Heterarchy as Complexity: Archaeology in Yoro, Honduras

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Abstract
Based on archaeological evidence from the Cuyumapa Valley in Honduras, including the presence of multiple ballcourts, this paper argues that archaeologists need to pay more attention to Carole Crumley’s concept of heterarchy when considering social relations, political relations, and power in ancient societies such as those of the Maya and their neighbors in Mesoamerica. We redefine complexity to include less centralized but regionally heterogeneous societies in which social and political relations are not all centralized into a single hierarchical structure. The Cuyumapa Valley falls in the zone traditionally described as the southeastern edge or periphery of Mesoamerica. Yet our research shows that the region was not a less complex periphery reacting to stimuli from neighboring Maya societies but a region with its own specific developmental history.

Keywords
Mesoamerica, Honduras, Yoro, Heterarchy, Social complexity, Center-periphery relations, ballgame

Disciplines
Anthropology | Archaeological Anthropology

Comments
This is a revised and updated version of a conference paper by Hendon and Joyce, Questioning "Complexity" and "Periphery": Archaeology in Yoro, Honduras, presented at the 58th Annual Meeting of the Society for American Archaeology, in St. Louis, MO, in 1993. This is also a pre-publication version of a chapter to appear in Archaeological Research in Honduras: Understanding Ancient Lifeways in the Intermediate Area, edited by Terence L. Winemiller and Virginia Ochoa-Winemiller. University of Alabama Press.

This article is available at The Cupola: Scholarship at Gettysburg College: http://cupola.gettysburg.edu/anthfac/15
The Proyecto Arqueológico Cataguana e Oloman (PACO) was designed to deliberately examine a region "beyond the Maya frontier," conventionally located in the lower Ulua river valley. Research conducted between 1988 and 1993 in the drainage of the Cuyumapa river in the Department of Yoro allowed us to define a ceramic sequence from the late Middle Formative to the Terminal Classic periods, characterize settlement patterns, and identify domestic and ritual activities, including festivals associated with the ball game and played in numerous ballcourts (Fox 1994, 1996; Fung 1995, 1996; Hendon 2002, 2007, 2010; Joyce 2001; Joyce and Hendon 2000; Joyce et al. 2008; Joyce et al. 2009; Lopiparo et al. 2005).

Our results challenge the definition of this area as a less complex periphery reacting to stimuli from neighboring Maya societies. We suggest a redefinition of “complexity” to include less centralized but regionally heterogeneous societies, and advocate models of sociopolitical networks based on links between and within settlements that broaden our understanding of
complexity to include dynamic, heterarchical networks which sometimes become the site of hierarchization, but need not be transformed into more centralized social relations in all cases (Hendon 2002; Joyce 2005; Joyce and Hendon 2000). From this theoretical perspective, Yoro, like many similar Honduran regions, offers a crucial example of alternative forms of social complexity that may routinely be overlooked or interpreted simply as evolutionary stages in the path to hierarchy.

Settlement pattern and regional chronology

The Cuyumapa river is a small waterway that flows through a series of narrow canyons and upland basins, joining the Humuya river between the mouth of the Sulaco River and the lower Ulúa Valley. The Oloman and Cataguana valleys, located on the Cuyumapa river immediately upriver from its confluence with the Humuya, are the first substantial stretch of alluvium east of the lower Ulúa valley. The Oloman valley (85 square kilometers) is downriver from the Cataguana Valley (80 square kilometers). Along with the Yoro valley further east, they form a natural corridor between the Ulúa and Comayagua valleys and the Aguan valley.

Only a few unsystematic comments on archaeological remains in the area had been recorded prior to the beginning of our project in 1988. An examination of 1:20,000 scale air photos by Russell Sheptak identified fifteen localities of interest (potential sites). They were located on the ground and surrounding fields were surveyed on foot. Features were mapped, extending outwards until no more features or artifacts were visible. Additional pedestrian survey in the southern Oloman valley, an area not covered by the air photos, identified three more sites.

We documented and mapped 511 structures in all throughout our survey area. These fall into two classes based on size. One is a relatively homogeneous group of 456 small-scale
structures that are under 1.25 meters in height. Sets of small mounds are generally arranged around a central open area or patio. Excavation confirms that these represent houses and associated domestic buildings. The second class, large-scale structures, is much more varied in terms of form and size. We include all platforms over 1.25 meters tall and all structures measuring over 15 meters long by 8 meters wide in this class. This includes seven ballcourts that were initially identified based on the presence of parallel, relatively closely spaced mounds that are longer than they are wide. Six locations, labeled PACO 1, 2, 5, 11, 14, and 15, were selected for test excavations. Each except PACO 1 has a ballcourt. Based on the initial results, more extensive excavations at PACO 1, 2, 14, and 15 explored domestic and public architecture, including the ballcourts at PACO 2, 14, and 15 (Fox 1994, 1995; Fung 1995, 1996; Joyce and Hendon 2000; Joyce et al. 2008).

