evidence for other chiefdom *correlates* (e.g., warfare, sustained heritable social hierarchy, ideological integration, or economic control by elites) is far from overt. Convincing evidence for centralized political power or transformation to stratified society with differential access to strategic resources has been elusive. These examples hint that aspects of the region's development of social and political complexity may differ significantly from expectations derived from other areas.

Incorporating Heterarchy

This chapter argues that the value of the Southeast Asian cultural sequence to larger theoretical issues lies in its challenge to conventional archeological wisdom that stresses predictive and deterministic models of culture change. Southeast Asian data provide an opportunity to evaluate concepts and models developed in other parts of the world: an opportunity to develop new conceptual frameworks rather than shape the region's development to fit pre-existing models (Morrison 1994). As a first step in the evaluative process, this chapter proposes that a central concept has been missing from the discussion of the development of Southeast Asian society and, in turn, from most of the general discussion of theory of social complexity: the concept of heterarchy (Crumley 1979, 1987).

Crumley points out that the discussion of the development of social complexity has focused almost exclusively on the elaboration of structures for hierarchy: evidence for superordination and subordination. A brief glance at the first few pages of the Earle (1991b:1) volume on chiefdoms reveals the critical dimensions concerned in understanding the "evolution of stateless complex societies." "Chiefdom language" is revealed in phrases incorporating words such as *power*, *domination*, *stratification*, *control* (over resources, river valleys, prestige-good trade), *warfare*, *dependent*, *central*, *elite*, and *prestige*. The dynamics examined focus on vertical relationships. Increased complexity has been equated with increasing levels of hierarchically nested conical structures (e.g., Peebles and Kus 1977). While these dynamics certainly

exist and are important, this approach is now recognized as a unidimensional view of complexity (Crumley 1987; Cocoran 1992).

Some theoreticians have realized that complexity might also be examined in other terms (Kauffman 1993), such as the number of dimensions, potential interactions, or the intricacy of interrelationships. Interconnections may be ranked, may not be ranked, or may be situationally ranked (i.e., hierarchical in one context or from one viewpoint but not permanently ranked or ranked differently in another context or viewpoint). A concept of complexity that moves away from determinism and incorporates choice and context could serve to broaden our discussion in useful ways.

Two key elements of heterarchy, namely *flexible hierarchy* and *horizontal or lateral differentiation*, are critical dynamics that have been neglected or under appreciated in the analysis of the evolution of Southeast Asian and probably other societies. Although Johnson (1982) earlier proposed a concept related to heterarchy, namely "sequential hierarchy," his discussion has not had the impact it deserves. This is possible in part because his phrase included the word "hierarchy," which did not differentiate his concept clearly from *normal* hierarchy ("simultaneous hierarchy" as used by Johnson). Nevertheless, his discussion adds significantly to Crumley's argument. In particular, Johnson's (1982:396) discussion of the context and implications of the horizontal elaboration of social organization in response to "scalar-communication stress" (hereafter "scalar stress") has direct bearing on Southeast Asian social evolution.

By examining their data through the hierarchical lenses of the chiefdom paradigm, Southeast Asian archeologists have generally missed the significance of the heterarchical dynamics of flexible ranking and horizontal differentiation in their evidence, which may help not only to define the distinctive social trajectory of the region but also help to frame the region's development in a way that it can be insightfully incorporated into the broader discussion of the development of social complexity.

I propose that there are at least four broad patterns or themes that shall be considered heterarchical among the sustained salient characteristics for social development in the core area of mainland Southeast Asia from at least the second millennium BC:

1) cultural pluralism;
2) indigenous economies that tend to be characterized by a) household-based units of production, b) community-based economic specialization, and c) competitive, multi-centered, and overlapping mechanisms for the distribution of goods rather than monopolies controlled by a single center;
3) social status systems that tend to be flexible in practice and include personal achievement even where ascribed systems exist in theory; and
4) conflict resolution and political centralization strategies that tend to have alliance formation with cooperative-competitive dynamics at their core, and that may be periodically renegotiated (warfare, with controlling, conquering, or other violent dynamics, is deemphasized or secondary).

While not expressing themselves identically in all contexts, these heterarchical patterns I propose can be identified in prehistoric, historic, ethnohistoric, and ethnographic contexts in Southeast Asia. I will focus in the following discussion on evidence from the prehistoric period, when the roots of the trajectory towards the region's states must have been established. Of course, prehistoric archeology is so new to the region that the data are sparse. New research may soon necessitate a complete revision of the perspectives proposed in this chapter. However, I will suggest that my interpretation of patterns in the prehistoric evidence is consistent with evidence for socio-political dynamics from later time periods in the region.

HETERARCHY IN THE PREHISTORIC BACKGROUND OF SOUTHEAST ASIAN STATES

While archeological data in Southeast Asia are sparse for the centuries immediately preceding early states (200 BC–AD 800), enough data are starting to be acquired from excavations of sites dating between 2000 and 200 BC, especially in Thailand, to suggest patterns of sociocultural development. Rice agriculture became well established during this period; both bronze and iron production appear; and differentially large sites, some with moats, probably appear around the mid-first millennium BC in the Mun-Chi drainage basin. If the data from this period are examined without focusing through the lens of the chiefdom paradigm, the following interesting patterns emerge: (1) marked localization in material culture; (2) development of specialized craft communities; (3) individuality in the treatment of graves with an emphasis in unusual graves on referring to the individual's ritual, economic, and/or social roles; and (4) paucity of evidence for organized violence or warfare. I argue that these patterns are heterarchical by stressing flexibility in status definition, political relations, and lateral differentiation in social and economic realms.

Localization in Material Culture: Evidence of Cultural Pluralism?

Excavations in Thailand are producing unexpected site-to-site variability in material culture that are suggestive of small localized cultures (White 1986:337; Ho Chui-mei 1992). While further excavation is required to confirm this observation and develop tighter spatial and chronological control over the data, there is some basis to suggest that there was a marked enduring localism evident in material culture, ritual, and social practices between 2000 and 200 BC.

Surprising differences in nearby sites first became evident when the pottery sequence of the prehistoric site of Ban Chiang was compared in detail with that of Ban Na Di located only 20 kilometers away (White 1986:234). Based on radiocarbon dates, the main cemetery deposit at Ban Na Di primarily overlaps the Ban Chiang Middle Period cemetery dating from the early to the middle of the first millennium BC. The usual archeological assumption that two such close sites would share the same cultural tradition (Higham and Kijngam 1984) proved hard to specify ceramically. Contemporaneous deposits at the two sites had so few stylistically similar ceramics that it was difficult to crossdate the two sites.

One might at first question whether the sites had contemporaneous deposits. The two sites shared one highly distinctive though rare vessel type, however, and this firmly anchored the two sequences to each other. Once the stylistic idiosyncrasy of the two sites' ceramics was observed, other surprising distinctions became evident.

The observation of significant morphological and stylistic differences was supported by technical analyses. The methods of making the vessels at the two sites also differed according to pottery fabrication studies (Vincent 1984, 1988; Glanzman and Fleming 1985; McGovern et al. 1985; White et al. 1991). Although the Ban Chiang studies are only at a preliminary stage, Ban Chiang Middle Period pots overwhelmingly used rice temper while Ban Na Di used grog. Ban Chiang pottery was consistently manufactured with a lump-and-slab technique while over 90 percent of Ban Na Di pots were manufactured with a mold-and-coil technique (Vincent 1984:661; White et al. 1991). In summary, morphological, stylistic, and technical comparisons strongly indicate that Ban Chiang and Ban Na Di had different pottery manufacturing traditions during the mid-first millennium BC.

Pottery was not the only area of material culture where important differences between the two sites were evident. For example, bracelets made from *Trochus* marine shell were common at Ban Na Di, but none were excavated at Ban Chiang—at least not by the Fine Arts Department and University of Pennsylvania Museum excavations. The figurines found in graves at the two sites were markedly different in size, style, and significance. The Ban Chiang examples were small (3-4 centimeters in length) and ill-defined; the Ban Na Di examples were many times larger (most over 15 centimeters in length), more elaborately shaped, and clearly identifiable as cattle, humans, fish, and elephants.

Not only the material culture but social aspects also showed interesting differences, as revealed in the funerary ritual at the two sites. Grave contents and organization revealed that the two sites differed in the range of types and treatment of pots placed in the graves as well as the range of species and treatment of animal remains. The Ban Chiang Middle Period graves were characterized by skeletons overlain by sheets of sherds from deliberately broken pots that, when reconstructed, revealed several examples of the same type per grave. For example, Burial 40 from the second excavation season had seven white carinated pots and two painted-and-incised carinated pots. Vincent (1984:667) observes the opposite at Ban Na Di: each grave included several pots, some of which were broken, some of which were not, and "...the general tendency was to use a variety of vessel forms rather than multiple examples of the same form."

Animal bones in graves also indicated differences in ritual behavior. Ban Na Di graves commonly had entire limbs of ungulates, including cattle and occasionally pig. Ban Chiang more likely had chickens or animal jaws, but no complete articulating ungulate limbs were found as part of a grave assemblage (Kijngam 1979:73).

The noted differences in ritual and material culture are unlikely to represent cultural isolation. Lack of isolation is demonstrated by the evidence for long-distance trade in marine shell, stone, and metals in a regional exchange network extending from the Mekong to the sea (the distance between the Khorat Plateau and the Gulf of Siam is at least 500 kilometers). Long distance cultural connections are also evident in the uniformity of the metals technology and typology over a large area from Burma to Vietnam during the second millennium BC. This also indicates a widespread distinctive technological sphere, called the Southeast Asian Metallurgical Province (White 1988).

While the metallurgy reveals widespread technological communication, specific items of long-distance trade are not so uniformly distributed. If not due to sampling error, the fact that the Ban Na Di excavations produced several *Trochus* bracelets of a marine origin while not one was excavated at Ban Chiang suggests that each community participated differentially in trade in exotics—and probably other locally produced goods as well—although the two sites had basically similar access to interregional trade networks from a physical (time-distance) point of view. Individual communities may, thus, have placed different values on particular exotic artifacts: a heterarchy of values.

This particular example of unexpected local variation in material and ritual culture was discussed in some detail because there is enough published information from two major excavations with overlapping sequences to specify several aspects of intersite differentiation and to give some idea of the dimensions of localized variation. Other examples of nearby areas with marked and surprising differences in material culture have been identified in central Thailand (Ho Chui-mei 1992; Natapintu 1992), showing that the northeast Thai example is not isolated.

