THE EMERGING WORLD SYSTEM AND COLONIAL YUCATAN:
THE ARCHAEOLOGY OF CORE-PERIPHERY INTEGRATION, 1780-1847

Rani T. Alexander
Department of Anthropology
Columbia University

Rani T. Alexander, Department of Anthropology, 452 Schermerhorn Extension, Columbia University, New York, NY 10027. Tel. 212-854-7362; RA123@COLUMBIA.EDU.

v. 7/8/96

ABSTRACT

The conquest and colonization of Mesoamerica by Spain during the period AD 1519 - 1821 forms part of a macroregional interaction network known as the modern or capitalist world system. Regions incorporated within the world system usually undergo economic change such that production and labor are increasingly commoditized, dramatically altering the productive strategies of households and communities. As Price (1986) observes, world systems theory is difficult to apply to prehistoric or precapitalist macroregional systems because the world systems analogy lacks referents to broader processes of state expansion, political-economic structure, and the corresponding archaeological record. This paper uses archaeological and historical data from the Parroquia de Yaxcaba, Yucatan, to explore the variable impact of political and economic change on the organization of production and labor of rural communities. Archaeological site structure and spatial organization are analyzed to assess the implications of world system expansion for the archaeological record in a region where the market transition ultimately fails. Settlement patterns and site structure in Yaxcaba Parish suggest variation in production organization among communities that differs from historical reconstructions. Comparison of independent lines of evidence indicates that variation in the processes of core-periphery integration are archaeologically recognizable.

INTRODUCTION

Wallerstein (1974a) originally defined the modern capitalist world system as an economic entity integrating multiple sociocultural subsystems through a single division of labor and the exchange of staple products. The economy of outlying cultural subsystems, often referred to as "peripheries", becomes commoditized and specialized towards the export of goods and staples that are consumed in the system " core." Substantial quantities goods manufactured at top-ranking centers within the world system are distributed to the periphery as a means of extracting surplus value from hinterlands. The result is a division of labor between cores and peripheries that fosters periphery dependence on the core (Wallerstein 1974b).

Although descriptions of the modern world system assume a capitalist mode of production, attempts have been made to use a more general core-periphery model to describe pre-capitalist and prehistoric political economies (Blanton and Feinman 1984; Blanton et al. 1992; Kohl 1987a; Rowlands et al. 1987; Schortman and Urban 1987, 1992; Santley and Alexander 1992). Many of these studies indicate that interaction between core and periphery is variable, especially with regard to the hinterland's dependence on the core (Kohl 1987b, 1992). World systems models are difficult to apply to prehistoric macroregional networks because they do not specify how the world system affects processes of political-economic expansion, centralization, or segmentation, and variability in core-periphery relations generally lacks archaeological correlates (Price 1986). What exactly are the archaeological indicators of core-periphery integration? How can one recognize differences in the organization of macroregional systems archaeologically? The archaeological record of the Parroquia de Yaxcaba is analyzed below to evaluate material correlates of world system expansion against documentary evidence in this historically-known region.

This paper examines the proposition that the modern world system is based on a single division of labor and that differing modes of production are geographically segregated between cores and peripheries. With reference to the history of *hacienda* expansion in Yucatan, I will argue that the world systems model understates the variability of economic

---

articulations, production autonomy, and the range of adaptations in rural hinterlands that are so evident in their archaeological material patterning. I attempt to show that core-periphery differentiation and dependency are variable processes that contribute to structural differences among macroregional systems.

In the modern world system the division of labor that promotes dependency between a center and its hinterland affects the organization of labor and production at the household

level (Smith and Wallerstein 1992; Smith et al.1984). The state institutions within world systems must integrate local, subsistence economies with the larger system in order to appropriate resources and services for their support (Brumfiel 1993; Brumfiel and Earle 1987; Claessen and van de Velde 1991). In preindustrial agrarian states, the mobilization of surplus usually necessitates intervention in household production, because households as a rule do not generate large amounts of produce beyond their subsistence needs (Brookfield 1972; Brumfiel 1993; Halstead and O'Shea 1989; Sahlins 1972). The extraction of resources from hinterland communities by the state affects tactics of intensification, diversification, and specialization that households adopt to compensate for their participation within the macroregional system. In the modern world system capitalist accumulation requires commoditized labor and formation of a proletariat that consequently results in drastically altered household structures (Wallerstein and Smith 1992).

World system expansion, however, does not always lead to increased wage labor and commodification (Wallerstein 1984; Wallerstein and Smith 1992). The proportion of household resources derived from wages or market participation does not always correlate with the household's geographic proximity to the core or its location within a semiperiphery or periphery. I submit that the world systems model has been unable to account for the maintenance of household autonomy in the allocation of social labor, because it treats household form and function as dependent variables (Wilk 1991; Wolf 1990). Defining households as capitalist, income-pooling units and characterizing precapitalist households as "primordial" (Stauth 1984), sustainers of a "natural economy" (Evers et al. 1984), and a "community" form of labor organization (Wallerstein 1984), misconstrue the complexity of the relations of production in both prehistoric and modern contexts. As Wilk (1991:23-25) points out, these views simply create a new developmental typology in which household labor

---

evolves from traditional, to partially-waged, to capitalist, that brings us back to modernization theory, dependency, and underdevelopment.

In the present paper, the term household refers to an activity group that carries out functions of production, consumption, co-residence, transmission, and reproduction (Netting 1993; Netting et al. 1984; Wilk 1991; Wilk and Netting 1984; Wilk and Rathje 1982). Below I present a case study in the household-level, archaeological site structure of three late Colonial period settlements in the Parish or *Parroquia* of Yaxcaba, Yucatan, Mexico. The study explores the archaeological indicators and spatial patterns which may signal differences in the articulation of hinterland settlements in Yaxcaba Parish with the centers of Merida, Mexico City, and Madrid. Archaeological variation in house lot structure is used to infer production and labor organization at the community level for three hinterland settlements whose relations with the core vary historically.

DISENFRANCHISEMENT, CREDIT, AND WORLD SYSTEMS

According to Wallerstein and Smith (1992; Wallerstein 1984), the household is the basic unit of the emerging world system. The inexorable trend towards accumulation and commodification leads to increasing proletarianization of the population and the production of surplus value that reshapes household structure. In Wallerstein's words (1984), capitalism 'tears households away from territory' and reduces the importance of kinship and coresidence as bases for pooling income and defining household boundaries. Commoditization produces economic crises to which households respond by increasing the proportion of household income derived from wage labor. In some circumstances, however, domestic units may expand subsistence activities and access to non -wage labor (Smith 1984). This anomaly, the intermediate or "partially-waged" household structure, retards the pace of proletarianization (Wallerstein 1984). Freidman (1984) suggests that peripheries in particular demonstrate two anomalies within the modern world system: (1) Only a minority of the population participate in wage labor on a full time or constant basis; and (2) wages are often not sufficient to

---

sustain and reproduce the labor force over time. These theorists face a dilemma that fails to explain the persistence of subsistence and non -wage labor within the world system.

The world systems model oversimplifies the economic and geographic relations of primary producers to the means of production and to the macroregional system. Economic reorganization on the periphery is conditioned by several variables that determine how labor ultimately becomes divided within the system. Two important variables in this process are (1) disenfranchisement, the removal or restriction of control over the means of production (tools, resources, land) from primary producers; and (2) the extension and availability of credit to individuals or households that may experience shortage. The interaction of these two variables determines the periphery's dependence on the core. Capitalism removes household labor from subsistence production and transfers it to the production of commodities that permit capital accumulation via the extraction of surplus value (Wolf 1982). This is accomplished through disenfranchisement, which at its extreme results in commoditized labor. Disenfranchised laborers who specialize in the production of non-subsistence goods, however, must also be able to convert their labor (wages) into subsistence resources. In the modern capitalist world system, liquidity (the ability to convert one product to another) is achieved through a diversified market system and a monetary economy that facilitates the extension of credit to bridge temporal and spatial gaps in the supply of products.Nevertheless, in some rural areas disenfranchisement and the availability of credit have not always produced the division of labor between cores and peripheries characteristic of the modern world system (Cook and Binford 1990; Wilk 1991). Displacement of population from the core to the periphery frequently provides the impetus for disenfranchisement and for making new forms of

credit available in hinterlands. The new arrivals attempt to replicate the capitalist mode of production predominant at the system center in outlying areas. Depriving existing hinterland populations of control over the means of production, however, is a protracted negotiation that is not always "successful" from the capitalist's point of view. Households and communities may retain considerable autonomy in the deployment of labor or structural power (Wolf 1990). Similarly, credit may not be readily available in rural areas, and those attempting to replicate the capitalist mode of production may have difficulty converting extracted products into wealth. Households do not react uniformly to processes of

---

disenfranchisement and the extension of credit that may accompany capitalist expansion. Several recent studies demonstrate that hinterland participation in the expanding commercial sector is mediated by local ecological conditions and household labor organization that constrain production (e.g., Cook and Binford 1990; Little 1987; Netting 1993,1968; Steir 1982; Wilk 1991).

