House Trajectories in El Cabo, Dominican Republic: The Building bBocks of Late Ceramic Age Culture

Alice V. M. Samson
Leiden University

Abstract: The archaeological site of El Cabo, on the east coast of the Dominican Republic, was inhabited from AD 600 to the first decade of European contact (ca. AD 1504). This paper focuses on the Chicoid habitation and presents results of excavation from the largest unit. A rich artefact assemblage and dense posthole configurations allowed reconstruction of domestic life, including at least fifty indigenous structures, most of which are interpreted as houses. The reconstruction methodology is described and a typology of built structures presented. It is argued that the diachronic renewal of the house over the course of centuries, forming “house trajectories”, was an important factor in the constitution of Late Ceramic Age culture and sociality.

Résumé: Le site de El Cabo, situé sur la côte est de la République Dominicaine, était occupé de 600 ap JC à la première décennie après la invasion Européenne (1504 ap JC). Cet article se concentre sur l’occupation Chicoide et présente les résultats des fouilles de la tranchée plus grande. Un mobilier abondant et des nombreux trous de poteaux ont permis la reconstruction de la vie quotidienne, y compris au moins de cinquante structures domestiques, parmi lesquels des plans de maisons. La méthodologie de reconstruction et une typologie de structures sont élaborées. On raisonne que le renouvellement diachronique de la maison à travers des siècles, produisait des “trajectoires de maisons”. Ces trajectoires étaient un élément important dans la culture et socialité de la Céramique Tardive.

Resumen: El yacimiento arqueológico de El Cabo, ubicado en la costa oriental de la República Dominicana, estuvo habitado desde el 600 DC hasta la década después de la llegada de los europeos (aproximadamente 1504 DC). Este artículo abarcará la fase habitacional Chicoide y los resultados de la excavación de la trinchera mayor. Un gran conjunto de artefactos y una densa configuración de huecos de poste contribuyeron a la reconstrucción de la vida domestica. Así como las reconstrucciones de por los menos cincuenta planos de estructuras indígenas, la mayor parte interpretados como viviendas. Se describe la metodología de reconstrucción y la tipología de estructuras construidas. Se argumenta que la renovación diacrónica de las viviendas a lo largo de los siglos dió forma a las “trayectorias de viviendas”. Estas trayectorias fueron un factor significativo en la constitución de la cultura y la socialización en la Cerámica Tardía.
Introduction

The pre-Columbian archaeological site of El Cabo is situated on the east coast of the Dominican Republic, overlooking the Mona Passage. The site was first investigated by researchers from the Museo del Hombre Dominicano in the late 1970s, and in an impact assessment in 2000 the site was deemed vulnerable due to mineral extraction in the area (Olsen 2000, 2001, Ortega 1978). Since 2005, archaeological and geophysical investigations have been carried out under the direction of Dr Menno Hoogland and Professor Corinne Hofman, with a field team from Leiden University, in collaboration with the Museo (Hofman et al. 2006, 2008, Samson and Hoogland 2007). The excavations form part of a project funded by the Netherlands Foundation for Scientific Research (NWO) also involving Dr José Oliver, Dr Lee Newsom and Dr Branko Mušić.

Research in El Cabo reveals a picture of community life spanning a millennium. This contribution focuses on some of the results from the 10th to early 16th century habitation, specifically relating to house structures. Given the large number of structures, a description of their individual characteristics is not possible in a short paper. This contribution presents an interpretation of structures and a site typology and describes how structures articulate into sequences within a community history. Some fifty structures were reconstructed, the majority interpreted as houses, but also various non-residential buildings, fences and domestic tools. The habitation area and built structures reveal details of architecture, house lifecycle, inhabitant composition and related domestic, ritual and mortuary activities. Four inhumations were recovered as well as a range of bodily adornments, tools, domestic goods, food remains and socially valuable items. The community of El Cabo was abandoned in the first decade of the 16th century, probably after the second wars of Higüey (1504), or even as late as 1514 (Moya Pons 1992).