Another aspect of subregionalism in prehistoric Thailand is revealed in differential participation in a *bronze age* as a defined phase of some time depth that was distinct from and preceded an *iron age*. Thus Glover (1991a, 1991b) argues that western Thailand, particularly the Kwai Noi and Kwai Yai river valleys, has no evidence of any involvement with the bronze technology employed at contemporary sites in northeast and central Thailand during the second and first half of the first millennium BC. Since the distances in absolute terms are not outside the range of known trade networks, he concludes (1992:13 emphasis added) "...we are starting to recognize more than one 'interaction sphere' in prehistoric Thailand, *where the barriers were as much social as physical.*" Although northern Vietnam is outside the purview of this chapter, it is noteworthy that Ha Van Tan (1991) also observes localized variation in contemporaneous cultures and states that the localization was *salient* there during the pre-Dongson (i.e., pre-iron) period (2000–700 BC). He notes that the localized cultural diversity was evident in pottery styles, stone-tool shapes, and technology, as well as in the differential presence and elaboration of bronze.

An interesting point about the timing of this marked localization, observed by myself in northeast Thailand and by Ha Van Tan (1991) in Vietnam, is its concurrence with the appearance of bronze. In both areas, there seems to be greater similarity in regional material culture (stylistic similarities extending over larger areas) prior to the appearance of bronze. As soon as bronze enters the technological repertoire, material culture fragments into small, highly localized groupings. Hence, while presumably fostering increased interaction (i.e., communication) among communities, the appearance of bronze is also associated with increased material and symbolic horizontal differentiation.

Applying Johnson's (1982) discussion, the widespread appearance of bronze in prehistoric Southeast Asia could have created a context of scalar stress. The response to this stress was horizontal differentiation of community units, recognizable in archeological contexts as localized variability in material culture and funerary ritual. Elaboration of ritual behavior involving expressions of stylistic variability that can signal subgroup affiliation are noted by Johnson (1982:405) as integrative mechanisms that can reduce scalar stress among what he calls "egalitarian" groups. Why differentiation occurred horizontally rather than vertically will become clearer as we look at other aspects of the prehistoric evidence below. Localized cultural variation continued in Thailand into the iron period (second half of the first millennium BC) at least in the Khorat Basin of northeast Thailand (Vallibhotama 1991:7). In Vietnam, however, the iron age Dongson Period witnessed a consolidation of micro-regional cultures (Ha Van Tan 1991).

Horizontal Differentiation in Prehistoric Economic Organization

Elite control over specialized craft production and distribution is often considered a correlate of increasing social complexity and a means for individuals or groups (e.g., lineages) to accumulate wealth and acquire power. No evidence has yet been found in the core area of mainland Southeast Asia to suggest that control over commodity production and distribution was a major means by which regional elites centralized political power. Furthermore, current evidence indicates that craft specialization and long-distance exchange developed and intensified in a decentralized and multicentric manner that was not conducive to sustained hierarchical controls.

The best example with which to explore this issue during the prehistoric period in Thailand is the production and distribution of copper-based metals (see Pigott et al. [1995] and White and Pigott [1995] for detailed discussions). By its very nature, copper-based metallurgy must entail some degree of specialization because the complexity and effort of production and the nucleated distribution of the raw materials dictate that producers must be fewer than consumers.

Evidence from Thailand dating between 2000–300 BC indicates that metal producers throughout this period were independent specialists (White and Pigott 1995). While the common presence of crucible fragments at village sites far from ore sources indicates that ordinary villages had resident casters, specialists were sometimes aggregated into communities (e.g., Non Nok Tha, Non Pa Wai, Nil Kham Haeng; White and Pigott 1995). Costin (1991:8) has recognized community specialization as a distinct genre of production organization where "autonomous individual or household-based production units, aggregated within a single community, [produce] for unrestricted regional consumption." Within this general concept, evidence from Thailand shows that the intensity of production and the volume of output from these specialized metal-producing communities can vary from a less intense level that could be termed "community craft" to a highly intense level with remarkable output that can be termed "community industry" (White and Pigott 1995). This industrial level of community-based production output is in evidence in copper production sites dating between 1500 and 300 BC in the Khao Wong Prachan Valley of central Thailand (Pigott et al. 1995; White and Pigott 1995).

No intrasite functional differentiation consistent with workshop organization of production has been identified in the central Thai copper production communities with industrial levels of output (Pigott et al. 1995). Instead, the small-scale production equipment, the diminutive cast products, the dispersed distribution of the production debris, and its intermixture with habitation materials points to household production. Each household likely undertook the necessary steps to bring the raw material (i.e., copper ore from nearby deposits) through the various production stages to final cast product. No evidence points to restricted access, hierarchical organization of labor, spatial separation of tasks, or any other evidence suggestive of overarching controls. Pigott et al. (1995) present a model of the technology that suggests how copper production could have been managed by small-scale production units.

The cemetery evidence associated with copper production communities suggests that producers were recognized for their economic roles. Burials at Nil Kham Haeng that were wealthier in terms of numbers and variety of grave goods also commonly had copper production artifacts, such as furnace chimneys, molds, ores, and copper artifacts, often miscast. The distribution of the graves in the site suggests that access to status through copper production was not restricted to any particular segment of society (Pigott et al. 1995). There is nothing to suggest that these producers necessarily accumulated extraordinary wealth or used their specialized economic position to accumulate political or economic power beyond their community at the regional level. The site sizes are modest and in the range typical for prehistoric village sites (e.g., Nil Kham Haeng was 3-5 hectares in size). Furthermore, areas where significantly larger sites were developing in the mid-first millennium BC (e.g., the Phimai area along the Mun drainage system) were some distance away from copper resources and known major specialized copper production communities.[1]

The evidence in Thailand for the development of copper production reveals patterns of intensification and elaboration that are not hierarchically differentiated but laterally differentiated. The lateral differentiation can take different forms. The current evidence from the second millennium BC in northeast Thailand is consistent with a dispersed production system where different stages of the production process may have been undertaken at different sites by different communities (White and Pigott 1995). In contrast, central Thailand has clear evidence for nucleation of production in the Khao Wong Prachan Valley, with individual communities undertaking most of the production steps. Moreover, current evidence suggests that nearby communities were producing copper at the same time but may have employed slightly different technologies and produced somewhat different product ranges. This observation is based on the evidence at Nil Kham Haeng, which had a marked emphasis in the production

of socketed cordiform implements, the function of which is not yet known. At nearby Non Pa Wai, however, the upper deposit of which overlaps with lower Nil Kham Haeng, metalworkers focused on producing ingots and a broader range of implements. The central Thai evidence thus suggests that one means by which economic organization based on specialized community production can intensify without hierarchization is by individual communities further specializing in particular portions of the *market*. This type of lateral differentiation via community focus on a *market niche* may obviate the need for administrative controls or a command economy. As Johnson (1982:404) states "...elaboration of essentially horizontal social organization...decreases the complexity of regulating social relationships...."

Mechanisms of commodity distribution during the pre-state period in the core area of Southeast Asia remain obscure. Given the decentralized and flexible independent production organization and the lack of evidence of the tight control of consumption by an apical elite, however, it seems likely that distribution was decentralized and multi-modal. Strategies may have been similar to those discussed in Bowie (1992) and Stark (1992), who describe the distribution of textiles in northern Thailand and pottery in Luzon respectively in ethnohistoric contexts where much production also occurred in specialized communities. Commodity distribution through complex, multimodal, lateral connections probably served a function in horizontally integrating the larger culturally pluralistic region.

Prehistoric Social Differentiation: A Context for Flexibility

As in other parts of the archeological world, identification of social elites has been a dominant theme in Southeast Asian archeological research for more than a decade. Several prehistoric cemeteries have now been the subject of excavations and, usually conceptualizing from the evolutionary paradigm, Southeast Asian archeologists have tried different strategies to perceive evidence for progressive differential status among graves. Inspired by Peebles and Kus (1977), Tainter (1978), and others, some archeologists have looked for evidence of steps toward hereditary hierarchy—nonvolitional ascriptive ranking—as a key to the development of social complexity (Peebles and Kus 1977:431). Results so far have been unconvincing and, at times, contradictory. The muddled state of understanding structural characteristics of the prehistoric society is partly due to the small sample available; small portions of only a few cemeteries have been excavated. Yet, the theoretical tools brought to bear on the data are proving to be inadequate. Four Thai sites have been sufficiently excavated to reveal prehistoric cemetery deposits of some magnitude and published analyses of enough detail to comment on evidence for social ranking: Ban Kao, Non Nok Tha, Ban Na Di, and Khok Phanom Di.

The cemetery at Ban Kao in west-central Thailand dated to the first half of the second millennium BC and was excavated before differentiating ranked social systems was emphasized in American archeological theory. Sørensen (1967) observed that graves varied in relative endowment of grave goods from one to over 24 artifacts and discussed the selection, placement, and treatment of objects. The variation in wealth and treatment of grave goods crosscuts age and sex, with some of the children having graves better endowed than some adults. Some burials also stood out as unusual. Burial 10 consisted of a 50 year old male with a grave assemblage suggestive to Sørensen of shamanism. What impressed Sørensen more than any evidence for possible status differences is the "extraordinary degree of arbitrariness and apparent informality" of the burials, "their personal-looking equipment" (Sørensen 1967:74), and the absence of "rigid rules for burial" (ibid.: 141).

The cemetery at Non Nok Tha dates primarily to the second and first millennia BC. The excavator (Bayard 1984) concluded that there were two affiliative groups at the cemetery, based on differential distribution of certain pottery types. Bayard then examined the burials for relative wealth in terms of numbers of objects per grave, which ranged from 0-32. It is noteworthy that Bayard used an *arbitrary* boundary as 14/15 items per grave to distinguish between rich and poor within what he acknowledged to be basically a continuum from "rich" to "poor." Both affiliative groups had rich and poor graves, but one group had a higher proportion of the rich graves. Bayard considers this pattern of differential distribution of grave goods evidence for "superordinate ranking." The group that was rich also tended to have more of the exotic artifacts including metals, although this association was apparently not highly significant. Because some of the children's graves were rich, he includes this as evidence for *ascribed* rather than *achieved* status. There was some tendency for some parts of the cemetery to have higher proportions of one or the other affiliative group.