HISTORICAL BACKGROUND

The conquest and colonization of Mexico and Central America by Spain during the period 1545-1821 constitutes a part of the development of a global, macroregional network of interaction that has become known as the modern or capitalist world system (Braudel 1984; Frank 1978; Wallerstein 1974a). Furthermore, the expansion of the world system to New Spain can be described as a consequence of Spain's worsening position relative to the rest of Europe over the course of two centuries (Braudel 1984; Ringrose 1983).After the reconquest of Spain in the late fifteenth century, state policies irrevocably damaged the economy. First, increase of wool production by forbidding the enclosure of land produced an imbalance between stockraising and agriculture, resulting in severe grain shortages in the sixteenth and seventeenth centuries (Lynch 1981). State protection of the wool trade (raw wool was often exported in bulk to the Low Countries) and a lack of emphasis on agricultural production resulted in famine, necessitating large scale imports of wheat by the beginning of the sixteenth century. The expulsion of the Jews in 1492 and the subsequent expulsion of the Moors effectively eliminated the small merchant-artisan class (and their capital) and reduced the numbers of agricultural workers which further narrowed the spectrum of the Spanish economy. Spain's unfavorable balance of trade with the rest of Europe continued through the seventeenth century, and the country became increasingly dependent on foreign supplies (Lynch 1981; Vicens Vives 1969). The growing Spanish population was supported by importing agricultural and secondary products from elsewhere in Europe. These goods were paid for by re-

exporting materials extracted from New Spain such as cochineal dye, hides, sugar, and especially silver. Currency inflation reached a crisis in

---

1680 when the devaluation of the peso caused wholesale prices to drop by nearly half (Vicens Vives 1969). By 1700 plague epidemics and famines reduced the Spanish population by 25%.

The seventeenth century was also a period when the maritime trade of Europe became integrated within a continent-wide market system (Braudel 1984; Ringrose 1983; Wallerstein 1980). As exchange systems centered in England and the Low Countries dealt more with bulky staples, such as wheat, fish, and textiles, they outcompeted the Spanish economy. Spain's weakened economy, however, held several implications for the autonomy of her colonies, especially Mexico City. The inability of the mother country to supply her colonies with sufficient manufactured goods promoted a florescence of local commerce in the New World (McAlister 1984). The Spanish American colonies became more self sufficient, producing their own textiles, wine, olive oil, tallow, and minting their own money. Although the Crown tried to limit trade with the Orient, the colonies exchanged silver for wax, spices, porcelain, and Chinese silk, and substantial trade developed between Mexico City and Peru (Brading and Cross 1985; Clayton 1985). Contraband trade also rose during this period. By the end of the seventeenth century most goods could be produced in the New World, and the colonists relied on Spain only for mercury (for extracting silver via the amalgamation process) and the highest grade luxuries (Boyer 1977; McAlister 1984). Mexico City became the preeminent central node of Spanish American communication and commerce within the emerging world system.During this period Yucatan comprised a peripheral backwater of the Spanish empire. Attempts to more fully integrate the area with the macroregional system date to the late 1700s when the recovery of the native population and the institution of the Bourbon reforms induced a transformation from a tribute-based to a market-based economy (Farriss 1984, 1986; Patch 1993). The integration of Yucatan with the Spanish world system produced economic changes corresponding to increased production of cash crops (sugar, henequen, and cattle) and the diffusion of *haciendas* into rural areas. *Haciendas* were large Spanish-American owned estates incorporating large numbers of resident workers for the production of a single, exportable crop. The expansion of distinct kinds of *haciendas* in different geographic regions

---

and differences in the production process of sugar, henequen, and cattle had a variable impact on subsistence economies in different areas of the peninsula. Sugar production, situated in the southwest part of the peninsula, and henequen production, centered in the northwest, required large permanent labor forces, whereas cattle raising was not a labor intensive activity. Consequently, the cattle *haciendas* of central Yucatan did not require large numbers of workers on the estates. Sugar production and cattle raising required large amounts of arable land, and in the southwest and central regions the *haciendas* competed for land with subsistence agriculturalists. Henequen, on the other hand, could be grown on very poor soils, and its production did not always compete with maize (Strickon 1965). The market transition did not occur evenly throughout the peninsula, and in central and western Yucatan it resulted in a protracted series of conflicts over the distribution of land culminating in the Caste War of Yucatan in 1847 (Cline 1950; Patch 1985; Reed 1964).

HISTORY AND ARCHAEOLOGY IN YAXCABA PARISH

The *Parroquia* de Yaxcaba is located in the cattle-raising region of central Yucatan, and during the mid-eighteenth century it lay at the edge of Merida's marketing sphere (Patch 1993) (Figure 1). During the Late Colonial period (1780-1847), the population grew rapidly, dispersing from its two original congregated towns, Yaxcabá and Mopila, into 29 separate communities (AME 1784; López de Cogolludo 1954; Relaciones Histórico Geográficas 1983) (Figure 2). From 1778 to the Caste War of 1847, the population of the Parish nearly tripled (Figure 3). An extensive archaeological survey of the settlements listed on the *visitas pastorales* for the Parish revealed a four-part settlement classification based on the attributes of site size, amount of masonry architecture, and site layout. The classes consist of the *cabecera* (Yaxcaba), *pueblos*, independent *ranchos*, and cattle *haciendas* (Alexander 1993; AME 1784, 1804, 1828, 1829). Historical information demonstrates that the *cabecera* and *haciendas* were the settlements most closely integrated with the colonial economy, followed by the *pueblos*, whereas independent *rancho* settlements were only loosely articulated with the colonial system.