Background

The location of El Cabo situates it within a cultural-geographical area which is seen as both the origin of the development of the Chicoid ceramic series; one of the latest ceramic styles in the Greater Antilles, and within the Mona Passage archaeological area; identified on the basis of similarities in material culture between the eastern Dominican Republic and western Puerto Rico (Ortega et al. 2003, Rouse 1951, 1992, Veloz Maggiolo 1993, Veloz Maggiolo et al. 1973, Veloz Maggiolo and Ortega 1996). On the basis of ceremonial artefacts, pottery styles and historic texts, this area has been seen as a locus of innovation and cross-fertilization which has provided a template for complex society in the region. Recently, this has gained more momentum and the social mechanisms behind Mona Passage relations have been characterised in terms of centuries-old genealogical ties between elites, specifically between caciques in an Higüey-Guaynía network (Oliver 2008, 2009). Research at El Cabo to document the internal dynamics of Late Ceramic Age settlement brings a domestic and lived perspective to bear on such models. The research was especially valuable given the rapid destruction of cultural heritage in the eastern Dominican Republic for large-scale coastal development.

1 A full interpretation of site structures and community development is the subject of a forthcoming dissertation by the author.

The site of El Cabo itself occupies a low coastal promontory of uplifted carbonate lagoon deposits, softer than the hard coral coastline on either side. The Mona Passage linking Altagracia and the west coast of Puerto Rico was a busy shipping lane in early contact times (Lovén 1935). The site commands an excellent view of the coast and out to sea, although there are no easy harbours, nor ready access to the beach. To the west, at a short distance inland, the site is ringed by cliffs. These cliffs, karst formations riddled with caves, reveal a considerable precolonial presence, including mortuary remains and petroglyphs in some of the local caves. There are a myriad of smaller sites within a short walk of the site, testified by the presence of surface pottery scatters on the coast, probably fishing spots and lookouts, and others at the base of the cliffs or associated with bathing water sources and possible ceremonial areas (Johnson this volume, Johnson 2009, Olsen 2000, 2001).
Analysis of the ceramics from El Cabo identifies two phases related to the Ostionoid series and one to the later Chicoid series (Hofman et al. 2007). The early Ostionoid phase is characterized by fine and thin-walled ceramics, predominantly red and brown in colour, with burnished and polished surfaces. The majority of vessels are plain and simply-shaped with some variation in lip form and very occasional decorative elements such as adornos and striped black and grey bands of paint (St Jean 2008a, 2008b). Adornos consist of zoomorphic and anthropomorphic modelled appliqués with coffee bean eyes, pinched protruberances, appliquéd limbs and small D-shaped handles. The late Ostionoid pottery (also referred to as ‘transitional’ (Veloz Maggiolo et al. 1973)) shares these characteristics, but is coarser, often with orange/brown surfaces. The Chicoid ceramics are characterized by a large variety of vessel forms, heavily decorated with modelled appliqués, incision and punctuation (Hofman et al. 2007).

---

2 Veloz Maggiolo’s more local terminology for the Dominican Republic (Veloz Maggiolo et al. 1973, Veloz Maggiolo 1977) which refers only to series, rather than subseries is preferred over that of Rouse (1992).
Radiocarbon dates from El Cabo show the earliest dated Ostionoid sequence in the eastern Dominican Republic, beginning in the late 6th to mid 7th century. El Cabo also bears the latest dates for a Chicoid context in the region, in the late 14th century. This is noteworthy because the presence of early European material culture and written texts indicate sites in the area, including El Cabo, Atajadizo, Macao and those in the Parque del Este, witnessed a colonial presence in the late 15th century, and yet there are no 15th or 16th century radiocarbon dates.

3 Early dates from El Barrio are excluded from this discussion due to issues of calibration and context.
A methodology of open area excavation units to reveal floor plans and associated artefact spreads was employed in El Cabo to answer household-scale questions – that is research questions which focus on daily activities, living structures, practices and social and spatial organization. Two principle fieldwork strategies were employed: Excavation of 2×2m units across the entire site, and the excavation of a single larger unit in the late habitation area.