The excavators at the site of Ban Na Di (Higham and Kijngam 1984) focused on a different strategy for examining social ranking. They compared the burials from two excavated portions of the site about 25 meters apart, primarily in terms of the presence of imported objects (e.g., trochus shell, metal). These artifacts were considered exotic "primitive valuables" and indicative of higher "expenditure of energy" for burials in which they were found. The burials that contained the primitive valuables were considered "considerably richer" and were found primarily in one of the excavation locales; certain artifacts were in fact "restricted" to graves from that one area, although bronze was *not* restricted to one locale. The pattern lasted throughout the use of the cemetery, which was 800–1000 years according to Higham and Kijngam (1984:440). They conclude (1984:441) that "[t]he evidence is...unanimous in supporting the presence of hereditary inequality...a moderate degree of lineage ranking...." This report did not compare the two cemetery samples for differences in the numbers of objects per grave, presumably because of the low number of complete interments.

The cemetery at Khok Phanom Di (2000–1500 BC) is a five hectare coastal site in central Thailand that is contemporary with Ban Kao. The excavators (Higham and Bannanurag 1990) have interpreted the majority of the graves from the ten-by-ten meter pit as belonging to clusters that represented separate burial areas for different kin groups. They furthermore claim to isolate a series of generations that crosscut the clusters. Interestingly, the evidence indicates that relative wealth varies over time among the clusters, with wealthy graves being succeeded by ordinary or poor graves within an individual cluster. Some of the earlier discussions of the burial sequence imply a transition toward ascribed status during the later part of the sequence (Higham 1989b:87; although see also Higham et al. [1992:54], which indicates a shift in understanding). Burials from the later part of the sequence included rich infant graves and an outstandingly rich interment of a woman in her thirties (Burial 15). Higham (1989b:86-87) believes that this change in the burial placement suggested a "reserved mortuary area" for well-endowed individuals. Other evidence suggestive of "chiefdom-type" *correlates*, including craft specialization, prestige goods that could be emblems of status, differential energy expenditure, centralization, and differential site size, are attributed to the site. Following wealthy Burial 15, however, subsequent graves were not so richly endowed. Thus, there is no evidence that markedly differentiated status was sustained in future generations.

These brief, oversimplified treatments cannot do justice to the details of each site's data, the richness of each scholar's approach and analysis, the issues of the applicability of the models used, or the issues of sampling and chronology. The capsule summaries serve to draw attention to patterns in past mortuary analyses, however, from which I would like to make some observations and suggest a new focus.

It is clear that each cemetery reflects a broadly related mortuary tradition of primarily supine inhumations with grave goods that commonly include ceramic vessels. Each cemetery differs in many notable respects, however, and the variations in analytical approach reflect these differences to some degree. The data do not fit readily into the models proposed for looking at different levels of ranked societies, and it is not clear that any one approach to analyzing the cemeteries is *better* than any other. While it is clear that these are not egalitarian societies in the sense that every grave is not treated the same and that individual graves vary in the quantity and range of associated grave goods, social differences in the cemeteries are often subtle, not overt, and apparently expressed in a different manner at each cemetery.

The variation among the cemeteries suggests that the available models and their application to Southeast Asian data need to re-examined. Trying to focus the analysis to evaluate primarily the presence and degree of ranking (i.e., if social status was egalitarian, achieved, or ascribed) is not doing justice to the complexity of the data. It is unclear whether the differential wealth assumed in terms of the number of objects in a grave or the presence and absence of non-local artifacts actually implies variation in a formalized system of rank. In my opinion, all the sites discussed above are consistent with Bayard's statement (1984:108; which he gives even while arguing for subordinate and superordinate ranking at Non Nok Tha): "the apical very rich class postulated by Peebles and Kus, containing mainly adult males, does not appear to be present. Moreover there is no evidence for ranking in the restricted sense used by Peebles and Kus in their study...no clearly demarcated boundaries between ranks are apparent, nor are obvious symbols or badges of rank in evidence." The approaches to perceiving social differentiation do not seem to address the available data adequately. This is not to say that differential ranking of

some sort was not present; the question is whether or not the approach to social analysis appropriately conceptualizes how the societies functioned.

What can be considered *salient* about prehistoric Thai cemeteries, if a theoretical position is put aside? Beyond the fact that each cemetery seems to be a part of the common mortuary tradition mentioned above, I suggest there are four salient characteristics.

The first salient characteristic is that the relative endowment of the graves vary at each site in a way that is consistent with a continuum rather than a step progression. Rich graves are rich because they are at one end of a continuum. There is an overall increase of wealth over time in the sense that the graves at the wealthy end of the spectrum may have more objects and a greater range of object types, particularly after 1000 BC, but there is not necessarily a marked increase in *differentiation* of groups by wealth over time. This sense of continuum continues into the Ban Chiang Late Period, which is one of the only excavated cemetery deposits in Thailand that extends into the early first millennium AD and just before the earliest historic evidence on the region and the earliest states. In other words, there is no overt evidence for the emergence of something like a large, obviously poorer group that contrasts with a smaller, obviously richer group with a clear gap in between, which is the criterion proposed by Peebles and Kus (1977) for ranking consistent with a chiefdom.

The second salient feature of the cemeteries is that the criteria denoting social differentiation differ at each cemetery. I am assuming, for example, that the difference in prominence in exotic artifacts at Ban Na Di and Non Nok Tha may very well reflect *cultural* differences and that therefore the set of variables or criteria used to compare graves at one site will not necessarily be appropriate for all of the other sites in the region. This observation is consistent with the observation in the previous section that there is a marked tendency in Southeast Asia toward highly localized cultures expressed in localized material cultures and that this cultural localization will be reflected in localized value systems with respect to burial ritual and social status. Another corollary of this observation is that an individual dimension of social status (e.g., access to certain imports) may be only situationally and not generally relevant.

The third salient characteristic of these prehistoric cemeteries is that the graves of children are often as well or better endowed than contemporary adults. We cannot assume that this implies "nonvolitional hereditary status" (Peebles and Kus 1977). This pattern could also represent parental affection or display of *claimed* parental status in a context where status is a context for negotiation. A sample of graves of individuals in their early teens would assist examination of this issue in more detail.

The fourth salient characteristic is the common occurrence of burials that stand out as distinctive, not so much in terms of great wealth or obvious political power but in the individualized sense noted by Sørensen for Ban Kao. These unique graves usually suggest differentiation in terms of the individual's social, ritual, or economic role. Two graves at Ban Chiang are suggestive of differential treatment: BC B.20 with its unique assemblage of bone artifacts and BC B.23 with its unique assemblage of pellets, adze, bracelets, and a pot. The nearby site of Ban Tong has a grave of a male with over 17 associated deer jaws. Graves with metal production artifacts (hence possibly graves of metalworkers) have been found at Non Nok Tha (Bayard 1980) and Khao Wong Prachan Valley sites in central Thailand (Pigott and Natapintu 1988; Pigott et al. 1995) as well as in Vietnam (Ha Van Tan 1991). These graves indicate that an individual's activities contributed to their role differentiation relative to others in the society. Grave differentiation at Ban Chiang, Ban Kao, Ban Na Di, and Non Nok Tha has not been identified in terms of overtly exclusive placement combined with a degree of wealth outstanding from the continuum (i.e., an outstandingly rich grave in a special location suggestive of a chief or chiefly lineage).

On the other hand, Khok Phanom Di has the best evidence yet found in Thailand for a prehistoric grave that is differentiated by a large quantity of grave goods and special placement. Burial 15, a female, was buried within an unusually large pit (nearly 1 meter deep and 3 meters long) that was placed in a different location and orientation than the earlier graves. She was embellished with 8-10 pottery vessels and tens of thousands of beads, presumably sewn to a jacket. It is noteworthy, however, that included in the grave furnishings were many implements for pottery manufacture, including anvils, burnishing stones, and unfired pottery preforms. She has been interpreted as a highly ranked potter for these and other reasons (Higham 1989b:87). It would seem that this grave, in addition to the high relative-wealth that is measured by number, range, and quality of grave goods, further exemplifies the pattern of differentiation by social and economic function suggested at other sites. The social evidence

from Khok Phanom Di and the nearby later site of Nong Nor (Higham and Bannanurag 1992; revised dating for Nong Nor in Hedges et al. [1993]) shows no sustained or subsequent trend toward elite consolidation. This suggests that the scalar stress that may have spawned Khok Phanom Di's distinctive later developments was not of a degree or nature to push the society into a fundamental shift toward a hierarchical system of integration and control. It might have merely spawned an unsustainable, *flash-in-the-pan*, social manifestation during a brief period late in the Khok Phanom Di mortuary sequence.

Despite earlier claims for "hereditary hierarchy" in these cemeteries, it now seems that the data provide strong evidence of achieved bases for social differentiation in these prehistoric cemeteries in Thailand. However, I feel that to merely conclude that these prehistoric societies had achieved status does not do justice to the complexity of the data. Instead, I propose that the prehistoric cemeteries of Thailand are consistent with the existence of a flexible, complex, multifaceted, multilateral system of status and social differentiation. Personal economic achievements and social functions, as well as variation in family wealth and probably kinship rank, all operated simultaneously and hence combined ascribed and achieved factors. Furthermore, I suggest that avenues toward status were multidimensional and may have varied by microculture, with wealth as only one component of social differentiation. These avenues could probably be negotiated and manipulated by individuals. I propose this multifaceted system in part because it would be consistent with later Southeast Asian historic and ethnographic evidence, which will be briefly reviewed later in this chapter.

Low Levels of Violent Intercommunity Conflict

Another observation for the prehistoric period is that there is very little evidence for significant social energy directed toward intergroup violent conflict. Elsewhere, I have made the point that the *bronze age* period in the core area of mainland Southeast Asia was relatively peaceful compared to areas such as the Mesopotamia and Shang Dynasty China from where the traditional conception of the "bronze age" has been derived (White 1982, 1988). The observation was made in part because most of the prehistoric bronzes seem to be personal ornaments and implements useful in a village context and few bronzes could be unequivocally classed as weapons (northern Vietnam seems to have developed somewhat differently, with more evidence of metal weapons after 1000 BC). The point has been criticized (Higham 1984), but the critique addresses the issue from a narrowly conceived, undifferentiated framework. The issue is not whether some weapons or some conflict were present. The issue is the degree to which warfare was a central organizing focus in the dynamics of the society that motivated the production of metals, the evolution of technology, and the expenditure of significant amounts of social energy in defensive and offensive strategies in both the social (e.g., development of standing armies) and material realms (e.g., building of large, permanent fortifications). All societies need to resolve conflict and intergroup hostility. Feuding and some head-hunting, perhaps even along the lines described for the Nagas (Jacobs et al. 1990:138), certainly could have characterized the prehistoric societies discussed in this chapter. Evaluation of the archeological evidence *in toto*—including the relative rarity of unequivocal weapons for use against humans, the patterns of skeletal trauma that are consistent with everyday accidents (Douglas 1995), and the absence until well after the appearance of iron of any evidence of large, possibly defensive constructions such as earthworks—suggests that the prehistoric societies in the core area of Southeast Asia had very little interest in developing *military might*.