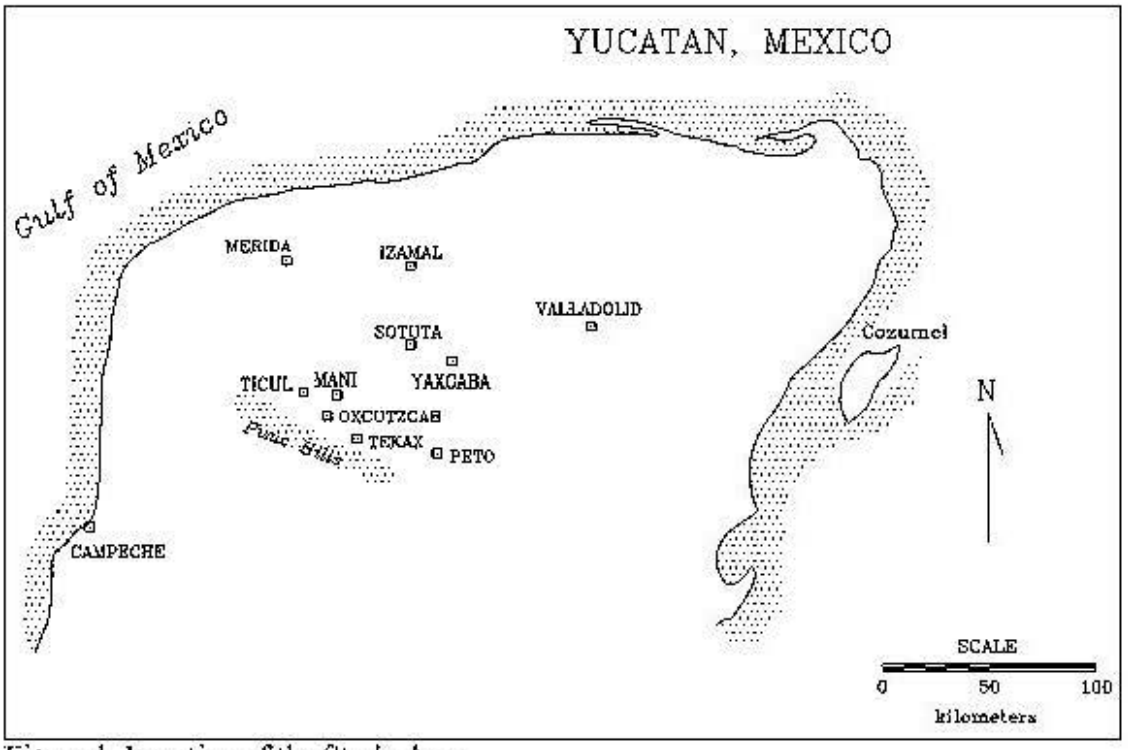

Figure 1. Location of the Study Area

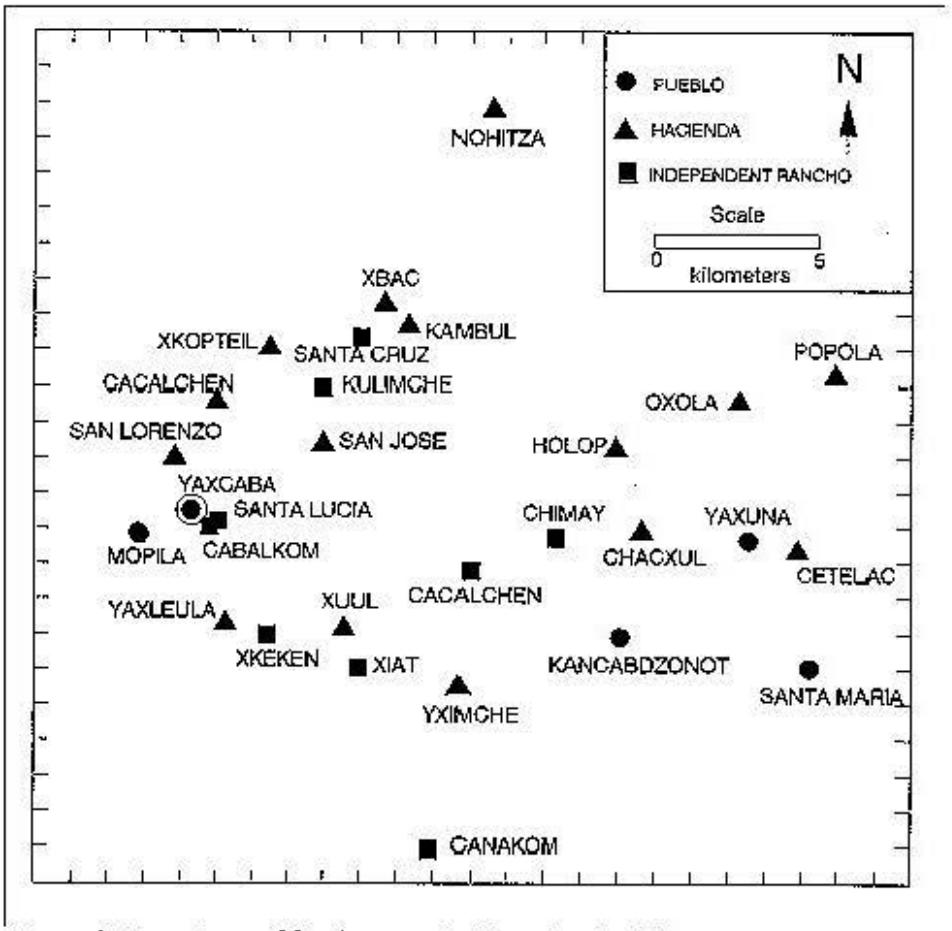

Figure 2. Locations of Settlements in Yaxcaba Parish

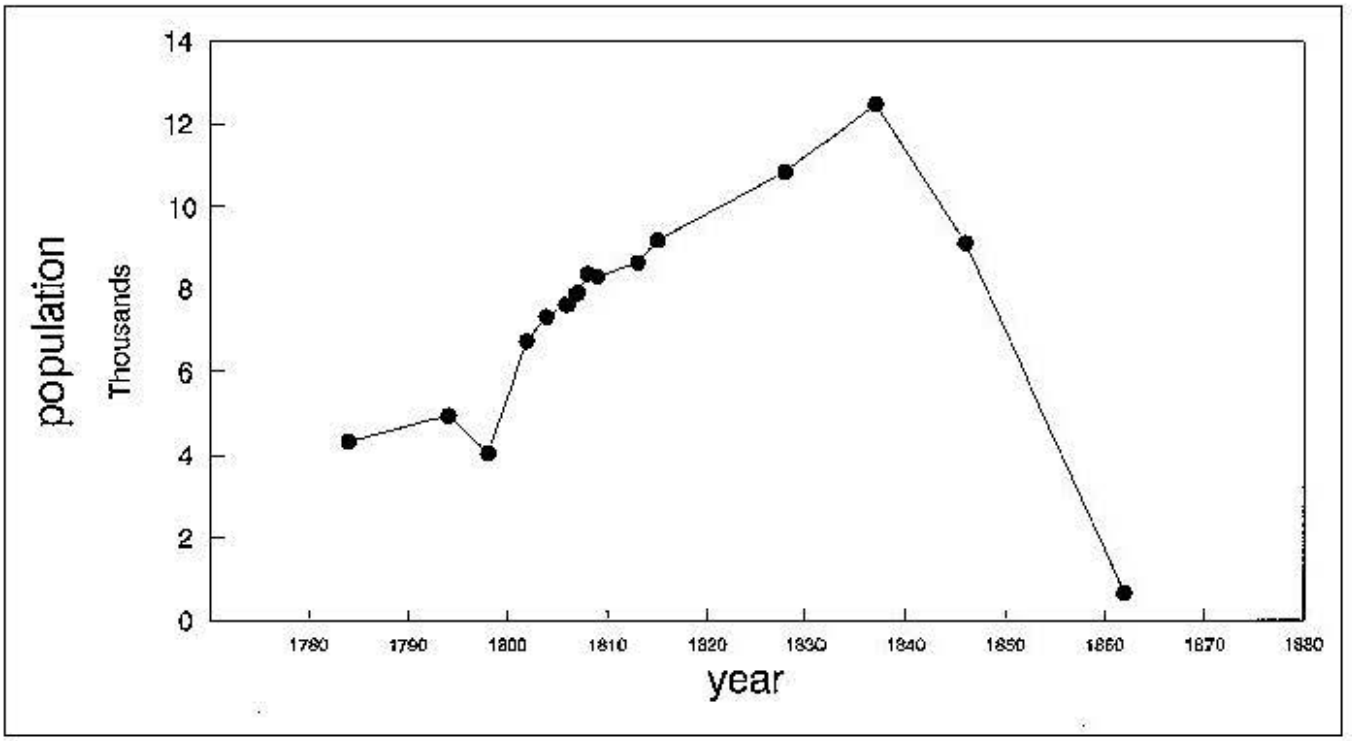

Figure 3. Population in Yaxcaba Parish, 1780-1862

Table 1 describes two trends evident from comparing the archaeological settlement classification to the historical data on the changing population within the settlements. First, the number of cattle *haciendas* increased by 24% (from 6 to 15), yet only about 10% of the Parish population resided on the estates (AME 1784, 1804, 1828). This suggests that by 1828 a disproportionately large amount of land was used to support cattle, and less land was available to subsistence agriculturalists. Second, there was an increase in the numbers of *pueblos* from one to four and a corresponding decline in the numbers of independent *ranchos*. Three independent *rancho* settlements were reclassified as *pueblos* in the historical documents, and the date of construction of a church in each of these settlements corresponds to the date of historical reclassification. Most of the population growth occurred in the *cabecera* and the *pueblos*. The result was that more people were integrated into the subsistence sector of the economy, making them subject to church and civil forms of tribute and taxation.

Table 1. Population Distribution among Settlement Types in Yaxcaba Parish.

