
9 **EXPLORING ANCIENT ECONOMIC RELATIONSHIPS AT CARACOL, BELIZE**

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An archaeological understanding of ancient economic systems is difficult to achieve from both a theoretical and a practical standpoint. Ancient economies rarely resembled the capitalist global system with which we are familiar today. And, the interpretation of the relations of production and distribution is difficult given the incomplete nature of archaeological data. Ongoing research at Caracol, Belize, however, has purposefully focused on attempting to understand the site's ancient economy in terms of relations of production and distribution. While distribution nodes, or marketplaces, have been previously identified within the Caracol settlement, systems of ancient production have been more difficult to define. However, investigations of over 100 of Caracol's estimated 9,000 residential groups provide some relevant information - as does excavation data from the site's more public architectural complexes. Recent field seasons at Caracol have specifically focused on looking for attached specialists and craft production residue, as well as the identification of locales that could have been used for the household, workshop, or industry production of goods. This paper presents a summary of the archaeological data relating to Caracol's ancient economy.

Introduction

Archaeologists traditionally attempt to define ancient economies and trade systems. Artifacts are studied in terms of their physical distribution, their standardization, their distance from known sources, and – if possible – their production. Although long considered to be one of the archaeological areas that can be reconstructed with relative ease (e.g. Hawkes 1954:161), in truth the analysis of ancient economic systems is something of a quagmire. Nowhere is this more noticeable than in the Maya area, where sampling and levels of analysis vary from site to site and where considerations of economy are usually dependent on conceptions of societal organization, making overarching interpretations difficult.

Since its inception in 1983, the Caracol Archaeological Project has been concerned with understanding that site's ancient economy. Towards this end, we have carried out a program of mapping that has resulted in the recording of approximately 23

square kilometers of settlement and in the recovery of a dendritic system of causeways that bind the various parts of Caracol into a single socio-political and economic whole (Figure 1; A. Chase and D. Chase 2001a); as Earle (1991:5) has noted, the “development of formal roadways . . . is to solve new needs of larger scale political integration.” We have tested some 107 residential groups located outside of the site epicenter in an attempt not only to date the occupation of these groups but also to understand the site's social composition through contextually recovered artifact distributions (D. Chase and A. Chase 1998, 2002). We have also excavated specific building types to try to understand function (A. Chase and D. Chase 2001b) and to look for areas of production. As a result of this work, we have been able to begin to define the economy of ancient Caracol (A. Chase 1998) and to examine changes to that economy over time. This paper seeks to provide an overview of Caracol's ancient economic system.