Why might this be? Control over resources has been considered a rationale for developing offensive and defensive capabilities. While some economic resources such as copper and salt (but less so agricultural land) are nucleated in particular regions of the region of concern, they are generally not so concentrated that any individual village might be cut off from a desired or essential product if they were having a feud with another village. We know in central Thailand, for instance, that several contemporary communities were producing copper at the same time. While there may have been competition among communities in the production and distribution of metals, there is no evidence yet for resulting intercommunity conflict. In fact, I would argue that long term interregional exchange without evidence of associated political centralization or control implies a context with little warfare. Dispute resolution may have stressed mechanisms such as ritual and sequential decision-making discussed by Johnson (1982).

A Few Comments on Developments in Later Prehistory

The evidence reviewed above suggests that a horizontally differentiated yet integrated social system with flexible economic and social dynamics developed in Thailand during the millennia prior to the mid-first millennium BC. One probable basis for the long term success of this system was the broadly based, reliable, and localized subsistence strategy (Higham and Kijngam 1979; White 1995). Cultivation of inundated rice in intermediate locations along drainage systems seems to have formed the basis for the region's staple production since northeast Thailand was initially settled by rice agriculturalists in the fourth millennium BC (White 1995). I have argued elsewhere (White 1990; see also Bray 1986) that cultivation of inundated rice in Southeast Asia is best carried out in small land-holding units, of which the household is the natural unit, because of the intimate micro-environmental manipulation over successive years of particular patches of land necessary to produce the best and most reliable yields (Geertz 1963). That horizontal social integration and decentralized, reliable subsistence production go hand in hand is supported by Johnson (1982:404), who suggests that "decision complexity in the realm of subsistence organization is inversely related to resource predictability...[and] the integrative potential of sequential hierarchy [i.e., heterarchical social systems] is directly related to resource predictability." Notably, Johnson (1982:403) implies that he expects the pace of decision-making (which might be related to the pace of political change?) in social systems with sequential decision-making (i.e., horizontal integration) to be *slow*.

As previously noted, archeological evidence from the late prehistoric period is sparse but currently suggests that settlement patterns in the Mun and the Chi river systems of northeast Thailand in the middle of the first millennium BC experienced shifts to include the appearance of moats and differentially large settlements. This evidence has been interpreted as primarily a response to exploiting areas with increased fluctuations in resource predictability due to rainfall variability (Welch and McNeill 1991). Following Johnson, therefore, this might suggest that hierarchical elements, at least in the realms of settlement size and probably labor organization, were introduced at this stage and in this region as a response to the scalar stress provoked by increased unpredictability in subsistence–resource acquisition. The heterarchical elements did not fade away from Southeast Asia's social system, however, but remained fundamental to the region's developmental trajectory, as we shall examine in the next section.

HETERARCHY IN LATER SOUTHEAST ASIAN HISTORIC AND ETHNOHISTORIC CONTEXTS

While archeological evidence from the prehistoric period immediately preceding the formation of states in the region is very sparse, awareness of later outcomes from historic times can put the prehistoric archeological evidence into clearer perspective. A full review of the relevant historical, ethnohistorical, and ethnographical literature is beyond the scope of this chapter. I will note below selected examples that suggest that the heterarchy proposed for the prehistoric period continued into the period of early historic states and more recent times.

Cultural Pluralism in Later Southeast Asian Contexts

Marked ethno-linguistic diversity is a well known characteristic of Southeast Asia with a known time-depth of a millennium or more. Examination of the historical and ethno-historical literature reveals, however, that the region's cultural pluralism is a much more pervasive and complexly expressed quality than can simply be attributed to immigration of groups from southern and western China a thousand years ago or more. The cultural pluralism is not only coincident with linguistic divisions but is also evident within ethno-linguistic groups (Graves 1994).

Ethnicity and cultural diversity were well recognized by the early Southeast Asian states. Wolters (1982:52) has even stated that a most salient characteristic of the earlier historic period is cultural diversity and its highly localized expression. Wicks (1992) argues that one of the interesting manifestations of localization is in the "widely divergent ways of expressing value," resulting in highly diverse means and degrees of monetization of early state economies and the co-existence within individual regions of numerous valuational systems.

Cultural diversity and ethnicity served both integrative and structural functions in early Southeast Asian states. Ethnic groups were recognized to fill certain economic niches, such as providing particular goods or services. The Kui, for example, may have provided iron for the Khmer empire (Bronson and Charoenwongsa 1986:24).

Ethnicity, occupation, and residence at Pagan generally coincided and were eventually legally codified (Aung Thwin 1985:90). The core-area state administrations' approach to cultural diversity notably contrasted with China's approach to the Red River valley, where the Chinese practiced cultural imperialism with considerable success. Imposing the dominant group's culture and homogenizing the diverse conquered groups does not appear to have been a major state goal in the Southeast Asian core area.

While the marked ethno-linguistic diversity of recent Southeast Asia has a known time-depth of only one or two thousand years, ethnic boundary formation in historic times has been considered, in part, a context for choice and manipulation in the region's *political economy* and not merely a given of historical origin (e.g., Lehman 1967). The consciousness of this flexibility of ethnic identity seems to have a strong political motivation.

Graves' (1994) discussion of the Kalinga of northern Luzon of the Philippines provides an excellent example of subgroup formation *within* a single ethno-linguistic group. This example also shows how intra-ethnic group cultural diversity can form within an alliance-focused and fluid regional political context with community economic specialization. A non-rigid status system based on multiple criteria, where "ascribed status differentiation is only weakly developed" is also extant (Graves 1994:15). Of potential relevance to interpreting the localized pottery traditions of prehistoric Thailand is his finding that pottery design systems corresponded to politically defined regions. Graves attributes the regionality of design not only to the learning frameworks formed by regional endogamy but also as deliberate demonstrations by potters of regional affiliation. Potters consciously avoided designs of another region. Graves (1994:48) concludes:

> The Kalinga case illustrates for us that sharply bounded social systems can occur...in the absence of strongly differentiated political or status regimes. This social fact is not well appreciated by archeological typologists, who seem to believe that well-organized or stylistically distinct social systems always imply authoritarian forms of social complexity.

In summary, both historic and ethnographic evidence document ongoing expression of cultural pluralism where social boundaries are defined by various means that may or may not include language differences. The social subgroups provide a means for lateral differentiation and integration of the larger society and a context for flexible ranking and flexible economic and social interrelationships that are not necessarily *controlled* by a recognized higher power.

Heterarchical Dynamics in Indigenous Economies of Later Southeast Asia

Although the evidence available concerning the indigenous economies of the early historic period is sparse and ambiguous, it seems likely that localized, household-based production of food and crafts, with specialized communities producing some commodities, continued in large part to characterize regional economies.

The production of rice, the main source of finance for Southeast Asia's early states in the core area, likely incorporated intensification strategies in some contexts. Hydraulic works are associated with these states, but the degree to which they were built and managed by the political centers or were even necessary to the production of rice is often open to question. For Angkor and other areas, food production may still have been organized by household units with the hydraulic management decentralized and probably community based (van Liere 1980; Stargardt 1990; Christie 1992). For Pagan, which is located in a dry zone, access to a well developed and probably more-regulated irrigation system may have been more integral to rice production (Aung Thwin 1985).

In fact, the temple, or rather the temple network, is the institution frequently mentioned as having a major role in expansion of hydraulic works as well as in accumulating and then redistributing resources (Hall 1992:241-2). It could be argued that the establishment and elaboration of these region-wide hierarchical systems outside of government bureaucracies (which at least in the case of Angkor were notably underdeveloped) and along side locally based landed elites represents another example of a strategy of lateral differentiation at a juncture of scalar stress. In this situation, political leaders needed to finance themselves in a sustained manner sufficient for major building campaigns and the occasional extra-territorial war. The locally focused landed social elites were apparently unwilling to recognize and support continuity of institutional leadership beyond the life of individual charismatic leaders (Wheatley 1979). Thus, the establishment of a *parallel* hierarchical system comprised of a region-wide religion

(where apparently none existed previously) that served to ideologically and financially support the hegemon and his successors could be argued to represent a clever heterarchical political innovation.

Detailed information on the indigenous manufacturing sector (e.g., pottery, salt, textiles, metals; Hall 1992:275) is lacking, although the literature implies some continuity from the prehistoric period of the genre of economic production and exchange posited above: household units of production, community specialization, and a multicentric overlapping distribution system that was not tightly controlled by a small group of elites (Wolters 1982:37; Hall 1985:172,322; Wicks 1992; although see Aung-Thwin [1985] on Pagan for a different picture). While extra-regional exchange was (to varying degrees) subject to elite controls, internal trade was merely "frequently supervised" primarily to limit surplus accumulation (Wicks 1992:310). For Angkor, Hall notes (1985:172,322) that indigenous marketing networks were not centralized or hierarchically organized by the state or a merchant elite. Hall states that the merchants "controlled" the networks, which were the means by which the king and temples acquired goods. Hall seems to imply, however, that the merchants controlled access by the elites to the networks but not necessarily the exchange among the settlements themselves.

There is very little specific information on the production and distribution of manufactured goods, but, drawing from various sources (Suchitta 1983; Hall 1985, 1992; Bronson and Charoenwongsa 1986:13; Bowie 1992; Christie 1992; Wicks 1992), a likely scenario seems to be that *attached* (following Earle's concept discussed in Brumfiel and Earle 1987) workshops or patronized artisans produced some products for royalty, such as fine textiles or religious sculpture. Unattached, unadministered specialized communities also coexisted, however, which produced for both the elite and local consumers either in discrete villages or as sectors in urbanized settings. Elites gained access to the products of independent specialized communities via intermediaries and through tribute and taxation mechanisms. Such a system could have helped to maintain and even stimulate community and regional economic productivity and differentiation.

Multi-modal commodity production and distribution systems that emphasized household production and community specialization also characterized more recent periods. Bowie's (1992) description of the multi-modal character of production and distribution of textiles in nineteenth century northern Thailand provides an excellent example of a diverse, multicentric, and predominantly household and community-based craft production and distribution system in a state context. Different stages of production (e.g., cotton growing, carding, spinning, weaving, dyeing and sewing) could take place in various combinations of both nucleated and dispersed settings ranging from individual households in a village to regions that had several villages specializing in particular products. Distribution of the endproducts of the various stages could be done by means ranging from the individual craftsperson to caravan tradesmen to the consumer travelling to the producer. Producers such as itinerant dyers could also visit consumer villages and perform their specialty away from home.