Settlement	1784			1804			1828		
Type	#	Pop.	%	#	Pop.	%	#	Pop.	%
Cabecera	1	1491	34%	1	3292	45%	1	3128	28%
Haciendas	6	343	8%	7	632	9%	15	1058	10%
Pueblos	1	155	4%	2	876	12%	4	4625	42%
Indep. Ranchos	11	2413	55%	7	2522	34%	6	2241	20%
Total	19	4402		17	7322		26	11.052	

Sources: AME 1784, 1804, 1828, 1829

After independence from Spain in 1821, land classified as *monte del rey* and open to all for use became *terreno baldío* (vacant land) and subject for sale (Farriss 1984; Reed 1964). Many claims made by *hacienda* owners in Yaxcabá Parish bordered the communal lands of newly established *pueblos* and independent *ranchos*, and legal title to some of these lands was subsequently purchased. A rough estimate of the total area claimed as *terreno baldío* suggests that it represented about 21% of the total land area of the region (Alexander 1993). The three independent *ranchos* that sought pueblo status in the early 1900s may have reacted to increased land stress. Becoming a *pueblo*, manifest by constructing a church, may have legitimized the inhabitants' claims to communal land surrounding the settlement, even though they would have been subject to civil and ecclesiastical taxes.

The economic role of the large cattle estates demonstrates variation from what would be predicted following the world systems model. The historical evidence indicates that cattle raising with subsidiary maize cultivation was the principal activity on the estates (BCCA 1778; Patch 1993). There is a dearth of evidence, however, regarding the sale of individual animals, the production of meat and hides, or the *hacienda's* links to markets in Merida or Valladolid. Conversely, historical information relating to the multiple mortgages and sale of these estates is plentiful. Some individuals or families acquired as many as five estates, and it was common for them to own multiple residences in Yaxcaba or Merida. The cattle *haciendas* seem to have functioned partly as a source of capital and collateral, rather than as "factories in the field" operating under a capitalist mode of production. The cash and capital Spanish-Americans needed to conduct economic activities in the urban centers was acquired by mortgaging their property based on the number of head of cattle and the value of buildings and facilities on the estate (Alexander 1993).

World system expansion in the late eighteenth and early nineteenth centuries in Yucatan created variable pressures on different parts of the settlement hierarchy in terms of land stress and the availability of credit. Cattle raising, especially in this instance, was not a labor intensive activity and thus provided little impetus for aggregating laborers on the estates. Most workers were sharecroppers, *luneros*, rather than completely landless wage laborers (Granado Baeza 1845). As a result, opportunities for households of the subsistence sector to supplement their income by means of wage labor or sharecropping on the *haciendas* were limited, and credit requested of the *hacienda* owner by his workers was not predominant in the region as a whole. The expansion of the *haciendas*, representing the commercial economic sector, at the expense of the *pueblo* and independent *rancho* communities, the subsistence sector, indicates that attempts to disenfranchise indigenous inhabitants from their land were underway during this period.

The inability of the cattle *haciendas* to incorporate a growing population on the estates suggests that the process of disenfranchisement was incomplete and did not result in a large number of landless laborers who could then be employed in the commercial sector. The *hacienda* did not "replace" the indigenous community as the principal social and productive unit in the region.

Archaeological settlement patterns mirror the division between sites historically known to be integrated into the commercial cattle raising sector, the *cabecera* and *haciendas*, and sites of the tributary-subsistence economic sector, the *pueblos* and independent *ranchos*. The division is marked by the distribution of masonry architecture that is stylistically similar to structures in Merida, the administrative center of the province. In the early nineteenth century, several structures in the Parish exhibited a colonial architectural style characteristic of the core: the municipal building and the curate's residence in Yaxcaba, churches, shrines, elite Spanish-American residences (*quintas*), the main house (*casa principal*) and central complex of buildings and facilities of *haciendas*, and pump-type wells (*norias*) that used animal traction or windmills to draw water from below. The architecture is characterized by masonry construction, often with a decoration of small stones set into the outer surface of the wall (*ajuelado*), columns with decorated capitals, scalloped doorways with decoration above the lintels, and elaborate, arched stone gateways.

Table 2 presents the distribution of masonry architecture and the number of colonial buildings per site for each site class. The *cabecera* contains the greatest number and diversity of architecturally elaborate buildings. It has a municipal building, two churches, a large curate's residence, and more than twelve *quintas*. Fifteen cattle *haciendas* are located in the surrounding area, most containing *casas principales* that are stylistically similar to the *quintas* in Yaxcaba. The four *pueblos* in the Parish each have a church, and two have small *quintas*. For the most part, however, *pueblos* are characterized by the predominance of non-elite house lots. Independent *rancho* settlements are similarly distinguished by the prevalence of house lots, and they lack elaborate architecture except for small masonry shrines, chapels, and sometimes *norias*.

Table 2. The Distribution of Colonial Architecture in Yaxcaba Parish.

Site Class	No. of Sites	municipal buildings	churches	curate's residence	shrines	quintas/ casa principal	norias
Cabecera	1	1.00	2.00	1.00	1.00	12.0	1.00
Pueblo	4	0.00	1.00	0.00	0.25	0.50	0.25
Hacienda	15	0.00	0.00	0.00	0.07	0.80	0.93
Independent Rancho	11	0.00	0.00	0.00	0.64	0.00	0.18

Note. All figures refer to frequencies of buildings per site for each class

The distribution of architecture that is stylistically related to the system core seems to correspond to the economic integration of settlement classes. The *cabecera* and the *haciendas*, closely associated with the expansion of commercial interests in the region, contain residential, civic, religious, and productive architecture typical of colonial structures in Merida. The amount of colonial architecture in the *pueblos* and independent *ranchos*, however, is considerably reduced and mostly limited to structures of religious function. Settlements less well integrated with the colonial regime are characterized by aggregations of

---

house lots that suggest subsistence agricultural production within these communities. Although the number and size of colonial constructions within settlements is partly a function of the site's length of occupation, the correlation does not apply across settlement categories. The decreased presence of architecturally elaborate structures in *pueblos* and independent *ranchos*, regardless of their duration of occupation, suggests that architectural distribution indeed marks the division between the commercial and subsistence sectors and is related to the uneven expansion of the world system in the region.

HOUSE LOT SPATIAL ORGANIZATION AND SITE STRUCTURE

Following the regional survey of communities listed on the *visitas pastorales* for Yaxcaba Parish, intensive archaeological survey was carried out at three sites, one from each settlement class: the *hacienda* Cetelac, the *pueblo* Mopila, and the independent *rancho* Cacalchen (Figure 2). Abandonment of all three sites coincided with the Caste War, but the length of colonial occupation at Mopila (1581-1847), was longer than at Cetelac (1773-1847) and Cacalchen (1750-1847). The *cabecera* was not included in the survey because the current occupation of the settlement has obscured most archaeological vestiges of the pre-Caste War period. In order to examine variation in settlement and site structure among communities, the sites were mapped in detail to reveal patterns of streets, house lots, features, plazas, and public architecture. Surface collection transects were placed within a small random sample of house lots at each site to examine patterns in the density and distribution of refuse discarded on the lot. The results of these investigations indicate how differences in archaeological site structure reflect differences in the settlements' articulation to the macroregional system.A household is not an archaeological unit of analysis, and residential unit form (a spatial unit) does not closely correspond to household morphology (a social unit) (Hammel 1984; Netting et al. 1984; Wilk 1991; Wilk and Rathje 1982). This apparent theoretical impasse for archaeologists can be partially resolved by defining households on the basis of "what they do", as a complex of adaptive strategies (Netting 1993; Wilk and Netting 1984;

Wilk 1991). The definition provides archaeologists with a workable concept for investigating the relationships among production, labor organization, and site structure. In cases where the household, the activity group, can be securely linked to a focal point where co-residential activities are performed, such as a house lot or compound, archaeological site structural patterns should indicate adjustments to the productive strategies of households and communities. For all settlements in Yaxcaba Parish, the spatial unit that most closely corresponds to the household is the house lot.