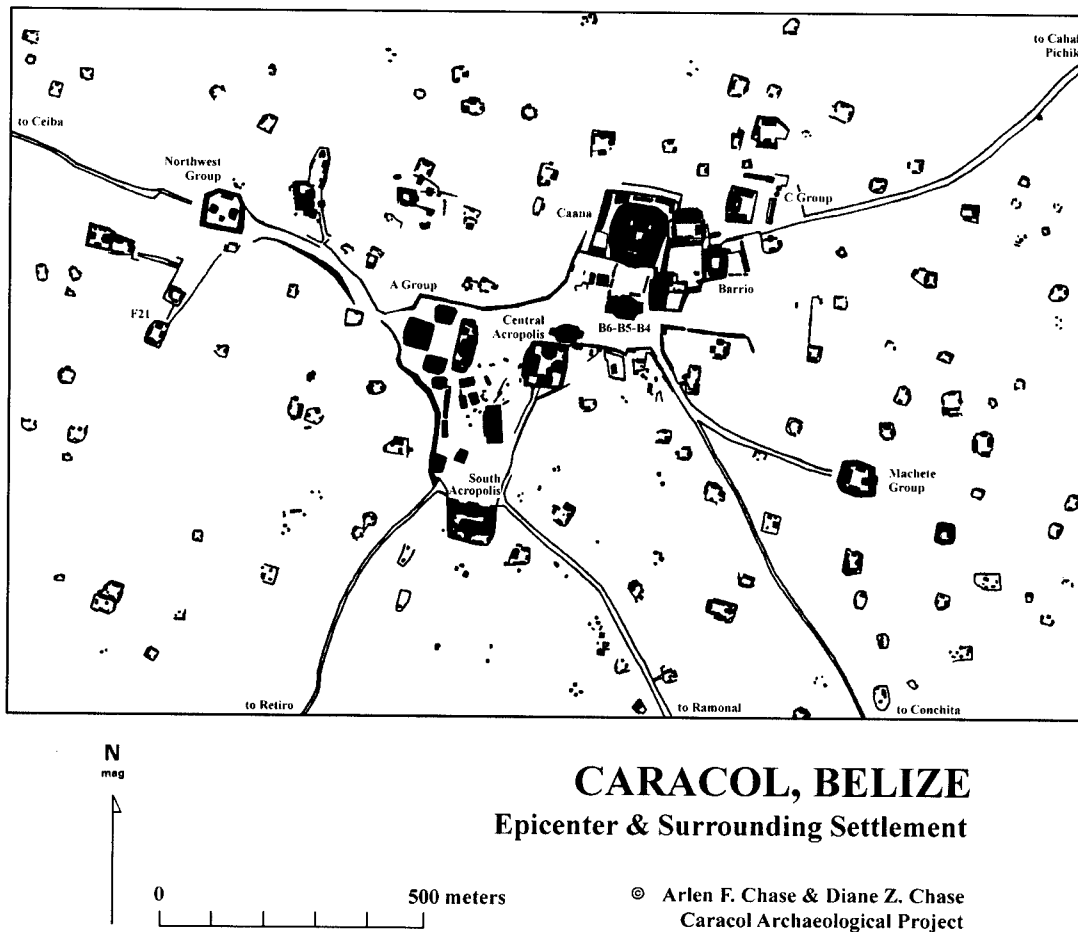


Figure 1. Epicentral map of Caracol.

Economic Models in the Maya Area

A full gamut of opinions on how complex the ancient Maya were and what kind of economic systems they employed currently exist (e.g. Fox et al. 1996). Many of the existing models of Maya economy do not consider temporal changes or the broader integration of the Maya into “world systems.” There is also confusion over terminology used to define economic systems and integrative measures. With regard to considerations of ancient and modern economies, Dalton (1975:113) explicitly noted that there is a “need to be consciously aware of the meanings of the words we use if we are avoid using concepts which inhibit the construction of theories capable of deep

explanation of the real-world processes we analyze.”

Lack of precision in the use of terms has led to confusion among commonly used terms like “prestige” and “luxury goods” as well as a lack of consideration of the multiple networks that may have once existed within an economic system. For instance, while prestige items may have been exchanged or perhaps even gifted among certain parts of society, this does not mean that a prestige-goods economy characterized the entire economic system (Smith and Berdan 2003:9). Likewise, while the Late Classic Maya may have “feasted” (see Dietler and Hayden 2001), this concept also does not substitute for an entire economic system which surely

also included bulk goods and luxury items. Feasting and gifting are integrative measures that establish networks, but not necessarily economies (Smith and Berdan 2003:9). In our opinion, such terms may be appropriate for some early Maya communities. Thus, while feasting may have served as a redistribution mechanism during the Middle and Late Preclassic eras at Blackman Eddy (Garber et al. in press) or for the coastal plains of southern Guatemala and Mexico (Clark and Blake 1994), this is not really an appropriate expectation for the Late Classic Maya of Caracol. Their economy had already evolved into a system in which there was greater commercial exchange of luxury and bulk-good items and articulation of various kinds of networks.

Intimately tied to any consideration of economics are the presence or absence of markets. Maya scholars are divided on this issue. Part of this disagreement revolves around terminology and the notion of the market as being identified with “commercialism,” “free exchange,” and the existence of a “single price.” However, the modern concept of commercialism has been entering into literature on Postclassic Mesoamerica (Berdan et al. 2003) and is now being pointed to as one of the major differences between the Classic and Postclassic eras (e.g., Smith and Berdan 2003:12). Commercial exchange and “commercialism” are not necessarily equivalent. As defined in economic literature, the existence of commercialism implies the use of money and markets without state control. Yet, many see “money” *per se* as quite different from the use of feathers, *spondylus* shells, cacao beans, and textiles as equivalencies in exchange - as forms of what Freidel (1981, 1986; Freidel et al. 2003:42) has called “currencies” or “fungible commodities . . . which can be exchanged broadly for other things.” We doubt that true commercialism without any

institutional control of markets existed in the Precolumbian Maya world. The Aztecs rigorously controlled their markets and taxed transactions that occurred through systems of barter; tribute was expected from conquered territories and, although tribute items may have entered the market domain, strictly speaking tribute existed apart from markets (Hassig 1985; Hicks 1986). This kind of controlled distribution system has been called an “administered market economy” (Evans 1980; Smith 1979, 1997). It is this type of system that we interpret for Classic Period Caracol.