Production of elite products (e.g., silk for the aristocracy) was more *specialized* in the sense that fewer craftspeople had the requisite skills and capital. Silk, therefore, had higher prestige value and was more expensive, but its production and distribution was also multimodal. A few villages specialized in silk, but it was also woven at the court by war captives, slaves, or even members of the aristocracy themselves. Tribute and slavery were means in addition to the commercial sector by which textiles could be acquired by aristocrats. Therefore *attached* specialization co-existed with but did not replace community specialization, even in the production of elite products.

I propose that this pattern of varying degrees of differentiation within the household/community range of specialization and a multi-modal distribution system with limited attached specialization (probably more to *guarantee* elite access rather than *control* elite exclusivity to prestige products) is the type of scenario that should be envisioned for the development of craft specialization in the prehistoric and historic periods of the core area of mainland Southeast Asia.

Flexible Social Status in Later Southeast Asian Contexts

Rigidly ascribed social rank is not a prominent characteristic of Southeast Asian historic or ethnographic social contexts. Southeast Asian ethnography is full of references to flexible social systems and status structures that do not conform to typical hierarchical models. The flexibility is evident in tendencies toward non-unilineal kinship systems, alliance-focused political systems, ambiguity and oscillation in intergroup relations, and leveling mechanisms in status and wealth. There are numerous references in the early state literature to flexibility in social status (e.g., Jacques 1979; Wolters 1982; Christie 1985:17; Hagesteijn 1986; see also Kobkua Suwanna that-Dian [1993]) and suggestions that structures that were hierarchical in theory overlay a much more fluid and flexible reality.

The nature and implications of the flexible social status of Southeast Asian states can be examined with the critical issue of succession. Lineage was downplayed and strategically manipulated in a multilateral fashion. Descent was only one criterion that might be used to legitimize a claim to the position of ruler and was used flexibly: male line, female line, spouse's line, distant ancestor, or even mythical ancestor (Hagesteijn 1986).

> A direct transfer of power from father to son is recorded in nine cases out of thirty-two....In almost as many cases (eight) the power passed to brothers or cousins...or to a wife's nephew, to grandsons or even to husbands of first cousins once removed. The choice among these many candidates was determined 'by their age and virtue' (Sedov 1978:116).

Usurpation by individuals with no royal blood was accepted if *prowess* (i.e., leadership ability) was subsequently demonstrated, as was the case for one of Pagan's most successful rulers (Aung-Thwin 1985:66). Needless to say, succession on the basis of *age* and *virtue* from a broad field of candidates is not what the evolutionary model for state formation predicts.

Historians have commented on the distinctive nature of leadership in Southeast Asia's early states, specifically its charismatic quality, the importance of the individuals' demonstrated *prowess* (Wolters 1982; i.e., achievements), and the individual's personal behavior and track record.[2] An extension of the interpersonal emphasis in leadership is that clusters of patron–client relationships (rather than ranked classes or lineages, laws, or bureaucracies) were the fundamental means by which *government* was administered and power was expressed (Wolters 1982:20).

Social anthropologists have long observed the prominence of non-unilineal forms of kinship organization among Southeast Asian societies (for recent review, see articles in Hüsken and Kemp [1991]). Others have pointed out (Winzeler 1976; Wolters 1982) that the probability that such non-unilineal or possibly bilateral descent systems characterized the ancient period would likely have had a significant impact on the formation and character of Southeast Asian states. While cognatic kinship does not imply a *type* of society or culture with predictable, common manifestations and characteristics, ethnographers have observed that one of the behavioral correlates of cognatic systems observed among several Southeast Asian societies is considerable *individual choice* (Embree 1969; King 1991:18) in responding to jural sanctions and social obligations. Thus it might be considered that cognatic systems provided a *prima facie* basis for flexible response, a product of which may have been the great variety of manifested social forms that have developed in Southeast Asia (King 1991:30) as well as their malleability over time.

That societies vary in the degree to which they proscribe the behaviors and choices for individuals has long been recognized by cultural anthropologists working in Southeast Asia. Embree (1969) discussed this phenomenon in Thai society, noting that although rules of social obligation are articulated in theory, the individual ultimately decides whether or not to abide by those rules. There may be a period of social tension if he or she does not, but the individual is usually eventually welcomed back into the social fold. Embree contrasts this *looseness* with the rigidity of Japanese and Chinese society, where filial piety, for example, is demanded and strongly sanctioned.

Southeast Asian societies also demonstrate flexibility in mechanisms for status definition. Jacobs et al. (1990) provide illustrative examples of the Nagas, whose variegated status could be based on combinations of ascribed and achieved qualities; lineage, marriage, number of heads taken (reflective of prowess), number of different types of feasts sponsored (reflective of wealth) were all employed in status differentiation but could be stressed variously over space and time to produce different degrees and configurations of ranking. Individuals, especially men, even from lowly ranked lineages could strategize to acquire status through their own actions. Status was not defined within a single all encompassing conical hierarchy or fixed value system, rather a multilateral system for determining status in particular contexts resulted in the potential for varying flexible hierarchical arrangements.

Alliance-Focused Socio-Political Systems in Later Southeast Asia

Historic and ethnohistoric political systems in Southeast Asia also reveal common elements in their stress on flexibility and alliance formation. It was critical for successful leaders to demonstrate diplomatic skill through managing interpersonal relationships (Wolters 1982:18) or negotiating peace or external trade (Hall 1985:191). Although many wars were recorded, historians do not seem to regard them as the central organizing activity for the early rulers (Wolters 1982:17), or at least peaceful leadership and alliance formation are also frequently stressed (Hall 1985:6, 138).

A corollary of the charismatic style of leadership is the centripetal as opposed to centrifugal nature of the dynamic between the state and its populace. Attraction of population toward leaders and toward the center outweighed an expanding domination or compulsion by the center over territory (Christie 1985:9). This tone can be seen in a lack of emphasis on permanent territorial boundaries, their fluctuation, fluidity, and even overlap. States were not seen as mutually exclusive bounded entities, and some areas perceived themselves as being parts of more than one state at one time (Winichakul 1994).

A corollary of the centripetal dynamic between the state and its populace is that controlling territory was less the focus than controlling labor and hence people. Hall (1985:4) believes that the struggle to control people, and thus manpower, principally through the formation of political alliances with local landed elite was the primary concern for rulers. Low population density is repeatedly mentioned as "a problem" for Southeast Asian states. Elaboration of patron/client-style relationships formed the basis of labor recruitment rather than defining stratified role relationships. Leaders attracted followers, even entire villages, through providing security, land, prestige, protection, and access to water as means of expanding a supporting populace. The "slaves" or "bondsmen" mentioned in the literature could likely be best conceived as falling into a client-type of relationship (Aung-Thwin 1985:87).

The political and social anthropology of the region repeatedly stresses the importance of political alliance formation and the coexistence of and flexible interplay among hierarchical and egalitarian value systems (e.g., Leach 1954; McKinnon 1991). Graves' (1994) discussion of the Kalinga notes that the regions of settlements were formed on the basis of continually renegotiated *peace pacts*. Leach's (1954) *Political Systems of Highland Burma* provides a classic and richly complex case of what can easily be identified as heterarchy: the ambiguous relations and oscillation (rather than the evolution) between autocratic, hierarchically ordered *gumsa* systems and the egalitarian, factionalized *gumlao* systems. Any individual community may operate in either a relatively hierarchical or a democratic manner and may alternate between the two over time. In addition, the superior relationship of wife-givers to wife-receivers implies a contextual hierarchy in the asymmetrical marriage alliance systems frequently identified in Southeast Asian groups (also discussed by McKinnon [1991] and others) because the lineages marry in a circular pattern. In theory, the asymmetric circle of superior relationships among wife-givers to wife-receivers results in the very paradoxical *dromic* pattern that was the basis of the original discussion of heterarchy (McCulloch 1945).

Jacobs et al. (1990) describe similar systems of structural oscillation (the Thendu/Thenkoh and Sema/Angami) in his book on the Nagas of eastern India. Other Southeast Asian groups display different contexts for oscillatory behavior, such as in ethnic identity or ritual behavior (e.g., Kirsch 1973). In sum, the ethnographic literature provides numerous examples of groups that consider hierarchical relationships in politics and society to be contextual and flexible.

DISCUSSION

This overview of evidence for heterarchy in the prehistory, history, and ethnography of Southeast Asia suggests steps towards a heterarchically aware model for the development of social complexity appropriate to the Southeast Asian context. I thus see two fundamental elements contributing to heterarchical development in Southeast Asia that have had profound implications for the region's trajectory of development: (1) tendencies toward ego-focused social systems that I propose have greater inherent potential for flexibility than unilineal kinship systems; and (2) tendencies to emphasize or at least incorporate lateral solutions to structural problems at points of scalar stress, a quality that may have implications for the pace and style of Southeast Asia's social development.

Evolutionary models that focus on the development of ascriptive ranking tend to assume or be most compatible with unilineal kinship organization. Yet a tendency toward ego-focused social systems in Southeast Asia is suggested in all three time periods considered: from the individualized treatment of graves in the prehistoric period, to the multiple avenues of succession and evidence for bilaterality in the historic states, to the prevalence of cognatic kinship systems in the ethnographic record.

Likewise, lateralized strategies with increased differentiation occurring horizontally seem to be a frequent response to contexts calling for increased complexity. The fragmentation of material culture after the appearance of bronze in the prehistoric period instead of the more expected increases in vertical differentiation, is one example. The incorporation of the pan-regional temple networks as a context for hierarchical expression in the historic period when perhaps the underlying secular social system was resistant to institutionalized vertical differentiation, can be viewed as a mechanism of horizontal differentiation. In ethnographic contexts, the intensification of ethnic differentiation rather than homogenization and subjugation as different ethno-linguistic groups come into increased contact with lowland state societies (e.g., articles in Kunstadter [1967]) is another example.

Flexible hierarchy and horizontal differentiation may be expressed in different ways among different societies across time, but they provide a basis for flexibility in response to challenges, be they environmental, economic, social, or historical, and alternatives to direct hierarchical mechanisms for regulatory control and integration. That this type of differentiation can serve in various types of societies during various stages of development as an alternative to, or even a component of, vertical differentiation as a mechanism to accomplish complex tasks and reduce social tensions is, I maintain, demonstrated in the Southeast Asian evidence. A potential implication for these underlying dynamics is that *control* and regulatory mechanisms can be dispersed rather than centralized and contextual rather than structural. Cross-group interaction can occur without the need for status to be defined as a stable condition, status defined not at all, or status defined only for the particular occasion or type of occasion (e.g., wife-giving or receiving).