Site structural analysis links relationships among artifacts, ecofacts, features, and structures to inferences of specific processes and behaviors responsible for spatial patterns (Binford 1987). Household change (i.e. transformation of the complex of adaptive strategies occurring within the co-residential unit) may be envisioned as occurring in three ways. First, productive activities may be added to the domestic economy. Second, productive activities may be eliminated from the complex of household activities. Third, the roles or proportions of various productive activities may change in relative importance to each other. Each of these possibilities requires some adjustment of household labor organization but may not necessarily produce any concomitant change in material culture or technology (Binford 1978, 1983). If variation in production organization is archaeologically recognizable, then site structural analysis can ultimately differentiate variation in the relations between centers and hinterlands within the world system.The economic reorganization of peripheries in the world system affects, but does not determine, the household's organization of production and labor. Extraction of surplus value from peripheries is often achieved by provisioning households with items of non-local manufacture such as machetes, axes, or preciosities (Wilk 1981, 1991). Household participation within the larger economy, however, depends on its ability to allocate labor which conditions its response to supply and demand (Cook and Binford 1990; Little 1987; Wilk 1991). In the Yaxcaba region, house lot structure suggests that household adaptations vary according to disenfranchisement from land, the tax structure of the region, and the availability of credit. This variation is especially noticeable for one particular productive activity, raising small livestock. Similarly, the consumption of non-local products can indicate a community's degree of economic integration. In Yaxcaba Parish, the distribution of two non-local manufactures, metal and glazed ceramics, can be compared to the settlement's economic

position relative to the colonial system.

For the three sites intensively surveyed, two major differences in settlement patterns were noted: variation in house lot size and variation in the number of ancillary structures per house lot (Table 3). Average house lot size at Cetelac is much larger than at Mopila, which in turn is larger than at Cacalchen. The Kruskal Wallis test, a nonparametric comparison procedure, and nonparametric pairwise comparisons (Wilcoxon tests) indicate that the differences in mean house lot size are statistically significant between each of the three sites (Kruskal Wallis $|P|<0.002$; Wilcoxon $|P|<0.0001$ between Cetelac and Mopila; $|P|<0.0001$ between Cetelac and Cacalchen; $|P|<0.004$ between Mopila and Cacalchen).

Table 3. Comparison of site population, density, house lot size, and ancillary features.

Site	Population 1828	Population Density 1828	Mean House Lot Size (sq m)	Mean Ancillary Features per House Lot
Mopila	342	6.22	3451	0.217
Cacalchen	634	18.11	2770	0.645
Cetelac	51	1.28	6110	0.346

With regard to the second pattern, different features were identified within the house lots. These included foundation braces of apsidal house structures, pig sties, chicken coops, *chich* (rock) piles and *arriates* (stone rings that protect tree roots), wells, and water control devices such as *pilas* (water storage tanks) and *eras* (irrigation berms). The numbers and diversity of ancillary features not used as dwellings demonstrate variation among the sites. Pig sties, chicken coops, and water control devices within individual house lots were more numerous at Cacalchen than at Mopila or Cetelac. A Kruskal Wallis test calculated for the mean number of ancillary features per house lot demonstrates a statistically significant difference among the sites ($|P|<0.027$). Wilcoxon tests show that the mean number of ancillary features per lot at Cacalchen is significantly higher than at Mopila ($|P|<0.019$), but no significant differences were found between Mopila and Cetelac ($|P|<0.999$) or between Cetelac and Cacalchen ($|P|<0.110$).The historical evidence suggests explanations for the two patterns. Both the population size and the rate of population growth were much higher at Cacalchen than at Mopila or Cetelac. Table 3 and Figure 4 show that the settlement containing the largest house

lots correlates with the lowest population density, the lowest rate of population growth, and the smallest population. In contrast, the settlement with the smallest house lots has the highest population density, the greatest rate of population growth, and the largest population. At Cacalchen land stress was relatively high, because arable land needed for cultivation was limited by encroaching haciendas (BCCA 1845). Cacalchen house lots appear to have been subdivided when an additional residence was needed, providing a temporary solution for coping with rapid population growth within a circumscribed

community. House lots at Mopila were not divided. Because land stress was less acute at Mopila, the increased population was probably accommodated by expanding the area of settlement. At Cetelac the large house lots and low population density suggest that the availability of residential space was not restricted.

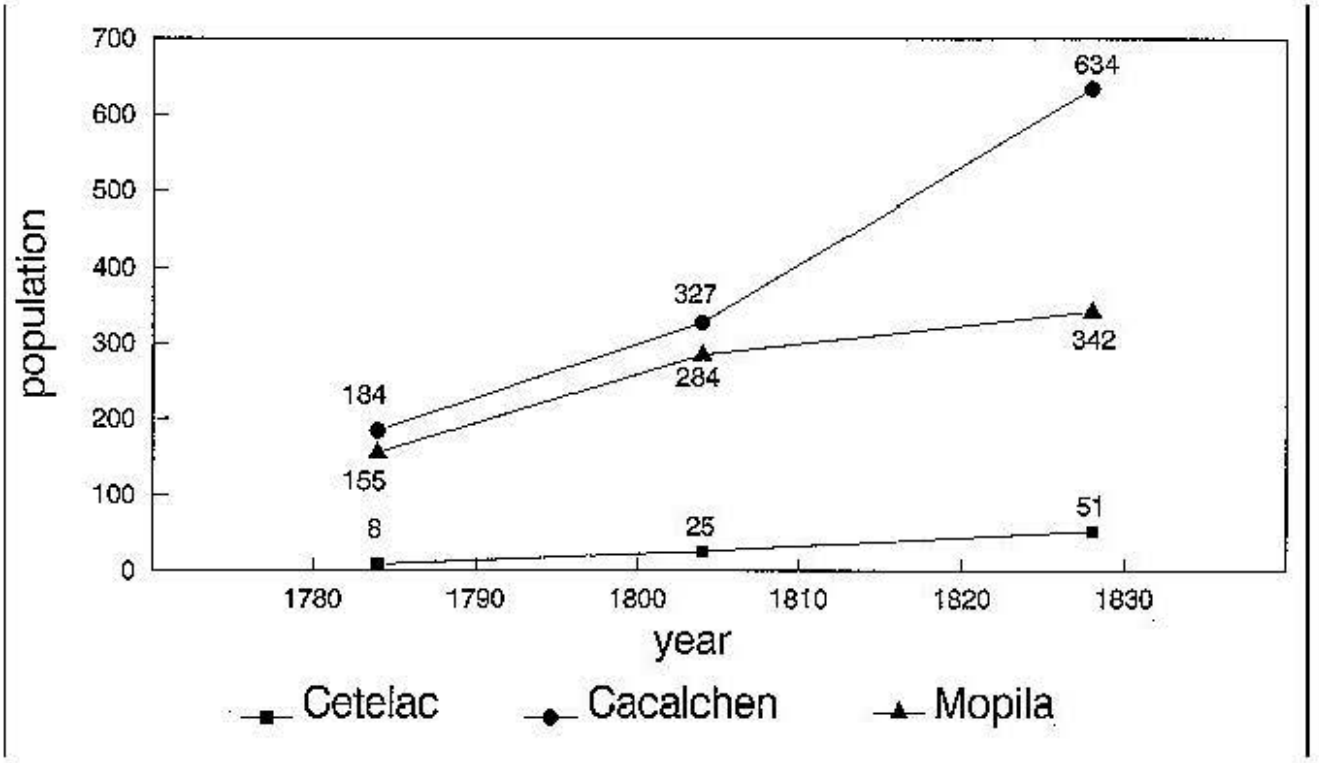

Figure 4. Population Growth at Mopila, Cacalchen, and Cetelac

The variation in the numbers of ancillary features may indicate different productive strategies and tactics intended to reduce risk of shortage. At Cacalchen the construction of permanent facilities for raising small livestock and for irrigation or water control in portions of the house lot suggests an intensification and diversification of house lot use which is less evident at Mopila and Cetelac. House lot gardening is a common form of agricultural intensification in tropical regions of Mesoamerica (Killion 1992). Intensive gardening or irrigation of a crop within the house lot during the dry season may also be used to hedge against a bad harvest. Raising small livestock, especially pigs, is often used as a source of emergency funds among the twentieth-century Maya (Hayden and Gargett 1990; Wilk 1991). The individual animals or their cooked meat may be sold locally when households are in need of cash. Intensified house lot production seems to have occurred in the community least tied to the colonial economy, the independent *rancho*, whereas house lot production was not emphasized to the same degree in the *pueblo* or the *hacienda*. Inhabitants of *pueblos* and *haciendas* probably had access to some forms of credit and opportunities for wage labor as a consequence of these settlements' close ties to the colonial economy (Granado Baeza 1845). In the late eighteenth century, small livestock raised by

Indians was taxed by the Church as a tithe or *diezmo* (BCCA 1778). In *pueblo* communities which fell under parochial jurisdiction, livestock raising was probably common. Because intensively raising small livestock would have been noticed and taxed, however, it might have been a less attractive way of supplementing one's income or hedging against unforeseen risks. On *haciendas* the *diezmo* on small livestock was paid by the estate owner on behalf of his workers (AME 1787; BCCA 1778).