Caracol, Belize and its Exchange Locales

As we have previously noted (A. Chase 1998; A. Chase and D. Chase 2001a; A. Chase et al. 2001), Caracol’s economy was closely intertwined with its political and social fabric. As a primate center, Caracol incorporated many of its inhabitants into a sprawling urban center that covered approximately 177 square kilometers. Its settlement, however, was not loosely organized. Rather, it was integrated by an elaborate road system that linked secondary architectural nodes directly to the site epicenter. All known secondary nodes functioned as causeway termini. These termini were embedded in Caracol’s landscape in two rings. An outer ring of termini, some 5 to 8 kilometers distant from the site epicenter, was composed of pre-existing sites that were engulfed in Caracol’s suburban sprawl. An inner ring of causeway termini, all some 3 kilometers distant from the site epicenter, represented large plazas that were purposefully established in Caracol’s landscape at the beginning of the Late Classic Period.

All termini were directly linked to the site epicenter only and not to each other. Each of the known termini also contains a broad open plaza that was once lined by low, long linear buildings on their edges. This is a

type of building that has been associated with markets at other sites, such as Tikal (Becker 2003:265-266). While the broad plazas articulate with other architecture at Caracol's outer ring of termini, the inner ring of the site's causeway termini consists exclusively of broad plazas with low linear buildings. The outer ring of engulfed termini revealed that such plazas were added into or inserted in front of the pre-existing center. Excavations into both the plazas and buildings that comprise the causeway termini reveal that both plazas and structures are largely lacking in artifactual remains and that neither locale yields the burials and caches so common in Caracol's residential groups.

The existence of true "markets" is still debated within Maya Studies. The ethnohistoric evidence for Maya markets has been called into question. Roys (1957:17, 51-52) suggested that markets existed in certain contact-era towns in the Northern lowlands and that they were physically associated with broad plazas and stone buildings. However, Farriss (1984:122-123) argued that any markets that may have existed in the Northern lowlands did not serve local needs, but rather only international trade. Archaeologists have tentatively identified markets: at Coba (Folan 1983:49-64) and Sayil (Tourtellot and Sabloff 1994:88-90) in the Northern lowlands; at Tikal (Coe 1967:73; Jones 2003:213-215; Moholy-Nagy 2003:108), Yaxha (Jones 1996:86-87), Nohmul (McAnany 1986:289) and Calakmul (Folan et al. 2001) in the Southern Lowlands; and at both Copan (Becker 2003:266) and Quirigua (Jones et al. 1983:10) to the far southeast. Because distributional studies of artifactual remains – of the kind called for by Hirth (1998) – have rarely been undertaken, the question as to whether or where markets existed is difficult to answer unequivocally with archaeology. However, the distributional data to demonstrate the existence of markets,

following Hirth's (1998) model, have been archaeologically collected from Tikal (Moholy-Nagy 2003) and from Caracol (see below). We have further inferred that the broad plazas that characterized the ends of the causeway termini at Caracol functioned as markets or, minimally, as exchange locales for the distribution of goods at the site (A. Chase 1998).

Household Production, Attached Specialists, and Artifact Distribution at Caracol

Any economy may be characterized in terms of production and distribution. Because of the extensive long-term excavations at Caracol that have focused on both epicentral architecture and residential settlement, it is possible to identify areas of production in the site's landscape and to also look at the distribution of specific artifacts in the site's residential groups.

Production at Caracol was undertaken within households. Each household had the capacity to produce different goods. No evidence for concentrated "barrio"-style production exists at Caracol (as can be inferred for central Mexico; e.g. McCafferty and McCafferty 2000; Nichols et al. 2000). McAnany (1993:71) has discussed "two kinds of specialists: elite specialists operating out of royal and non-royal households, and 'supplemental' specialists whose production is organized under the umbrella of large, economically and socially heterogeneous households;" elsewhere, she (1993:81) further notes that elite specialists could be thought of as being "attached to a household." Webster (1989) has argued for the existence of these "attached specialists" at Copan. In most cases, however, craft production was viewed as supplemental to agrarian production, meaning that it was centered in households. It is important to note, however, that household production

does not preclude participation in complex economic systems (Smith 1976).