Furthermore, the Southeast Asian data bring clearly into focus the fact that hierarchically based discussions of chiefdoms and state formation have been looking at a number of variables that are actually one side of a number of axes of cultural continua (Figure 9-2). The Southeast Asian data show that the definitiveness and rigidity of boundaries (between classes, lineages, and political entities) implied in the hierarchical models is a quality that should be treated as a variable and not as an inherent component of the process of the evolution of social complexity (a distinction reminiscent of Durkiem's mechanical and organic solidarity). While state societies in the archeological literature have tended to be discussed on the basis of the hierarchical end of the continua, our own society need only be considered to realize that heterarchical principles are not incompatible with statehood.

In a story that makes a point similar to Embree's (1969) comparison of the Thai and Chinese, the reality of variation in rigidity is highlighted by the exploits of a nineteenth century French expedition looking for a route up the Mekong for European trade with China. In interior Southeast Asia, the team encountered *ethnic confusion*, groups differentiated by dress, languages, and dialects. They also described great frustration in trying to get permission to pass certain regions, where local principalities were allied to more than one "state" claiming hegemony (Osborne 1975:94,105). "Sequential decision making" repeatedly held up the team's progress, as they needed permits from many powers and obtaining them was a confusing maze of interpersonal games. The team felt great relief in finally entering a region that bore the "...'stamp of routine uniformity' which China's cultural system imposed on the diverse ethnic groups assimilated to its civilization" (Osborne 1975:126) and in which the lines of authority were, relatively speaking, clearly defined.

Archeological theories have failed thus far to consider the effect that the difference between cultures with relatively rigid rules of structure and behavior and cultures with flexible rules would have on the development of social complexity. The type and functioning of hierarchies in flexible as opposed to rigid societies should differ, with flexible societies giving more play for strategizing and negotiation by individuals or groups. It is also a dimension that potentially has empirical correlates that archeologists might be able to identify to help us flesh out the dynamics of societies emphasizing heterarchical principles.

Figure 9-2 provides a framework to begin to articulate variability within the components of a cultural system along several axes of the hierarchy-heterarchy continua. An individual society need not be characterized by just the right or the left hand side of the table but could have various combinations of hierarchical or heterarchical com-

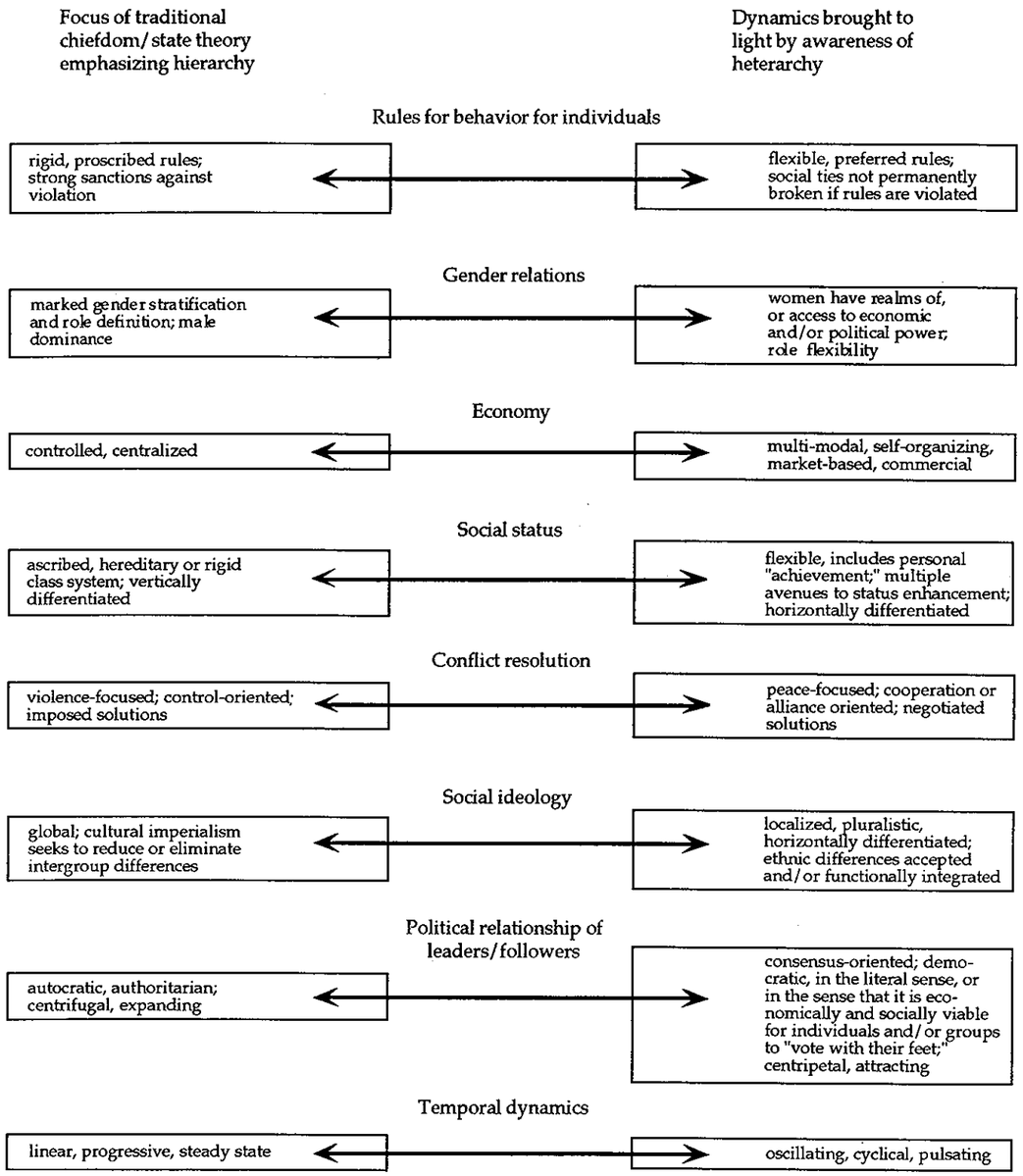

Figure 9-2: *Continua for dimensions of social organization in complex societies.*

ponents. Examination of an individual case with respect to these various dimensions and their structural interrelationships is a means to move beyond a *typology* approach (e.g., in Kristiansen [1991], the "decentralized stratified society" versus the "centralized archaic state") to analyzing components of intermediate or early state societies where the real-life example turns out to have some but not all of the characteristics of the *type* or characteristics of more than one type. Thus, for example, the Maya (Potter and King, this volume) reveal a highly stratified political system but a horizontally integrated economic system.

The potential richness of this approach is evident when considering that the dimensions should be considered continua and not either/or, presence/absence attributes. On individual dimensions, a society may tend toward one extreme, the other extreme, or maybe somewhere between the poles by combining aspects of both. For example, the textile production and distribution system described by Bowie (1992) for northern Thailand was primarily self-organizing but included some controlled or *attached* production of fine fabrics for royalty. Different crafts within the same society may be controlled or dispersed to different degrees with resultant implications for how the individual society functioned and changed. It is suggested that a comprehensive examination of the various combinations of elements in terms of their hierarchy/heterarchy dimensions will go far to flesh out differences among individual complex societies and their character at a particular point in their historic continuum.

Implications for Model Building

If the components of societies are merely placed along various continua, won't we get lost in mounds of particularistic details? How can one incorporate the data into models if one allows for individual and cultural choice, negotiation, and strategy? Including the concept of choice does not fit well with the underlying determinism of evolutionary models. The answer lies, I believe, in adding to our discussions the theoretical orientations being proposed from self-organization science and its subsidiary, chaos science, which are more compatible with heterarchical dynamics (Scott 1991; Kauffman 1993; see also Adams 1988).

While the specifics of the incorporation of these broader theories into archeological theory will be worked out as more archeologists apply the ideas over time, at the present I see several immediate contributions. Self-organization and chaos theories offer the following useful concepts: (1) a trajectory of development viewed as successively bifurcating rather than lineal; (2) the importance of specific initial conditions in determining the system's response at the point of bifurcation (equivalent to point of scalar stress?); (3) the view that the path taken at the point of bifurcation is relatively unpredictable (chaotic) whereas the path leading up to the bifurcation is relatively deterministic; (4) the articulation of fundamental dynamic patterns beyond lineal progressions (of which the oscillating dynamic may have particular relevance for the Southeast Asian context); and (5) the importance of *generic properties of ensembles* in the developmental trajectory of a system.

Up until very recently, archeologists have tended to think in terms of lineal (even if multi-lineal) progression and to discount other dynamic patterns such as the oscillating dynamic and their potential impact on cultural trajectories. Archeologists have focused almost exclusively on the steady state dynamic in the guise of equilibrium models. Interestingly, Johnson (1982:416) was on the track of the self-organization theorists by implying a bifurcation-type model for the development of complexity when he noted:

> ...trajectories of organizational development will depend in part on *response sequence*, i.e., the temporal order in which sequential and/or simultaneous hierarchy development or elaboration occurs....We can probably expect organizational change under scalar stress to be more discontinuous than continuous [emphasis added].

CONCLUSION: AN EMERGING RESEARCH AGENDA

I have argued that the issues raised in the beginning of this chapter concerning the pacing and legitimizing strategy for the development of complex society in the core area of mainland Southeast Asia can be fruitfully examined from a heterarchical framework. This perspective suggests that the development of social complexity and political centralization are distinct phenomena and that the concepts should be separated in discussions of theory. Moreover, the heterarchical perspective suggests new avenues for both theoretical and empirical research. On the empirical side, the Southeast Asian data show that evi-

dence may in many cases be accessible to archeologists to evaluate the presence for heterarchical patterns. For example, mortuary evidence can be used to examine flexibility of status, rigidity of funerary rules, and evidence for individualizing graves that may have bearing on the relative rigidity of rules of behavior or relative importance of individuals as opposed to corporate groups.

On theoretical issues, amplified criteria beyond simplistic binary oppositional frameworks (presence-and-absence style statements) need to be developed in order to measure, differentiate, and evaluate the impact of such variables as warfare, economic control, agricultural intensification, or craft specialization. Costin (1991) has made important advances in the amplification and differentiation of *craft specialization* as well as provided guidelines for evaluating variants in archeological contexts. Similar thoughtful treatments of the other critical variables are long overdue. For example, empirical evidence to evaluate the presence, type, degree, and impact of violent conflict on the social system should be able to be defined beyond a minimal reference to *warfare*. Criteria for amplification might include the degree of technical and formal elaboration of weaponry and a quantitative assessment of its prominence, the evidence for violent trauma in skeletal populations, and the evidence for defensive (not just offensive) manifestations, such as the degree of elaboration of defensive earthworks.