In total an area of 1000m² was excavated in this larger unit which was situated on the edge of the cliff on the highest part of the coastal promontory of El Cabo. This unit revealed a very dense clustering of features, over two per square metre, all related to the latest, or Chicoid phase of settlement between ca. AD 900 and 1500.
The stratigraphy of the large unit consisted of a thin layer (5 to 30cm) of present ground surface and a sandy soil on top of karst bedrock into which the features were cut. There was no stratigraphic distinction in this layer. Material from the artefact layer was recovered in 1m squares, allowing the interpretation of activities and practices associated with the structures.
Figure 6. Photograph showing the excavation of squares in the main unit. Schematic profile of a “typical” square showing (1) limestone bedrock, (2) dark brown humic, sandy layer with varying densities of faunal, ceramic and lithic remains. There is no stratigraphic distinction in this fill. (3) archaeological features cut into the bedrock.

Of the 2100 features, 99% are postholes made for sinking wooden posts into. This interpretation was made mainly on the basis of their incorporation as structural elements within buildings or other built structures. The majority of postholes are extremely regular both in plan and section. The preservation of the features is excellent, allowing the identification of tool marks and the reconstruction of over 50 structures.
Figure 7. View of the main unit as excavated in 2006 with details of individual postholes on the right. Note the vertical tool marks evident in the lower posthole.

Posthole fills are dependent on abandonment (Schinkel 1992:167-169). The most common practice was removal of posts and back-filling of the posthole. Exceptionally structures were burnt down. Five burnt post stumps were recovered in situ belonging to two house structures; the first dated to the 14th century (GrN 29035, GrN 30535 and GrN 30534, see figure 4), and a second dated to the early 12th century (GrN 31417 and GrN 31418, see figure 4).

Analysis of charcoal wood samples from the features by Dr Lee Newsom, Pennsylvania State University, shows that the posts were from Sapotaceae (sapodilla family), matching with two different species of the Sideroxylon genus: *S. salicifolium* (L.) Lam. and *S. foetidissimum* Jacq. These are tropical hardwoods which thrive in dry coastal conditions and whose wood is ideal for construction.
Figure 8. Plan drawing of the main unit. All features shown. The solid line in the east is the edge of the cliff.

Structures were primarily identified on the basis of the spatial relationships between features in the horizontal plane. This is immediately apparent when looking at the plan drawing of the main unit; circular configurations are instantly eye-catching. After spatial relationships, diameter and depth, recorded for all features, were the next most important factors for identifying structures. Other factors such as fill properties became relevant in later stages of analysis, concerning for example the lifecycle or chronology of particular structures.

Reconstructions of site structures were divided into 4 confidence classes (very reliable, reliable, plausible and possible), with well over half the reconstructions being classified as reliable and very reliable, and a strict threshold for rejecting any structures which didn’t come up
to scratch. It was possible to incorporate over 70% of the features into reconstructions. Those which remain unassigned generally cluster on excavation boundaries, where the full structure was not visible and therefore credibility was not strong enough.

The Structures and Structure Typology

The structures in El Cabo fall into eight main types: four house types, two types of special activity structure, a type which includes all post alignments, regardless of function and a unique type of small structure clearly not belonging to any other type. The house structures are the focus of this paper, but the full typology will be presented for the sake of completeness.

First a word on the term “house”, as this is the dominant interpretation of the structures identified. The architecture of “house” structures, as opposed to ancillary buildings, is consistently more elaborate and regular. Moreover, these structures are larger than other structures, have roofs and continuous, probably closed walls, a regular orientation and are the locations of commemorative acts and closing rituals. They are assumed to be dwelling structures and the material focus of domestic life and identity.

The recurrent architectural forms of the house structures are consistently related to a wide range of material culture remains. These include ceramic griddles, ceramic vessels, marine shell, fish and small mammal remains, whole or fragmented ground stone tools (mainly petaloid axes and adzes for woodworking and forest clearance), coral and stone crushing or grinding implements, modified stone and shell material, equipment associated with fishing and hunting activities, many items of personal adornment, cemi icons and parts of cemi icons and occasionally human remains. The distribution and density of the remains represent sweeping accumulations of domestic debris related to systematic maintenance of the living area in the last phase of habitation, or acts of deliberate deposition associated with structures (Samson forthcoming, Samson and Hoogland 2007).