Workshop or production areas are in evidence both within the palaces and residential groups of Caracol. In Caracol's epicentral palaces, bone was worked (Teeter 2001), *oliva* shell was worked, and cloth was spun and, presumably, woven. In the site's outlying residential groups, evidence of production exists for bone, lithics, *strombus* and *spondylus* shell, and indirectly for cloth and wood. These workshop areas are associated with specific households that were widely scattered over the landscape. Intriguingly, although *spondylus* is consistently associated in the literature as an "elite" and highly fungible item, the only known locale of suggested production (based on its occurrence in fill and non-ritual contexts) is a nondescript residential group 1.5 kilometers south of the epicenter. Four outlying residential groups may be associated with the production of *strombus gigas*; all are between 1 and 2 kilometers distant from the epicenter. This kind of shell was imported as whole specimens to Caracol and then subsequently worked through the use of chert and slate drills (Cobos 1994; Pope 1994). Evidence of *oliva* shell being worked has been recovered in the Terminal Classic "Barrio" palace.

Areas of intensive lithic production have been recovered for only two locales. One locale is immediately south of the site epicenter in a building minimally used, if not occupied, by specialists associated with the downtown area. The other locale in which intensive lithic production was found is a residential group 4 kilometers northwest of the site core. There, densely concentrated surface lithic debris was found without the need of excavation, the only instance of this so far delimited at Caracol.

Six other residential groups can be identified as loci of specialized production based on the occurrence of specialized lithic

tools that were most likely utilized on perishable materials, presumably wood (Pope 1994:156). A similar set of lithic tools was found located in an area under Altar 16 in the front stairway terrace of Structure B19, perhaps indicating that wood may also have been worked in this epicentral complex.

Spinning and the production of cloth was clearly important at Caracol (Figure 2). A total of 57 spindle whorls have been recovered from the site (A. Chase et al. in press), a large total when compared with other excavated locales in the Southern lowlands (the next largest sample comes from Tikal, which has a reported 51 spindle whorls [Moholy-Nagy 2004]). While ceramic spindle whorls from the floors of Caracol's downtown palaces indicate that spinning was carried out in these structures during the Terminal Classic Period, 38 stone spindles have been recovered in 20 burials at Caracol. These burials include both 6 epicentral tombs and interments in 14 different outlying residential groups. This widespread distribution of spindle whorls is not reported from other sites in the Southern lowlands and emphasizes the importance of spinning to Caracol's economy. Bone needles are not as common as spindle whorls, but also have a fairly widespread distribution. It is possible that one of the crops grown on Caracol's agricultural terraces was cotton.

Investigations during the 2000 and 2003 field seasons at Caracol were specifically designed to test the existence of craft specialization within the vicinity of the Caracol site epicenter. The 2000 investigations, coupled with previous season's work in the eastern walled area just south of the site epicenter, succeeded in identifying production locales for lithics and bone. It is suspected that cloth production may have also been undertaken in these walled areas. In contrast, investigations during the 2003 field season in the *plazuela* groups attached to the southern side of the