Stratigraphic superposition, ceramic cross-ties, and a suite of radiocarbon dates establish that the chronological sequence of occupation for the Cuyumapa drainage goes back to the Middle Formative period and continues through the Terminal Classic (Table 1). A Middle Formative surface at PACO 1 yielded smashed whole and partial vessels, figurine fragments, small burned bones, and a shark’s tooth. The vessels and figurines are comparable to those from Playa de los Muertos in the lower Ulua valley and include elaborate spouted bottles (Joyce et al. 2008). A transition from Middle to Late Formative is attested at PACO 15. The ballcourt for this site was built early in the Late Formative period, making it the earliest court in the study area. We also found Late Formative to Early Classic deposits at PACO 1 and 15. The ceramics from these deposits demonstrate continued connections between the Cuyumapa drainage and neighboring regions. Late Classic materials were encountered at all sites and many sites continued to be occupied into the Terminal Classic period. During the Late to Terminal Classic
periods, multiple ballcourts were in use. We did not find any archaeological evidence of Postclassic to Contact period settlement although the ethnohistoric record and oral tradition indicate that people were living in the region in the 16th-century (Davidson 1985), and one of the archeological sites we mapped but did not have the opportunity to test is located on the historic Hacienda Chaiguapa, established in the eighteenth century.

Our mapping allowed us to look for patterns in the placement of small- and large-scale structures with respect to both features of the natural environment and other cultural features. We found that the small- and large-scale structures formed discrete spatial clusters distributed along the courses of the major rivers and tributary streams. Most clusters were easily identified due to the presence of wide expanses of unbuilt land separating them. Agricultural requirements for access to land and water were critical in the location of most groups of small-scale structures, while clusters with large-scale structures were located to facilitate regional circulation and integration, mediated in part by ceremonies associated with ballcourts (Joyce and Hendon 2000; Joyce et al. 2009).

Most large-scale structures, including all ballcourts, occur in clusters that usually also incorporate small-scale structures. The degree to which small-scale clusters are concentrated near those with large-scale structures varies substantially, however. For example, PACO 5 is a cluster with two formally oriented plazas including a ballcourt twice as long as that of nearby PACO 2, where a single large mound flanking a ballcourt forms a smaller ballcourt complex. PACO 5, with the larger ballcourt, is located on the Oloman river near the junction with a major tributary. PACO 2 is located upstream on the same tributary. Twenty-nine small-scale clusters numbering from two to twenty-three mounds are evenly distributed along the tributary drainage, resulting in most being closer to the smaller ballcourt complex of PACO 2. Distribution of special purpose
architecture, in short, is independent of the distribution of the houses of the regional population, and each cluster of special purpose architecture may have served a population dispersed across an area overlapping with the population oriented to activities at other special purpose architectural clusters.

We have explored the implications of this regional settlement pattern in detail through analysis of variability and regularities in ballcourts and the sites where they are found (Joyce and Hendon 2000; Joyce et al. 2009). Ballcourts associated with more formal plazas have a southeastern orientation and a longer playing alley than ballcourts that do not form part of plazas, which are oriented east of north. We suggest that these two orientations correspond to the part of the sky where the sun rises during the winter and summer solstices, not as precise astronomical observatories but as part of the creation of gathering places to mark the seasons.

Summer ballcourts in clusters of special purpose architecture without formal plazas are located upstream on smaller tributaries. They would have been most conveniently for residents of surrounding farming hamlets made up of small-scale structures. The earliest court, PACO 15, as well as those at PACO 9 and PACO 14, conform to this pattern. Use of these ballcourts would not have required a major shift in the patterns of everyday practice.

Winter ballcourts, such as those at PACO 5, 11, and 17, are larger and are located on major rivers, making them more centrally located with respect to wider regions. Their location would facilitate travel to the court from farther away, but these journeys would require more time and changes in patterns of everyday practice. Assembling in these larger scale architectural settings, hosts and visitors would have formed larger and more diverse communities for at least the duration of the events taking place there, timed seasonally after the harvest.
Archaeology of practices: Excavations at PACO 2

Our research, rooted in household archaeology and theories of social practice, takes everyday activity as generative of social relations at multiple scales. Excavations at PACO 2 explored the evidence for everyday actions in Terminal Classic domestic groups 5-2 and 6-2 (Fung 1995, 1996), and for less routine actions in the contemporaneous ballcourt complex located nearby (Fox 1994, 1996). Censers, decorated bowls, and serving vessels found in the non-residential spaces indicate the practice of rituals involving feasting and incense burning in conjunction with ballgames hosted at PACO 2. The proportion of bowls to jars in ballcourt-related deposits is roughly equal, in contrast with residential areas nearby, where bowls greatly outnumber jars. Pottery recovered around the ballcourt included an array of non-local Ulua Polychrome cylinder vases and bowls. Large jars that could have been used for food preparation and storage were absent, and the small and medium jars present are more likely forms used for serving beverages such as *chicha*.