Independent *rancho* communities such as Cacalchen, on the other hand, were much less subject to parochial and civil oversight. Because these communities were only loosely integrated with the regional economy, sources of credit and wage labor would have been relatively scarce. Land stress was also a problem at Cacalchen. Under such conditions, intensification and diversification of production within house lots through gardening and raising small livestock might have been one of the few available options for coping with limited land and increased risk of subsistence shortage.The surface collections from house lots at Mopila, Cacalchen, and Cetelac indicate consumption of two classes of non-local items, metal and glazed ceramics, that can be chronologically assigned to the late 1700s and early 1800s. Fragments of metal and glazed ceramics recovered in house lots refer to discard frequencies of these items (corresponding roughly to rates of consumption) and form part of the abandonment assemblages of the sites (see Deal 1985). Table 4 shows the distribution and relative proportion of these items among the sites. All areas designated A through M are house lots, except for area B/C which refers to the *planta* of Hacienda Cetelac, consisting of the main house, *noria*, kitchen, and outbuildings. Metal and glazed ceramics are present in greater frequencies in Mopila house lots than at the other two sites. Consumption of metal and ceramics among individual lots in Mopila also varies considerably. House lots in Cacalchen demonstrate low frequencies of non-local items in their assemblages, but there is less variation among individual house lots in the settlement than at Mopila. The low frequencies of glazed ceramics and metal in the *planta* of the hacienda is surprising, but the depositional context of several collection units in area B/C consists of rooffall from the main house which may partly account for the low figures. House lots surrounding the *planta* of the estate, areas A and D, demonstrate the lowest consumption of metal and glazed ceramics of any house lots at the three sites.

Table 4. Distribution of Metal and Glazed Ceramics Among House lots and Sites.

	Mopila	Cacalchen	Cetelac
	Area E	Area J	Area A
metal	0.36	0.07	0.01
ceramics	0.27	0.03	0.00
	Area F	Area K	Area B/C
metal	0.56	0.17	0.07
ceramics	0.48	0.03	0.15
	Area G	Area L	Area D
metal	0.17	0.07	0.01
ceramics	0.21	0.07	0.02
	Area H	Area M	
metal	0.15	0.07	
ceramics	0.20	0.00	
Total			
metal	0.33	0.09	0.03
ceramics	0.31	0.03	0.06

Note: All figures refer to the proportion of total collection squares in which metal artifacts or glazed ceramics were present.

This admittedly rough archaeological measure suggests that the consumption of non-local manufactures among communities in the Parish does not show a clear correspondence with the settlement's position in the colonial economy. Historical information demonstrates that inhabitants of Mopila were more active in the regional economy than those of Cacalchen, and consequently the archaeological evidence shows a greater presence of metal and glazed ceramics along with variation in the amounts of those items between households at Mopila. House lots and residential areas of *hacienda* dwellers, however, indicate a reduced frequency of non-local items, yet Cetelac was presumably integrated with the colonial economy to a far greater degree than either Mopila or Cacalchen. The *hacienda's* connections to the colonial economy should have facilitated access to products such as metal and glazed ceramics for the owner and his workers. Nevertheless, the permanent residents of Cetelac apparently did not consume these items in any greater quantities than independent *rancho* inhabitants, despite their advantageous access to land and credit.The expansion of the world system to Central Yucatan in the early nineteenth century, marked by the proliferation of cattle raising estates, failed to completely disenfranchise rural households from means of production and to make wage labor the basis of household income. *Hacienda* expansion and the resulting stress on land resources resulted in two different solutions for rural inhabitants which prolonged and maintained the subsistence economy at the expense of the commercial sector. Rural communities either (1) legitimized the community's claim to land by agreeing to pay tribute to the Church and civil authorities, or (2) compensated for the loss of lands used for extensive cultivation by intensifying subsistence production on house lot gardens and raising small livestock within the settlement. Items of non-local manufacture were not consumed in great quantities in any of the settlements, but the archaeological evidence tentatively indicates that *pueblo* inhabitants may have been able to acquire these products in greater quantity than independent *rancho* or *hacienda* inhabitants.

In early nineteenth-century Yaxcaba Parish, the transition to a market-based economy failed. The protracted disputes over land initiated by *hacienda* expansion were interrupted by the Caste War of 1847. In the course of the conflict, many settlements were abandoned, and *haciendas* were destroyed. The first census following the Caste War in 1860 suggests that Yaxcaba Parish lost roughly 90% of its population to fighting, disease, and migration. Today inhabitants of the region still practice subsistence agriculture, apiculture, and small scale stock raising. Craft specialization is minimal, and links to the Mexican national economy are relatively weak. The *haciendas* of the early nineteenth century, destroyed or abandoned in the Caste War, currently comprise communal lands (*ejidos*) of *pueblo* and *rancho* settlements that have been reoccupied as the population recovered. The Caste War itself is viewed as the end of the *tiempo de esclavitud* (the time of slavery) and interpreted as a successful agrarian reform that restored the balance of land (cf. Bricker 1981; Sullivan 1989).

CONCLUSIONS

The expansion of the modern capitalist world system is supposed to disenfranchise communities from subsistence production in peripheral areas such that they produce goods and services that are consumed by the system core. Conversely, secondary products manufactured in the core are distributed to and consumed by the periphery as a means of extracting surplus value from rural areas. The process of core-periphery integration often results in loss of direct control over the means of production, and rural inhabitants may become dependent on institutions that extend credit to them in times of shortage. Ideally, basic household structure is changed and made more malleable so that it conforms to the capitalist demand for an unattached, mobile labor force that "materializes at the factory gates" when needed (Smith et al.1984).The archaeological and historical evidence from the *Parroquia de Yaxcaba* demonstrates that the process of world system expansion affects the organization of labor and productive activities at the community and household levels in hinterland areas. These

changes have archaeological consequences for the spatial organization of communities and residential units. Even subtle differences among hinterland settlements' degree of integration with the core may produce considerable site structural variation, as

exemplified by the differences in community spatial organization of Cetelac, Cacalchen, and Mopila.

Of the three classes of archaeological data considered above, the distribution of colonial architecture shows the clearest correspondence to the community's degree of economic integration with the colonial regime. The distribution of metal artifacts and glazed ceramics within house lots, a rough measure of the consumption of non-local products by households in Mopila, Cacalchen, and Cetelac, demonstrates that the non-elite residents of *pueblo* communities generally had greater access to such items than did inhabitants of independent *ranchos* or *haciendas*. Even though haciendas were more closely integrated within the macroregional economy, the resident workers did not necessarily consume non-local manufactures in quantity.House lot site structure at Cacalchen suggests a difference in the range of productive strategies practiced by households. Raising small livestock was probably a more intensive activity in independent *ranchos* than in *haciendas* and *pueblos*. The archaeological evidence suggests that households practicing diversified and intensified production tactics within the house lot, including raising small livestock, generally did not consume substantial amounts of non-local manufactures, metal artifacts and glazed ceramics. This observation strengthens the interpretation that intensified house lot production is a response to increased subsistence risk resulting from partial disenfranchisement from land. Intensified house lot production, especially raising pigs and chickens, probably represents a reorganization of household labor for coping with a risky economic climate of market expansion, but it does not necessarily indicate greater participation of these households in the emerging market economy.Evidence from Yaxcaba comprises an example of changes in production organization in a region where the transition to a more diversified market economy was retarded. World

---

systems theory de-emphasizes cases where local autonomy in allocating social labor is successfully negotiated such that attempts to disenfranchise primary producers from the means of production meet with failure. The imposition of a model that stipulates the segregation of modes of production between cores and peripheries oversimplifies the complexity and variability of the local community's articulations with the macroregional system. Although there may be other colonial studies that demonstrate closer conformity with the world systems model, the proposition that different modes of production become geographically segregated in macroregional systems is not unequivocally supported by cases from colonial period Yucatan.