Summarizing, the identification of “house” is based on the morphology and character of the architectural plan and the range of functions associated with the structure. Looking at the structures in more detail, it is possible suggest a typology. The different types (notably between Types 1, 2 and 4) also correspond to indigenous types.
El Cabo Structure Typology

Type 1 structures, of which there are sixteen in the unit, are interpreted as houses. These are very regular post-built structures with a perimeter circle of closely-set postholes, and an internal post configuration consisting of eight deep and wide postholes forming opposing pairs. The opposing pairs align on the entrance, which in the majority of cases, opens to the west. Entrances are relatively narrow, averaging 78cm wide. This is the only evident access point in the structure. There are no internal divisions in the plan. Structures range from 6 to 10m in diameter.

With regard to the external appearance of the building, the postholes of the perimeter circle, except for those at the entrance, were dug at an angle so that posts were slanting towards the centre of the structure and the roof and walls were one. The mean angle for the slant of these postholes is 70°, giving a steep roof pitch of 40°. Structures would have been tall with a conical or domed exterior form. The entrance pair of postholes is especially large, often of comparable size to the roof-supports inside, and generally flanked by postholes of diminishing size, but bigger than other perimeter features. This forms a symmetrical and monumentalized entrance façade.

Type 1 structures would have been asymmetrical in cross-section: Low at the back and high at the front, and the vertical entrance façade would have formed a porch, jutting out of the roof profile. The front of the house was much taller and loftier than the back of the house. Functionally, and because of the major orientation of Type 1 structures, the lower backs of the houses would have channelled sea winds up and over the roof, creating a sheltered area outside the front of the house.

---

4 All schematic drawings of the structures are to the same scale with north at the top of the page.
Type 2 structures, of which there are seven in the unit, are also houses. These are very similar to Type 1, with a few notable differences. The houses of Type 2 are oriented slightly differently (west northwest, instead of west). Moreover, the postholes of the perimeter circle are vertically dug into the bedrock, implying a cone and cylinder construction. Of course, the wall uprights may still have been joined together at the top as for structures in which the roof stretches down to the ground, but this is not as explicit in the underground architecture as for Type 1. Again Type 2 structures would have had a monumentalized entrance façade. Gaps in the back are not interpreted as additional access points. Structures range from 7 to 11m in diameter.
Type 3 structures, of which there is only one in the unit, are houses with maximised floor space by incorporating the roof supports into the perimeter wall. Despite this innovation the structural tenets are the same as Types 1 and 2. This structure is 10m in diameter.

![Type 3 structure schematic](image)

Figure 12. Schematic representation of Type 4 structures, indicating entrance (arrow) and pairs of opposing postholes (dotted lines).

Type 4 structures, of which there are two, are houses similar in diameter to Type 3. Unlike Type 3, they have separate internal roof-supports and are oriented northwest.

![Types 5 and 6 schematic](image)

Figure 13. Schematic representations of Types 5 and 6. Type 5 is interpreted as a sheltered special activity hut, with closed walls. Type six is interpreted as a roofed special activity hut, probably with open walls.
Types 5 and 6 (of which there are five and three respectively) represent two different sorts of ancillary, rather than house, structures. They range from 5 to 8m in diameter. Type 5 is a sheltered special activity hut consisting of circular or semi-circular arrangements of close-set postholes with at least one or multiple gaps in the perimeter. Presumably, posts were joined together at the top to form either a conical or domed shell. Type 6 is a roofed special activity hut. These structures probably had roofs, but open walls.

Figure 14. Schematic representations of Type 7 structures. The example on the right is a windbreak external to a house.

Type 7 structures, of which there are twelve in the unit, are a series of alignments interpreted as fences marking divisions and boundaries around and between structures, and others which act as windbreaks. This broad type ranges from 1 to 53m in length. Shorter alignments, probably external to houses, may represent domestic tools (drying racks, presses, pot stands etc.).

Figure 15. Representation of Type 8 structure.

A final unique structure (Type 8) consists of eight deep-set postholes forming a small oval the posts of which would have splayed outwards. The location of this structure on the extreme edge of the cliff perhaps offers clues as to its interpretation which would either have been positioned to take advantage of the sea winds, or of the panoramic view of the coast and out to sea. One might envisage a structure used for look-out, lighthouse or communication (along the coast and to sea traffic), or another purpose such as drying.
House Trajectories

A chronology of the structures breaks down into five phases (see Samson forthcoming for full phasing). Houses formed a linear arrangement along the edge of the cliff which moved further inland over time, up to the last phase in colonial times.