The residential groups at PACO 2 produced Terminal Classic assemblages dated after AD 800 representing the debris from a wider variety of activities. Grinding was indicated by manos and metates; food preparation and consumption by vessel fragments dominated by jars and bowls; chipped stone tool production by cores; and the use of chipped stone tools indicated by retouched flakes and flake tools. Fung (1995, 1996) suggests that the people living in the household compounds he explored here were engaged in production to support ceremonies held at the ballcourts, earning prestige by hosting visitors in feasts. In this regard, PACO 2 serves as a microcosm of patterns that we see at other sites as well, through which small hamlets and towns in Yoro were tied to more distant places (Hendon 2010).
Intraregional relationships: Ballgames and feasting

The earliest residents for whom we have evidence, Middle Formative people living at Las Honduritas (PACO 1), already engaged in feasting accompanied by ritual activities (Joyce et al. 2008). The people of early Las Honduritas used Playa de los Muertos style figurines and vessels, some of them with pastes suggesting importation from the lower Ulua valley to the west. This is succeeded by our earliest evidence of large scale special purpose architecture in the form of the summer-solstice oriented ballcourt complex of PACO 15, where non-local pottery continues to suggest ties to the Ulua Valley.

During the Late Classic to Terminal Classic period, the pattern of feasting followed by the ritualized destruction of objects used continues. Multiple independent clusters of large-scale special purpose architecture, exemplified most strikingly by the construction of six coeval ballcourts, significantly expand spaces for public gatherings. Some of these newly developed ballcourts are larger, more centrally located along river drainages, and, we argue, used by larger groups near winter solstice. While these clusters of special-purpose architecture are not the core of concentrations of house compounds, they are the centers of distinctive networks of foreign connections evident in imported pottery.

The greatest diversity of foreign pottery types in the Late to Terminal Classic is found at such sites. Sulaco Polychromes from the Sulaco river valley to the south (Hirth et al. 1989) and Ulua Polychromes stylistically comparable to examples from Lake Yojoa and the Comayagua valley to the southwest (Joyce 1993), representing two different social networks, were recovered at PACO 5, 15, 17 and 18, each a site with a larger ballcourt located on a major river. PACO 1, located on the Rio Cuyumapa itself, where no ballcourt was identified but a major group of large-scale structures formed a large plaza, also was tied both south and west by relationships
that brought nonlocal Sulaco and Ulua Polychromes.

In contrast, at PACO 14, Sulaco Polychrome was the only non-local pottery noted, and at PACO 9, only Ulua Polychrome. “Manatee lug” ceramics typical of contemporary sites in the Aguan Valley further east were recovered only at PACO 11. Each of these sites included a ballcourt, those at PACO 14 and 9 located on tributaries and oriented toward the summer solstice sunrise, that at PACO 11 part of a large plaza, and oriented toward the winter solstice sunrise.

Non-local materials were not just found in plazas or near ballcourts. Instead, some households had specific external ties. At PACO 2, Group 5-2 had higher proportions of imported obsidian, basalt, and pottery from the Ulua Valley than other excavated domestic groups. Group 6-2 employed locally available rhyolite for metates and had higher proportions of Sulaco Polychrome, acquired through connections to less distant areas (Fung 1995, 1996). Both the nature and direction of external social relationships that produced exchanges of pottery was transformed in the Terminal Classic. At PACO 2, by AD 880, while Sulaco Polychromes continued to be present, Ulua Polychromes were replaced by Baracoa Fine Paste ceramics, produced in the lower Ulua valley (Lopiparo et al. 2005).

The presence of Blanco Grey at Cerro Palenque (Hendon, this volume) and at Santa Rita and Travesia (Joyce 1987) is evidence of reciprocal exchange. Blanco Grey vessels are executed on a tempered brown paste polished to a dark grey-brown surface color that is local to the Cuyumapa drainage, in the same forms and sizes as Baracoa group. Nor was this the only material likely exchanged. Fung (1995:266) argues that bark beaters recorded at PACO 2 were used in more intensive production of bark cloth than in areas of Honduras farther west, suggesting that bark cloth could have been an item of exchange from Yoro, an argument pursued in more depth by Hendon (2010).
Given our contention that ballcourts in Yoro served as sites for a sequence of seasonal ceremonies including feasts, the exotic pottery vessels we recovered there, the Blanco Grey pots identified outside Yoro, and the bark cloth that while perishable we can suggest also circulated from the region, could have been the material for gift exchange between guests and hosts in and outside Yoro (Joyce et al. 2008). The contrast in material used for metates in different residential groups at PACO 2 has been interpreted as a means of creating distinction between residents of neighboring households in symbolically charged food preparation activities vital to social competition between within the community (Fung 1995, 1996).