Archaeological and anthropological investigations of production organization at the microlevel indicate that responses to capitalist expansion are variable (Wolf 1982). The idea that the integration of hinterland areas within macroregional systems (capitalist or otherwise) produces a concomitant and predictable transformation in the productive division of labor and degree of dependency between "core" and "periphery" is

questionable--even within the original modern capitalist world system itself. Applying a theory formulated on the basis of macrolevel historical data to microlevel anthropological studies becomes, in Wilk's (1991:25) words, "crippling when the unit of analysis becomes smaller and smaller." Although many of these problems have been circumvented by modifying world systems theory for sociological and anthropological contexts, the variability in the organization of production at the microlevel has additional implications for the use of world systems theory in archaeology.Describing prehistoric and precapitalist macroregional interaction using a world systems model applies a historical analogy to the archaeological record. As with any analogy, ethnographic, historical, or ethnoarchaeological, its use must be warranted. Arguments must develop links between the behavioral organization exhibited by the analogy and specific patterns of the archaeological record. Otherwise, the analogy becomes useless as a frame of reference for explaining the past. Because world systems theory suffers from a lack of referents to larger processes that structure political economies (Price 1986), archaeological correlates that consistently reflect variation in the structure of core-periphery relations are difficult to identify. If the archaeological record of the modern capitalist world system

---

indicates that articulations between cores and peripheries do not actually conform to the pattern originally proposed by the theory, it may be inappropriate to impose this aspect of the world systems model as a frame of reference for understanding processes of core-periphery differentiation in the past.

Additional research at the microlevel should focus on the variability in household and community organization and its transformations under increasing and decreasing integration with macroregional political-economic systems. The archaeological correlates of processes that link centers and hinterlands need to be more thoroughly understood before we can apply world systems theory as an explanation for macroregional organization. In some cases we may find that world systems theory does not provide a satisfactory explanation of the way things operated in the past. Subsequent investigations should continue to yield better methods of archaeological inference that permit an understanding of center-hinterland relations as well as the process of capitalist development itself.

REFERENCES CITED

Alexander, R. T.
1993 *Colonial Period Archaeology of the Parroquia de Yaxcaba, Yucatan, Mexico: An Ethnohistorical and Site Structural Analysis*. Unpublished Ph.D. dissertation, Department of Anthropology, University of New Mexico.

Archivo de la Mitra Emeritense (AME)
1784 Visita a Yaxcabá. Visitas Pastorales 1783-1784, vol. 2, exp. 42. Cathedral archive, Merida, Yucatan.

1787 Asuntos Terminados, vol.5, exp. 106, 115. Cathedral archive, Merida, Yucatan.

1804 Visita a Yaxcabá. Visitas Pastorales 1803-1805, vol. 5, exp.43. Cathedral archive, Merida, Yucatan.

1828 Yaxcabá. Selección Joaquín Arrigunaga Peon, caja 5, Ticul-Yotholin. Cathedral archive, Merida, Yucatan.

1829 Sotuta. Selección Joaquín Arrigunaga Peon, caja 4, Pencuyut-Teya. Cathedral archive, Merida, Yucatan.

Biblioteca Cresencio Carrillo y Ancona (BCCA)
1778 Declaraciones de diezmos en el Partido de Beneficios Altos y Bajos, son frutas de setenta y siete colectados en 1778 años. Mérida, Yucatán.

1845 1845 a 1847 Registro de las denuncias de terrenos baldíos. Mérida, Yucatán.

Binford, L. R.
1978 *Nunamiut Ethnoarchaeology*. Academic Press, New York.

1983 *In Pursuit of the Past: Decoding the Archaeological Record*. Thames and Hudson, New York.

1987 Researching Ambiguity: Frames of Reference and Site Structure. In *Method and Theory for Activity Area Research: An Ethnoarchaeological Approach* , edited by Susan Kent, pp. 449-512. Columbia University Press, New York.

Blanton, R. E., and G. M. Feinman
1984 The Mesoamerican World System. *American Anthropologist* 86: 673-682.

Blanton, R. E., S. A. Kowalewski, and G. M. Feinman
1992 The Mesoamerican World-System. *Review* XV: 419-426.

Boyer, R.
1977 Mexico in the Seventeenth Century: Transition of a Colonial Society. *Hispanic American Historical Review* 57: 455-478.

Brading, D. A., and H. D. Cross
1985 Colonial Silver Mining in Mexico and Peru. In *Readings in Latin American History, volume 1, The Formative Centuries*, edited P. J. Bakewell, J. J. Johnson, and M. D. Dodge, pp. 129-156. Duke University Press, Durham.

Braudel, F
1984 *Civilization and Capitalism 15th-18th Century, Volume III, The Perspective of the World*. Collins, London.Bricker, V. R.
1981 *The Indian Christ, The Indian King: The Historical Substrate of Maya Myth and Ritual*. University of Texas Press, Austin.

Brookfield, H. C.
1972 Intensification and Disintensification in Pacific Agriculture: A Theoretical Approach. *Pacific Viewpoint* 13: 211-238.

Brumfiel, E. M.
1993 The Economic Anthropology of the State: An Introduction. In *The Economic Anthropology of the State*, Monographs in Economic Anthropology, No. 11, edited by E. M. Brumfiel, pp. 1-16. University Press of America, Lanham.

Brumfiel, E. M., and Timothy K. Earle
1987 Specialization, Exchange, and Complex Societies: An Introduction. In

Specialization, Exchange, and Complex Societies, edited by E. M. Brumfiel and T. K. Earle, pp. 1-9. Cambridge University Press, Cambridge.

Claessen, H. J. M., and P. van de Velde
1991 Introduction. In *Early State Economics*, edited by Henri J.M. Claessen and Pieter van de Velde, Political and Legal Anthropology, vol. 8, pp. 1-29. Transaction Publishers, New Brunswick.Clayton, L. A.
1985 Trade and Navigation in the Seventeenth-Century Viceroyalty of Peru. In *Readings in Latin American History, volume 1, The Formative Centuries*,

---

edited P. J. Bakewell, J. J. Johnson, and M. D. Dodge, pp. 174-191. Duke University Press, Durham.

Cline, H. F.
1950 Related Studies in Early Nineteenth Century Yucatecan Social History. Microfilm Collection of Manuscripts on Middle American Cultural Anthropology No. 32. University of Chicago Library, Chicago, Illinois.Cook, S., and L. Binford
1990 *Obliging Need: Rural Petty Industry in Mexican Capitalism*. University of Texas Press, Austin.Deal, M.
1985 Household Pottery Disposal in the Maya Highlands: An Ethnoarchaeological Interpretation. *Journal of Anthropological Archaeology* 4: 243-291.
Evers, H.-D., W. Clauss, and D. Wong
1984 Subsistence Reproduction: A Framework for Analysis. In *Households and the World Economy*, edited by J. Smith, I. Wallerstein, and H.-D. Evers, pp. 23-36. Sage Publications, London.
Farriss, N. M.

1984 *Maya Society Under Colonial Rule: the Collective Enterprise of Survival*. Princeton University Press, Princeton, NJ.

1986 Indians in Colonial Northern Yucatan. In *Ethnohistory*, edited by R. Spores. *Supplement to the Handbook of Middle American Indians*, vol. 4, pp. 88-102. University of Texas Press, Austin.

Frank, A. G.
1978 *World Accumulation 1492-1789*. Monthly Review Press, New York.

Freidman, K.
1984 Households as Income-pooling Units. In *Households and the World Economy*, edited by J. Smith, I. Wallerstein, and H.-D. Evers, pp. 37-55. Sage Publications, London.