From a diachronic perspective most house structures over five to six hundred years of habitation belong to six main clusters. These form closely spaced or overlapping houses (see figure 16). Houses within a cluster are of the same type. The same house types are built over each other or in a slightly different location again and again. Each cluster represents multiple reincarnations of the same house over the course of centuries. People’s lifetimes are short, but the house endures. Each cluster of house renewal thus forms a “house trajectory”, in which every individual structure is a stage in the longer sequence. A trajectory describes the path of a body moving under the action of given forces\(^5\), the forces here being agency located in a particular lifeworld. A house trajectory was deliberately perpetuated by successive generations, and resulted in the development of a long-lived institution. It was through membership of this institution that inhabitants derived, transmitted and transformed identity and cultural and social values. This is similar to archaeological concepts of the “social house” (Joyce and Gillespie eds. 2000, Beck ed. 2007, Helms 2007). This will be briefly expanded upon in terms of the cycles of renewal which perpetuate the house, and in terms of house aesthetics which embody the morals of domestic sociality.

Cycles of Renewal

As mentioned, houses of the same type were built over each other again and again. The same postholes could have been re-used as they are preserved intact in the bedrock. Instead, the inhabitants favoured starting from scratch. Postholes from one house are hardly ever reused in another. More to the point, there is an emphatic avoidance of re-use. This does not mean that timbers were not replaced. It is quite possible that new posts were put in the same holes in the solid bedrock. At a certain point however, the house had to be renewed. Renewal is different from replacement or repair, as it necessitates relocating, maybe as little as 50cm to a few metres, to start from scratch. House design remained the same, and house sizes did not change significantly between structure renewals, so refusal to re-use has to be explained by other than functional means: Renewal was not an act of maintenance; it was an act of reincarnation.

\(^5\) Oxford English Dictionary definition.
Figure 16. House structures in the main unit showing the six house trajectories. Each trajectory represents repeated and deliberate house renewal.

Unlike the maximum 15 years life expectancy of vernacular architecture in Amazonia (Oliver 1997), each house in El Cabo may have been in use for 50 to 100 years. This is based on an estimate that if each house in a trajectory were inhabited for an equal amount of time, and the longest house trajectories (1 and 2) each consist of five houses and spanned a period of five hundred years (based on C14 dates from one of the earliest structures and the presence of European material in a posthole of one of the latest) then this would imply that each structure was in use for about 100 years. This is a defensible estimate given the possibility of extending a structure’s life by replacing posts as described above. This suggests that when it comes to Caribbean domestic practice, ethnographic projections from the South American tropical lowlands may not always be appropriate. This is not just due to the drier, coastal conditions of many Caribbean settings which increase lifetimes of structures, but also because of cultural differences which led to the development of large and continuous settlements in the Caribbean. El Cabo does not provide the only example of long-lived pre-Columbian houses. Structures from the Tutu and Golden Rock sites are also estimated to have lasted ten to fifty years (Schinkel 1992, Righter 2002:336). Evidence from El Cabo is perhaps the hardest evidence to date that pre-Columbian Caribbean architecture and social institutions were more durable than on the mainland.
House Aesthetics

Evidence that houses were more than ‘just’ living structures can be found in the details of the aesthetics of their architecture and life histories. There is a clear preoccupation with house aesthetics and beautifying the house. This can be seen in house depositions, spatial regularity and architectural embellishment.

The preferred abandonment strategy was removal of posts and back-filling. This was the case for 14, and possibly as many as 32 structures. When house posts were removed at structure abandonment, items of bodily adornment were placed in the postholes. This occurs in ten structures. Reasons to believe these items were part of deliberate and structured abandonment practices are that a) their distribution is confined to the postholes of house structures (as opposed to ancillary buildings), b) that they occur in specific locations within the house: either entrance or internal postholes, or in perimeter postholes aligned on the internal postholes, usually in the north or south wall, and c) that they consist of specific types of artefacts, namely beads and pendants.6

Figure 17. Dog teeth pendants recovered from posthole fills. The incised motifs on the left hand tooth are identical to those found on a cache of dog and seal teeth in the vicinity of El Cabo in the 1970s (Ortega 2005:116).