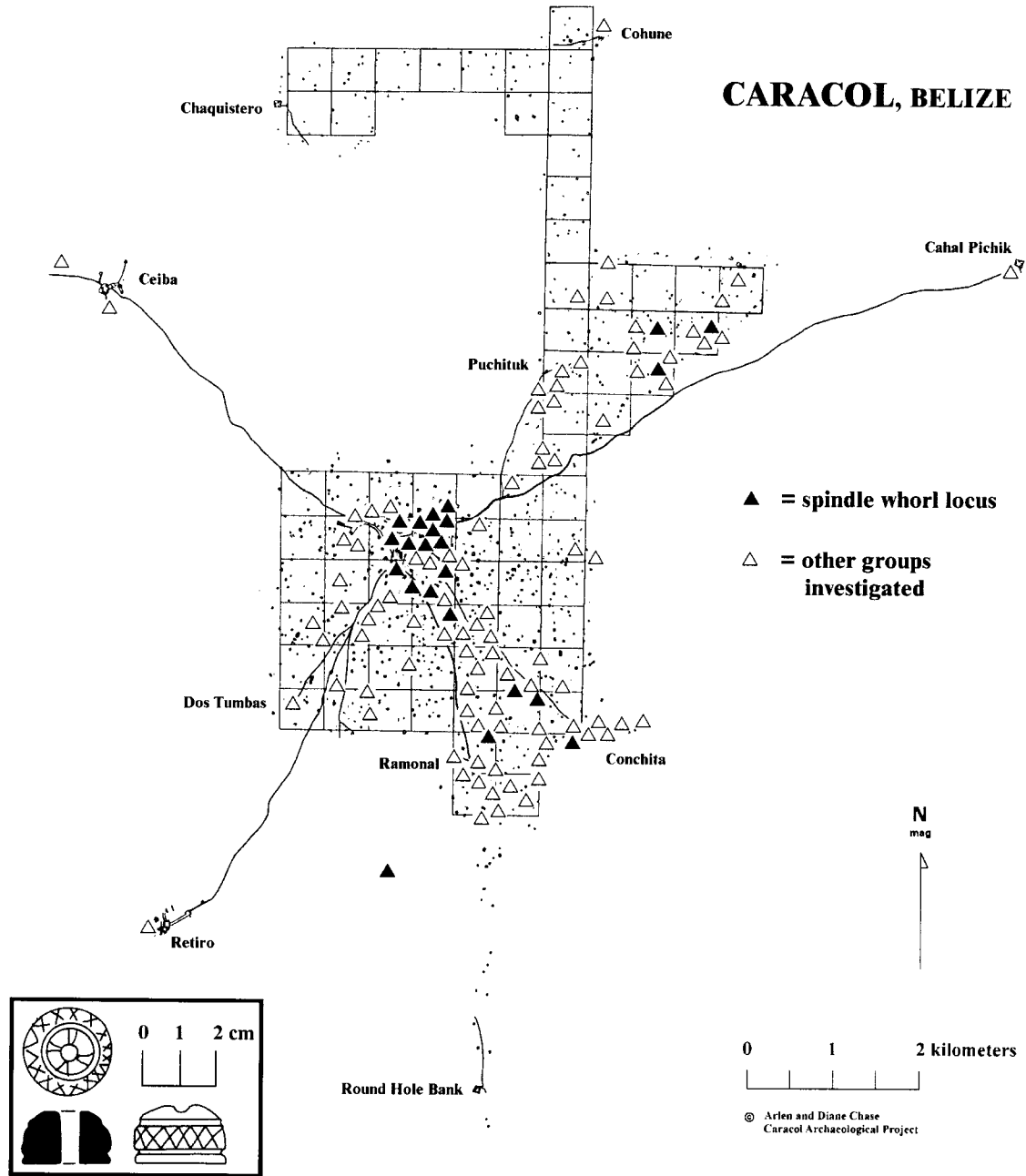


Figure 1. Distribution of archaeologically recovered spindle whorls by residential group at Caracol, Belize. The majority of the spindle whorls come from interment contexts.

South Acropolis suggest no craft specialization was present. The individuals living here, however, were not of the highest status and may have provided other sorts of services for the epicentral elite.

It is evident that production at Caracol was localized in households and generally existed without state control, with a possible exception being craft production locales located immediate adjacent to the epicenter and alongside the Conchita causeway. However, artifact distributions suggest exchange of luxury items through Caracol in a manner conforming with Hirth's (1998) projections for markets and market exchange. Obsidian is an imported good that was used for its cutting edge throughout the Maya area; some have even suggested its potential use as "money" (Freidel 1986; see also Rice 1987). While obsidian is relatively rare at some sites, such as Calakmul (Braswell et al. 1998), it is ubiquitous at Caracol. Almost all excavations at the site produced some obsidian and it is noted for all 107 residential groups investigated. Thus, obsidian was widely available to Caracol's population. Similarly, jadeite is not restricted to elite contexts, but occurs with almost equal frequency in epicentral and residential contexts. The same is true of polychrome vases. These, too, enjoy a wide distribution within Caracol's residential groups and are more likely to occur in such groups than in epicentral contexts. Ritual objects, in the form of fairly standardized cache vessels, have also been recovered from a majority of excavated households. Thus, these goods appear to have been widely and easily available to Caracol's inhabitants. These artifact distributions, in fact, accord well with similar arguments made by Hirth (1998) for Xochicalco, where he posited that the broad spatial distribution of artifacts produced by craft specialists from locally available and imported raw material was a hallmark of the market exchange of domestic goods.