Granado Baeza, B.
1845 Informe dado por el cura de Yaxcabá. Registro Yucateco, vol. 1. Colección Alfredo Barrera Vásquez, Centro Regional de Yucatán, INAH, Mérida, Yucatán.

Halstead, P., and J. O'Shea
1989 Introduction: Cultural Responses to Risk and Uncertainty. In *Bad Year*

Economics: Cultural Responses to Risk and Uncertainty, edited by Paul Halstead and John O'Shea, pp. 1-7. Cambridge University Press, Cambridge.

Hammel, E. A.
1984 On the *** of Studying Household Form and Function. In *Households: Comparative and Historical Studies of the Domestic Group*, edited by Robert McC. Netting, Richard R. Wilk, and Eric J. Arnould, pp. 29-43. University of California Press, Berkeley.

Hayden, B., and R. Gargett
1990 Big Man, Big Heart? A Mesoamerican View of the Emergence of Complex Society. *Ancient Mesoamerica* 1: 3-20.

Killion, T. W.
1992 The Archaeology of Settlement Agriculture. In *Gardens in Prehistory: The Archaeology of Settlement Agriculture in Greater Mesoamerica*, edited by Thomas W. Killion, pp. 1-13. University of Alabama Press, Tuscaloosa.

Kohl, P. L.

1987a The Use and Abuse of World System Theory: The Case of the "Pristine" West Asian State. In *Advances in Archaeological Method and Theory*, vol. 11, edited by M. Schiffer, pp. 1-35. Academic Press, New York.

1987b The Ancient Economy, Transferable Technologies and the Bronze Age World System: A View from the Northeastern Frontier of the Ancient Near East. In *Centre and Periphery in the Ancient World*, edited by Michael Rowlands, Mogens Larsen, and Kristian Kristiansen, pp. 13-24. Cambridge University Press, Cambridge.

1992 The Transcaucasian "Periphery" in the Bronze Age, A Preliminary Formulation. In *Resources, Power, and Interregional Interaction*, edited by Edward Schortman and Patricia Urban, pp. 117-137. Plenum Press, New York.

López de Cogolludo, D.
1954 *Historia de Yucatán*. 4th edition, 3 vols. Comisión de Historia, Campeche. (Originally published in 1688, Madrid).

Little, P. D.
1987 Domestic Production and Regional Markets in Northern Kenya. *American Ethnologist* 14: 295-308.

Lynch, J.
1981 *Spain Under the Hapsburgs*. Blackwell, Oxford.

McAlister, L. N.
1984 *Spain and Portugal in the New World, 1492-1700*. University of Minnesota Press, Minneapolis.

Netting, R. McC.
1968 *Hill Farmers of Nigeria: Cultural Ecology of the Kofyar of the Jos Plateau*. University of Washington Press, Seattle.

1993 *Smallholders, Householders: Farm Families and the Ecology of Intensive, Sustainable Agriculture*. Stanford University Press, Stanford.

Netting, R. McC., R. R. Wilk, and E. J. Arnould
1984 Introduction. In *Households: Comparative and Historical Studies of the Domestic Group*, edited by Robert McC. Netting, Richard R. Wilk, and Eric J. Arnould, pp. xiii-xxxviii. University of California Press, Berkeley.

Patch, R.
1985 Agrarian Change in Eighteenth-Century Yucatan. *Hispanic American Historical Review* 65(1): 21-49.

1993 *Maya and Spaniard in Yucatan*. Stanford University Press, Stanford.

Price, B. J.

1986 Teotihuacan as World-System: Concerning the Applicability of Wallerstein's Model. In *Origen y Formacion del Estado en Mesoamerica*, edited by A. Medina, A. Lopez Austin, and M. Carmen Serra, pp. 169-194. Instituto de

Investigaciones Antropologicas, Serie Antropologica 66, UNAM, Mexico.

Reed, N.
1964 *The Caste War of Yucatan*. Stanford University Press, Stanford.

Relaciones Histórico Geográficas
1983 *Relaciones Histórico-Geográficas de la Gobernación de Yucatán*, (Mérida, Valladolid, y Tabasco). Tomos I and II. Universidad Nacional Autónoma de México, México, D.F.

Ringrose, D. R.
1983 *Madrid and the Spanish Economy, 1560-1850*. University of California Press, Berkeley.

Rowlands, M., M. Larsen, and K. Kristiansen
1987 *Centre and Periphery in the Ancient World*. University of Cambridge Press, Cambridge.

Sahlins, M.
1972 *Stone Age Economics*. Aldine de Gruyter, New York.

Santley, R. S., and R. T. Alexander
1992 The Political Economy of Core-Periphery Systems. In *Resources, Power, and Interregional Interaction*, edited by Edward M. Schortman and Patricia A. Urban, pp. 23-49. Plenum Press, New York.

Schortman, E. M., and P. A. Urban
1987 Modeling Interregional Interaction in Prehistory. In *Advances in Archaeological Method and Theory*, edited by Michael B. Schiffer, pp. 37-95. Academic Press, New York.

1992 The Place of Interaction Studies in Archaeological Thought. In *Resources, Power, and Interregional Interaction*, edited by Edward M. Schortman and Patricia A. Urban, pp. 3-21. Plenum Press, New York.

Smith, J.
1984 Nonwage Labor and Subsistence. In *Households and the World Economy*, edited by Joan Smith, I.Wallerstein, and Hans-Dieter Evers, pp. 64-89. Sage Publications, London.

Smith, J., and I. Wallerstein
1992 *Creating and Transforming Households, the Constraints of the World Economy*. Cambridge University Press, Cambridge.

Smith, J., I. Wallerstein, and H.-D. Evers (editors)
1984 *Households and the World Economy*. Sage Publications, London.

Stauth, G.

1984 Households, Modes of Living, and Production Systems. In *Households and the World Economy*, edited by Joan Smith, I.Wallerstein, and Hans-Dieter Evers, pp. 90-100. Sage Publications, London.

Steir, F.
1982 Domestic Economy: Land, Labor, and Wealth in a San Blas Community. *American Ethnologist* 9: 519-537.

Strickon, A.
1965 Hacienda and Plantation in Yucatan: an Historical-Ecological Consideration of the Folk-Urban Continuum in Yucatan. *America Indigena* 25: 35-65.

Sullivan, P.
1989 *Unfinished Conversations: Mayas and Foreigners Between Two Wars*. University of California Press, Berkeley.

Vicens Vives, J.
1969 *An Economic History of Spain*. Princeton University Press, Princeton.

Wallerstein, I.
1974a *The Modern World-System I*. Academic Press, New York.

1974b The Rise and Future Demise of the World Capitalist System: Concepts for Comparative Analysis. *Comparative Studies in Society and History* 16: 387-415.

1980 *The Modern World System II: Mercantilism and the Consolidation of the European World-Economy, 1600-1750*. Academic Press, New York.

1984 Household Structures and Labor-Force Formation in the Capitalist World Economy. In *Households and the World Economy*, edited by Joan Smith, I.Wallerstein, and Hans-Dieter Evers, pp. 17-22. Sage Publications, London.

Wallerstein, I., and J. Smith
1992 Households as an Institution of the World-Economy. In *Creating and Transforming Households: The Constraints of the World Economy*, edited by J. Smith and I. Wallerstein, pp. 3-23. Cambridge University Press, Cambridge.

Wilk, R. R.

1981 *Agriculture, Ecology, and Domestic Organization among the Kekchi Maya* . Ph.D. dissertation, Department of Anthropology, University of Arizona, Tucson.

1991 *Household Ecology, Economic Change and Do mestic Life among the Kekchi Maya in Belize*. University of Arizona Press, Tucson.

Wilk, R. R., and R. McC. Netting
1984 Households: Changing Forms and Functions. In *Households: Comparative and*

Historical Studies of the Domestic Group, edited by Robert McC. Netting, Richard R. Wilk, and Eric J. Arnould, pp. 1-28. University of California Press, Berkeley.

Wilk, R. R., and W. L. Rathje
1982 Household Archaeology. *American Behavioral Scientist* 25(6):617-639.

Wolf, E. R.
1982 *Europe and the People Without History*. University of California Press, Berkeley.

1990 Distinguished Lecture: Facing Power--Old Insights, New Questions. *American Anthropologist* 92:586-596.