Complex societies can be re-examined along these more-fully articulated dimensions to see if the variability encountered can be addressed more richly as well as systematically. Changes in complex societies over time might be specified to particular dimensions, and the impact of particular stimuli may vary depending on how a particular society's continua are configured at any particular point of scalar stress.

In addition to helping us examine our data more thoroughly, systematically, and richly, the proposed perspective challenges some of the basic assumptions anthropological archeologists have stressed in recent decades in upper level theory, namely assumptions of determinism, predictability, and *a-cultural* evolution. The Southeast Asian data highlight the need to incorporate in archeological theory the possibility and implications of heterarchy at every level of social dynamic.

NOTES

[1]Not considered in this paper are the socio-political developments on the northern periphery of mainland Southeast Asia along the Red River in northern Vietnam and Yunnan. States in northern Vietnam are considered to have been imposed by China (Wheatley 1979, 1989). Archeological evidence from the prehistoric period shows that the Red River Valley's socio-cultural development took a trajectory distinctive from the core region of mainland Southeast Asia from at least 1000 BC and probably earlier.

[2]The possibility that the development of site hierarchies in the Phimai area was associated with centralized production of crafts other than copper needs to be thoroughly explored. The resources considered of focal interest for these societies (i.e., land, salt, timber, and iron ore) are not highly nucleated, however. McNeill and Welch (1991) in a preliminary study were also not able to identify evidence for specialized ceramic manufacturing centers.

[3]This stress on the personal achievement of state rulers is bound to disturb the archeologist brought up on cultural evolutionary theory. Achievement included many qualities and actions, including ability to skillfully gather political intelligence, mediation and diplomacy, spiritual endowment, wealth, and sometimes warfare, among others. Skill in handling complex interpersonal relationships was probably more important for leaders than mobilizing aggressive actions.

ACKNOWLEDGMENTS

My gratitude is extended to Eleanor King, Heather McGrath, William Henderson, Julia Wiland, and the anonymous reviewers of this chapter for their help in clarification of the text and its points. Ardeth Anderson prepared the figures. Any errors of fact or interpretation are of course the responsibility of the author.

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10

Heterarchy and the Analysis of Complex Societies: Comments

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A good concept enables us to organize research findings and ask interesting questions about them. It gives us the ability to predict, "This goes with that," and to explain, "Now I see why this goes with that." Judged by these criteria, heterarchy is a remarkably good and useful concept.

Joyce White, in her American Anthropological Association presentation, reported a wonderful "ah-ha" experience in applying heterarchy to Southeast Asian data on burial and craft production. The concept of heterarchy made it possible for her to interpret evidence that had previously eluded understanding. Other contributors also comment on the usefulness of the heterarchy concept. Levy observes that when viewed from the perspective of heterarchy, Danish Bronze Age data on settlement, iconography, and gender "come together rather neatly." Rogers notes that thinking in terms of heterarchy enabled her to question her initial assumptions regarding tribal structure.

Thus, the concept of heterarchy provides new perspectives on the nuts-and-bolts foundations of archeology: settlement pattern data, resource procurement, artifact type distributions, design elements, and burial lots. It also stimulates the critical review of such basic concepts as craft specialization, the functions of central places, the structures of tribes and chiefdoms, and the definition of social complexity. Clearly, heterarchy is an important concept.

HETERARCHY DEFINED

But what is heterarchy? Contributors cite Crumley's (1979:144) definition that heterarchy is an organizational structure in which "each element possesses the potential of being unranked (relative to other elements) or ranked in a number of different ways...." As used by the contributors to this volume, heterarchy includes a number of different structural forms:

- an array of independent, homogeneous elements (see Ehrenreich on the distribution of ironworking among sites in southern England);
- the membership of elements in many different unranked interaction systems with participation in each system determined by the needs of each element (see Rogers on tribal interaction in the Yadkin Valley, Levy on the relations of iconographic motifs in Bronze Age Denmark);
- the membership of elements in many different systems of ranking where the same element occupies a different rank in the different systems (see White on individual status in Southeast Asia, Potter and King on settlement functions among the Classic Maya, Small on economic, political, and status hierarchies in ancient Greece and elsewhere);
- the existence of two or more functionally discrete but unranked systems that interact as equals (see Potter and King on production sites among the Classic Maya, Zagarell on tribal relations in the Nilgiri Hills);
- the existence of two or more discrete hierarchies that interact as equals (see Levy on gender relations in Bronze Age Denmark, Wailes on church-state relations in Medieval Ireland).

Why has heterarchy been interpreted in so many different ways? Partly because the concept of *hierarchy* includes a number of implicit assumptions: that ranking is present, that ranking is permanent, and that the ranking of elements according to different criteria will coincide. As it turns out, none of these assumptions is necessarily true,

and the authors in this volume have found it necessary to challenge one assumption or another, or all three, with various models of heterarchy. Let us consider what changes the concept of heterarchy suggests for existing models of prehistoric economies, ideologies, and politics.

Socioeconomics and Heterarchy

Numerous proposals have been made linking economic complexity with the existence of social hierarchies (Brumfiel and Earle 1987). One large body of literature argues that the operation of complex economies requires hierarchies of coordination and control (e.g., Engels 1972 [1884]; Polanyi 1944:48-49; Sanders and Price 1968; Wright 1969; Flannery 1972). A second body of literature argues that full-time specialization will not occur without an elite to generate a reliable basis of support for craft specialists (Hicks 1987; Brumfiel 1987). A third body of literature proposes that political hierarchy cannot be maintained except when it rests upon some form of economic control (Earle 1987a, 1991; Clark and Parry 1990; Peregrine 1991). This linkage of economic complexity with political hierarchy has encouraged archeologists to assume that economic and political central places coincide, resulting in a single regional settlement hierarchy.

But the contributors to this volume challenge both the necessary connection between economic specialization and political hierarchy and the universal existence of a single regional settlement hierarchy serving economic, political, and religious functions.

White (Chapter 9) reviews the evidence for the organization of early bronzeworking in Thailand. In northern Thailand, the evidence suggests the intermittent exploitation of ore sources by many different groups, metalsmelting at the sources, and bronze-casting in the villages with a degree of community specialization in particular bronze items. In central Thailand, the evidence suggests more restricted access to the production process, with metalworking more or less monopolized by villages located near the ore sources. But in neither case does the evidence suggest elite control over production or production for a narrowly defined elite class. There is, in fact, no evidence for elite organization of production or exchange.

Potter and King (Chapter 3) present similar data for the production of utilitarian ceramics and lithics in the Classic Maya lowlands. Ceramic production occurred in a series of small regional villages; neither production nor distribution was localized around large regional centers. Intensive lithic production occurred in small settlements located literally on top of the resource; the output of these villages was distributed primarily to other small sites. Only the production of fine ceramics and the distribution of eccentric flints were centered at large sites, suggesting elite control and decision-making.

Levy (Chapter 5) also doubts the importance of economic control in the chiefdoms of Bronze Age Denmark. According to Levy, virtually all Late Bronze Age settlements yield some evidence of metal-working; there is no indication of attached specialists. The absence of field boundaries, fortifications, or centralized storage argues against elite control of the economy. So does the absence of settlement hierarchies defined either by site size or function. On this basis, Levy argues that Bronze Age chiefs did not exercise economic control and did not perform important economic functions. Rather, their power was based upon their control of non-economic rituals and esoteric knowledge.

Do these cases force us to reconsider the presumed linkage of economic complexity with social hierarchies? Yes and no. Thailand does seem to present a case where widespread craft specialization was sustained in the absence of elite control and decision-making, but craft specialization remained a seasonal, household-based activity of rather low scale and intensity (using Costin's [1991] terminology). Neither full-time craft specialization nor political hierarchy emerged. In Bronze Age Denmark, evidence for the chiefly control of material resources may yet be found. Cattle are a mobile resource whose ownership may be difficult to establish archeologically. Production locales for the largest and most elaborate bronze artifacts must surely exist and may eventually be found. In the absence of field boundaries, the earthen mounds of Bronze Age Denmark might have served as symbols of territorial control (Earle 1987a). Among the Maya, political elites *did* maintain control over the production and/or distribution of wealth items, such as fine ceramics and eccentric flints. Extensive specialization in utilitarian goods was present without elite control, but, as in Thailand, this production may have been seasonal and household-based, dependent upon the household's subsistence agriculture.

However, these discussions establish that certain aspects of the economy have not been investigated thoroughly enough and that some widely held assumptions about the organization of pre-industrial economies are probably wrong.

The possibility of specialized production at locales outside regional centers has been recognized for some time. For example, Costin (1991:13-15) discusses the concentration of craft specialists and the factors that determine whether production will be dispersed or nucleated. First on her list of variables is environmental diversity, as suggested by Potter and King for the Maya; second is transportation cost, clearly an important factor in New World societies where draft animals were absent and navigable waterways were limited. Given these environmental factors, archaeologists should have expected dispersed craft production in the New World and should have carefully considered its implications for economic organization, political organization, and settlement patterns. Potter and King are absolutely correct in arguing that this type of specialization has been neglected, largely because of assumptions about the importance of hierarchy. Heterarchical models are necessary for an accurate understanding of the Maya economy.

Levy's review of the settlement data for Bronze Age Denmark clearly establishes that the central places and three-tiered settlement hierarchies that information theorists have postulated for chiefdoms are not met with in the Danish Bronze Age. They are also not present in Hawaii (Timothy Earle, personal communication, 1993). Thus, while chiefdoms may have two or three levels of decision-making as suggested by Johnson (1973), archeologists should not expect to find these expressed in settlement pattern hierarchies. The implications of this for modeling chiefly power and for identifying its existence in the archeological record need some careful consideration.

White observes that Southeast Asia sites in the first and second millennia BC provide no evidence of elite organization of production or exchange, but they do exhibit social differentiation, specialized production, greater elaboration of craft production, and increasing variation in wealth over time. She asks if this is not social complexity in the absence of hierarchy. She argues that the Southeast Asian data strengthen Crumley's (1987) case against of the general equation of social complexity with hierarchy. This is a fundamental issue to which I will return in the conclusion to these comments.