For households engaged actively in attempts to increase local status, strategies like hosting feasts were part of a long-established repertoire of social interaction. Changes in external partners, such as the emergence of Cerro Palenque as a partner for PACO 2 by AD 880, tied the fortunes of specific households to events outside the local sphere. Yet with no site-wide or regional coordination of ties in one direction, and limited centralization within the region, the rise and fall of the fortunes of external partner's of any one household did not endanger the continuity of social practices and settlement in the Cuyumapa drainage as a whole.

Discussion

The main purpose of our fieldwork was to survey, map, and establish the settlement history in a previously uninvestigated area east of the better-studied areas of western Honduras. We were interested in evaluating whether there was a gradual fall-off in a suite of "Mesoamerican" characteristics, forming a true "frontier" with a pattern that we might then define as typically Honduran Central American. Our actual expectation, which was realized, was that we would not find a sharp break or gradual decline in these attributes, but rather, settlements
that were centers of networks of practices linking them strategically to others, both west and east.

Regional investigations like our project usually emphasize those features that are common, and may neglect discussion of those features that vary within the region. We highlight the following aspects of intraregional variation. First is the existence of two groups or types of large-scale architectural clusters in the Late and Terminal Classic periods. Second is the coexistence of different principles of association and location of architectural clusters, products of the realization of different interests. Third, the distribution and use of exotic pottery among Late and Terminal Classic sites suggests that distinct social networks within the Cuyumapa drainage emphasized relations with different parts of Honduras.

We see a value in maintaining a focus on diversity within the region, a diversity which we argue is a hallmark of a different kind of complexity, perhaps more typical of lower Central America than the centralized hierarchical organization attributed to Mesoamerica. Patterns of settlement, ritual activity, relations with outsiders, and social practices in the Rio Cuyumapa drainage reflect diverse principles and an absence of hierarchical centralization (Joyce and Hendon 2000). Such features have traditionally been viewed as indicative of a lesser degree of cultural complexity, or of stagnation at a “lower” level of cultural evolution (see Sheets 1992 for a critical review). We view the existence of a dense distribution of distinct polities in lower Central America, with multiple networks of affiliation, multiple scales of variation, and multiple practices of settlement organization, not as evidence of a lack of complexity but of a different mode of complexity, a mode characteristic also of the Cuyumapa drainage, where even ballcourts are incorporated into local practices and social relations (see Begley, this volume).

This kind of complexity has been labeled heterarchy (Crumley 1987, 1995) and represents an alternative to hierarchy as the ordering principle responsible for social complexity.
in many regions and times (Hendon 2002; Joyce 2005; Joyce and Hendon 2000; Scarborough et al. 2003). Crumley recommends that we approach complexity in terms of overlapping as well as nested relations, the former heterarchical, the latter hierarchical. She stresses the need to adopt an appropriate scale of analysis in order to “see” heterarchy, a point borne out by our data.

We argue that heterarchies are the result of coordination of horizontal relations of power (Adams 1975:60-61). Coordinate networks, in which relative ranking forms a basis for joint action rather than the exercise of power, are often the site of attempts to centralize control and thus create vertical, hierarchical relations of power. Complexity has generally been treated as residing only in this final product of social negotiation, and thus the absence of vertical hierarchies has been treated as an absence or failure of complexity. We argue that complexity is also the appropriate term to apply to horizontal negotiations, which may in fact achieve the goals of social agents without transformation to hierarchy. Diversity within a region, if it creates a set of conditions within which actors must adapt, is complexity as much as is diversity within a centralized polity. Both situations call for multiple although not always identical strategies. Heterarchy, with its multiple simultaneous scales and networks, is equally complex for the individual actor.

Acknowledgments

Our project was carried out under agreement with the Instituto Hondureño de Antropología e Historia. We thank its then directors, Victor Cruz R. and José María Casco, the former directors of archaeological investigations, Vito Véliz and the late George Hasemann, and the former director of historic investigations, Gloria Lara de Hasemann, for their support. Funding from the National Science Foundation, the Wenner-Gren Foundation for
Anthropological Research, the Clark Fund, the Peabody Museum, and the Committee for Latin American and Iberian Studies (including Tinker Foundation Support) of Harvard University is gratefully acknowledged.

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