It is proposed that these depositions were related to closing rituals at the end of the life of a particular house structure within a trajectory. This can be seen as one stage in the cycle of house renewal. But it also tells us something about the way the house was conceptualized: Beads and pendants, as items of bodily adornment, are markers of the cultured and identified body. The deposition of such items in significant locations in the house indicates two important relationships: That like the body, the house should be dressed in a proper way (Mills 2008), and that the identities of the household members were tied up with that of the house. This suggests that inhabitants and house, and body and house are related and reference each other aesthetically.

---

6 Rather than the three pointers, shell plaques and stone belt fragments which make up the majority of the paraphernalia found in the find layer.
In such a way, certain bodily adornments can be seen as unique artefacts iconic of household identities.

In terms of the architecture of the house, the fronts of all house types are monumentalized, probably producing an imposing façade. This is always the case for the two posts flanking the entrances and often for up to a third of the perimeter on either side of the entrance. This results in a front/back dichotomy emphasizing the face of the house and turning it into an area of display. Moreover, there is a consistent orientation in the circular structures: The entrance points away from the sea. However, within this broad functional rule there are three major orientations. Houses in the same phase share exactly the same orientation. So all houses in phase 1 are oriented west northwest, whereas those in phases 2, 3 and 4 are oriented due west. Another example of the concern for orderliness in architecture can be seen in the symmetry of the house plans. Regularity has not been exaggerated in the schematic drawings (figures 9 to 12), and the vast majority of the thirty or so houses incorporate multiple levels of symmetry in their foundations which would have been reflected in their architecture.

Scholarship on the characteristics of sociality of Native peoples of Amazonia has shown a profound link between morality and aesthetics, especially in the settlement realm (Overing and Passes ed. 2000). In El Cabo, the deposition of items marking stages in house renewal, the relationship between house and body, the emphasis of the house façade and the consistent and regular orientation and architecture of houses indicate that there was a proper way to embellish, dress and order the house i.e. make it beautiful like the bodies and social lives of its inhabitants. Domestic aesthetics in El Cabo may similarly have contributed to the creation of a tranquil and harmonious environment where work could be carried out and children raised.

Conclusion

Discussions of the development of Late Ceramic Age social complexity have not satisfactorily taken the domestic realm into account. Analysis of the development of house trajectories in El Cabo provides insight into how the house, as a material and social institution, in its everyday and long-term dynamics, is fundamental to this process. The site of El Cabo offers an archaeological perspective on pre-Columbian indigenous domestic life. It was possible to reconstruct over fifty domestic buildings and identify a series of house types and multiple phases in community history. Houses were deliberately renewed, forming diachronic house trajectories, which led to the development of durable indigenous institutions. These institutions were responsible for the transmission of moral and social values and thus important constituents of Late Ceramic Age culture and sociality. The above discussion has been limited to just one house group from the main unit. However, evidence not discussed here, shows that multiple, contemporaneous house groups existed across the whole late settlement (Samson forthcoming). This resulted in a stable community of 250 to 300 inhabitants for at least five, and possibly more than six hundred years.

Acknowledgements

I thank my supervisors Dr Menno Hoogland and Professor Corinne Hofman, as well as Adriana Churampí Ramírez and my colleagues in the Caribbean Research Group, Leiden University and all participants in the Caribbean Fieldschools and especially to the community of El Cabo, and to the mayor Lionel Avila. Thanks also to the Fundación Ecológica de Punta Cana for logistical
support, and the teacher and students of El Cabo school for the same. Finally, many thanks to the Museo del Hombre Dominicano, especially for the partnership of the current and former directors Juan Rodríguez Acosta, Marcio Veloz Maggiolo and Carlos Hernández Soto, and especially for the collaboration and support of Harold Olsen Bogaert, Jorge Ulloa Hung and Glenis Tavarez María. Thanks to Erik van Driel, Leiden University, for the artefact illustrations and Jimmy Mans, Alistair Bright and Angus Mol for comments on this paper. Participation in this conference was sponsored by Leiden University Fund (LUF)/Byvanck.
Bibliography


Schinkel, K. The archaeology of St. Eustatius: The Golden Rock site.