In the future, the study of heterarchy in socioeconomics will benefit from research along two lines. First, a more explicit terminology needs to be introduced. As observed above, the term heterarchy refers to a number of different structures. While this terminological imprecision is probably useful for heuristic purposes, it gets in the way of critical understanding. For example, in discussions of specialization, heterarchy is used to refer both to specialists who are not under the control of political leaders and to specialization that is geographically dispersed. Costin (1991) argues convincingly that these are two separate dimensions of specialization (which she calls "context" and "concentration") that are determined by different sets of variables. It would be best to maintain this terminological and analytical distinction.

Second, more attention needs to be paid to the structural contexts in which heterarchy (in its various forms) develops. Ehrenreich's (Chapter 4) analysis of metalworking in Bronze and Iron Age Britain is an example of the kind of work that should be pursued in the future.

Ehrenreich carefully documents change in metalworking from a higher degree of craft specialization during the Middle Bronze Age (when it was hierarchically organized) to lower levels in the Late Bronze Age and Iron Age. He attributes this trend to the introduction of new technologies that simplified metalworking, making it more accessible to individuals with minimum training. However, these new technologies yielded a softer, lower-quality product. Therefore, Ehrenreich asks why these inferior products became popular. He observes that the new technologies were accepted in the context of climatic stress and social instability. Following Crumley (1990), Ehrenreich suggests that heterarchical organization was preferred in Iron Age Britain because heterarchy is more flexible than hierarchy and more suited to unstable conditions. This is an intriguing general hypothesis that can guide further research.

Ritual and Heterarchy

Levy (Chapter 5) suggests that control of ritual ceremonies and esoteric knowledge supplies a basis for differential status and influence in societies such as Bronze Age Denmark where the economy assumes a heterarchical form and elite economic control is lacking. Wailes (Chapter 6) argues that religious and political functionaries in medieval Ireland were ordered in parallel hierarchies of equal status and power. These two cases raise important questions. Can ideological control operate independently of political and/or economic control? Can ideology serve as a basis for hierarchy when the political and the economic organization is heterarchical? There are strong arguments on both sides of these questions.

On the one hand, structural Marxists have argued vigorously that control of "the imaginary means of production" was a primary source of power to leaders during the early stages of the development of social inequality (Friedman 1975:171-178; Godelier 1978). Mann (1986:1-33) affirms the relative autonomy of power based on ideology, economics, military organization, and politics. In contrast, Demarrais et al. (1996) propose that ideological control is necessarily linked to economic control. They argue that ideology can be monopolized only through the control of its material expression in objects and ritual action. Control over the material expression of ideology requires, in turn, the control of at least some forms of production.

This issue is not easily resolved on the basis of Levy's and Wailes' examples. As discussed above, elite control of ritual ceremonies and esoteric knowledge may have been linked to some form of elite control of the economy during the Danish Bronze Age. The Church was certainly endowed with substantial wealth in medieval Ireland (but lawyers and poets were not—did all three groups exercise comparable power?). We await further archeological assessments of ritual control in the absence of elite control of the economy. In addition, future research should explore the conditions under which the differentiation of political and religious power emerges and the consequences of parallel hierarchies for subsequent political and ideological development.

Levy (Chapter 5) and Rogers (Chapter 2) provide a really striking method for measuring the degree of ideological control in prehistoric societies. Levy for metal objects and Rogers for ceramic vessels describe situations where the association of symbolic motifs on decorated objects do not follow any regular rules. Motifs are combined and recombined in various ways, and as Levy observes, these multiple combinations provide great opportunities for social manipulation. Such situations can be equated with the heterarchical organization of social discourse, which would indicate very little elite control over ideology. Such cases would contrast with situations where strict rules govern the associations of symbolic motifs, which in theory would occur when elites more strictly controlled ideology. Earle (1987b) describes instances of ideological control in Hawaii and the Inca empire; the study of iconography in these two contexts would provide an excellent test for the general validity of design patterning as a gauge of ideological control.

Societal Control and Heterarchy

In this volume, the concept of heterarchy is applied to what we have been calling egalitarian, ranked, and stratified societies. This suggests that heterarchy is probably not any single type of social structure; rather, it is a principle of social organization, like kinship, that is reworked and assumes different roles depending upon its structural context. We probably should not use heterarchy to replace the tribes–chiefdoms–states terminology with which we are familiar; instead, we should use heterarchy to look at these constructs differently.

Rogers (Chapter 2) offers new insights into the concept of the tribe. Focusing on 29 Late Woodland villages along the Yadkin River, Rogers finds that no hard-and-fast boundary separates these villages into the discrete political entities named in the ethnohistoric record. Instead, the absence of fall-off frequencies for stone types by distance from source suggests direct access to lithic supplies, perhaps facilitated by rules of exogamy and dispersed lineages that insured universal access to lithic sources. In addition, the absence of discontinuities in associations of ceramic attributes suggest the free flow of information, pots, and/or people (a situation also described by McPherron 1967).

Such a lack of boundaries is found in other egalitarian societies, such as those described in Hodder's (1982:73) ethnoarcheological study of Baringo, Kenya: "[i]n the Baringo area there is a continual tension between boundary maintenance and boundary disruption; the one exists in relation to the other." This unbounded social sphere is maintained, Rogers suggests, by the mobilization of statuses and allegiances based on a number of different principles. According to a review by Flanagan (1989), the ability to mobilize statuses on a number of different principles is now understood by ethnographers to be the key to maintaining *egalitarian* relations. Flanagan (1989:259) notes that, instead of being the simple homogeneous societies that we once envisioned, egalitarian societies are characterized by "not the absence of rules but the sheer complexity of equality-maintenance rules they must implement." This is borne out by Rogers' work. If heterarchy distinguishes a particular social type, then societies where egalitarian relations are maintained through the existence of a number of overlapping and discrepant social principles are the most suitable candidate.

White (Chapter 9) also presents a case where individual identity was a composite of various achieved and ascribed statuses based on a number of different principles. White uses burial data (i.e., differences in grave contents and treatment) to argue for a multifaceted, multilateral system of status and social differentiation, possibly based on lineage, marriage, prowess, and wealth. As White's analysis continues, it will be interesting to see if the various dimensions of social status can be teased apart and identified as dimensions of variability in the burial program. A promising beginning is already evident in White's identification of individuals whose social persona include the role of craft specialist.

Although ranking and stratification were absent in the groups studied by White, the differentiation of social status through competition is suggested by the elaboration of ceramics and metalworking. White resists calling these societies chiefdoms, and her argument is convincing. But she goes on to question the utility of popular archeological models of chiefdoms arguing that in Southeast Asia the "*correlates* are not correlating." I disagree. The data suggest that these societies are not chiefdoms, and many of the archeological correlates of chiefdoms (e.g., economic control, settlement hierarchies, and distinctive classes of burials) are absent in the archeological record. In other words, the "*correlates*" do correlate pretty well; none of them is present.

In this volume, heterarchy is often opposed to hierarchy so that the two appear to be mutually exclusive: the more heterarchy, the less hierarchy, and *vice versa*. It seems as if heterarchy might be used as a synonym for egalitarian. But Wailes (Chapter 6), Zagarell (Chapter 8), and Small (Chapter 7), who discuss heterarchical organization within states, demonstrate how heterarchy cannot only co-exist with hierarchies of control but actually strengthen inequality and dominance.

The sacred and secular hierarchies described by Wailes were created, historical records tell us, to accommodate the cadet lineages of royal families. A similar division of sacred and secular power occurred in response to elite competition in Tonga (Gailey 1987:69-71). Thus, the creation of one form of heterarchy, parallel hierarchies, has served as a means of containing tensions among elites that might otherwise disrupt the system of elite control. Thus, heterarchy can be instituted for the purpose of preserving hierarchy.

Zagarell arrives at a similar conclusion. He believes that the heterarchical relations among tribes in the contemporary Nilgiri Hills originated in the administrative policies of premodern states. These states ruled by allocating economic resources and functions among various subject groups. This allocation enabled the state to maintain power by balancing various power-holding groups rather than attempting to control each of them directly from above.

Small (Chapter 7) argues that the Greek city-states present a situation where political, economic, and status hierarchies were not integrated. In Greece, politics, economics, and status were represented by separate, largely autonomous institutions. However, the aristocracy, an economic elite who owned agricultural estates, slaves, and trading ships, tolerated autonomous political and religious institutions because it served their interests. An autonomous, *democratic*, state permitted aristocrats to find allies among non-elite citizens. These citizens provided the coercive force necessary to preserve slavery, which was the basis of aristocratic wealth. Thus, the political structure was heterarchical but in the service of a highly stratified economic system. A parallel might be drawn between the democratic governments of Greece that served the interests of aristocratic slave-owners and the interest group democracy of the United States that serves the interests of the hierarchically structured capitalist system (see Foley and Yambert 1989).

CONCLUSIONS: HETERARCHY AND SOCIAL COMPLEXITY

And so we return to the question posed by White: is heterarchy a form of social complexity? Certainly, heterarchy creates complexity in the lives of individuals. When production is non-specialized or carried out by part-time specialists, the lives of individuals are far more complex than they are in *complex* economies. As White and Rogers point out, the multiple activities, exchanges, and schedules of individuals in heterarchically organized economies result in more varied and challenging lives for the individuals involved. The maintenance of heterarchical social relationships also involves great complexity for individual actors. Rogers observes that in the Yadkin Valley, "autonomous individuals sustained access [to resources] by maintaining level social relations, forging alliances, intermarrying, and practicing high mobility." With these scenarios in mind, Rogers characterizes the change from a heterarchical tribal system to a hierarchical chiefdom as a "collapse" involving the homogenization and streamlining of organization.

However, in the literature on social evolution, complexity is most often defined as a property of systems rather than individuals. For example, Flannery (1972:409) states that the complexity of a system "can be measured in terms of its *segregation* (the amount of internal differentiation and specialization of subsystems) and *centralization* (the degree of linkage between the various subsystems and the highest order controls)...." The challenge posed by heterarchy is, can segregation occur in the absence of centralized control? We return again to White's observation that, in Southeast Asia, social differentiation, specialized production, craft-production elaboration, and wealth variation clearly developed over time while centralized control was absent.

The coupling of differentiation and hierarchy is so firm in our minds that it take tremendous intellectual effort to even imagine what differentiation without hierarchy could be. In this effort, archeological data can help guide our thinking; the data will resist the appearance of order until we have developed the proper heterarchical model to fit the case. To a large extent, the possibility of complexity without hierarchy is an analytical and empirical question that will require substantial model-building and testing in the future. But archeologists who explore the heterarchical organization of past societies that were not linked to states, empires, or capitalist world systems may be in an excellent position to give advice to social activists who seek to institute a more egalitarian society in our own complex contemporary world.

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