We believe that the loci for exchange at Caracol were the broad plazas at the ends of the Caracol termini, based on several measures. First, they are architecturally and archaeologically distinct from both residential groups and from most epicentral architecture. Second, they constitute the only easily accessible open spaces that can be found in the Caracol landscape. Most of Caracol's landscape is dominated by residential groups and agricultural terraces (A. Chase and D. Chase 1998). When combined with the karstic nature of the Vaca Plateau, these embedded plazas would constitute areas of attraction for assembly and activity. Third, the density of population at Caracol – estimated at between 115,000 and 140,000 people at A.D. 675 – was such that it would have necessitated specific areas for the distribution and/or exchange of goods. One-on-one or "down-the-line" exchange (Renfrew 1975) is simply not feasible. Following Smith (1976:334), "markets exist in virtually all large hierarchical systems because, after a certain size is reached, the elite and their retainers (themselves hierarchically organized) must be fed by a system more efficient than direct exchange or tribute collections." Given that Hassig (1991:25) has noted that roads "create points where the polity can exercise control," the only areas within the Caracol landscape that could have served as easily accessed and controlled exchange locales were the broad plazas that constituted the site's causeway termini. The ascription of market function to Caracol's large termini plazas is completely consistent with the on-the-ground recognition of the site as a primate center, for primate centers have administrative and economic hierarchies that are isomorphic (Blanton 1976:255; Smith 1974:173-175).

Dietary Considerations and Population Dispersement at Caracol

One other finding of the Caracol Archaeological Project is significant in terms of economic production and settlement distribution. Drs. Christine White and Fred Longstaffe of Western Ontario University have undertaken stable isotope analysis on a sample of 85 individuals from interments at Caracol. The values obtained from these analyses are not randomly distributed at the site, but rather are patterned. We have used these data to infer the existence of minimally 3 distinct diets at Caracol, all of which surely have economic implications. The best diet, one that is rich in both protein and maize, is that which is concentrated in the epicentral royal palaces and in elite residences attached to the causeway termini (A. Chase and D. Chase 2001b). A second diet, consisting of a good mix of protein and maize, is found in the residential groups scattered throughout the extensive agricultural terraces (A. Chase et al. 2001; D. Chase et al. 1998). A third diet occurs in groups just outside the site epicenter and in non-elite residential groups in the vicinity of the causeway termini; this diet is generally characterized as low in maize and extremely variable in terms of protein. At least for the structures and residential groups immediately outside of the Caracol epicenter, individuals exhibiting this third variable diet appear to have been engaged in the production of cloth as well as in the production of bone and lithic artifacts. Thus, an encircling ring of lower status craft specialists and service-oriented individuals is currently envisioned as having utilized constructions in a ring localized around the site epicenter. What this means is that the economic make-up of Caracol is to some degree reflective of the true Burgess (1923) concentric model for a modern city, where the poor (at least in terms of diet) cluster around the city center and wealthy live further afield. This is an empirical

archaeological rejection of Landa's (Tozzer 1941) model of a Maya center (see also Marcus 1983 and D. Chase 1986).

Conclusion

In dealing with economic considerations, archaeologists have been somewhat paralyzed by modern economic theory and debates over its relevance to ancient societies. There is no agreement over which viewpoint is appropriate: economic formalists believe that modern economic theory can be applied to any society; economic substantivists feel that modern economic theory can only be applied to modern capitalist societies; economic Marxists are more focused on exploitation and class relations. Attempting to work around these problems, Brumfiel and Earle (1987; see also Claessen and van de Velde 1991:6 for a critique) presented three different approaches or models for analyzing early state economies from an archaeological perspective: a commercial development model; an adaptationist model; and a political model. Political leaders actively interfere in the latter two models, but not the first. Part of the difficulty in dealing with ancient economies comes from the use of terminology that has specific modern meanings. Thus, commercialization has become almost synonymous with a "free market" economy. We would concur with Hassig's (1985) description of the Aztec economy as an administered market economy. It is also unlikely that the economy of Late Classic Caracol is neatly mirrored by any of the idealized approaches that characterize economic theory. In our view, the ancient Maya elite at Caracol maintained administrative control of distribution at market locales and also collected tribute from conquered groups (much like the later Aztec). While "penny capitalism" (Tax 1953) may have existed among the population and even led to the

accumulation of some wealth, exchange was carried out at specific locales, or markets, and was taxed by the central administration. Thus, as Rathje (1972) noted long ago, the Maya elite controlled the means of distribution but not the means of production. Recognizing the independence of production by agrarian smallholders in conjunction with administrative control of distribution is the first step toward a broader understanding of the development of alternative economies in the ancient Maya world.

Acknowledgements. The excavations at Caracol, Belize were funded by a variety of sources (see <http://www.caracol.org>). The excavations reported on here were funded by private donations to the University of Central Florida and by grants from the Ahau Foundation, the Stans Foundation, the Dart Foundation, the Harry Frank Guggenheim Foundation, the National Science Foundation (BNS-8619996, SBR-9311773, SBR-9709637, and DBI-0115837), and through funding provided by the United States Agency for International Development and the Government of Belize.

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