

Materials and Materiality of Megalithics in Nicaragua

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Abstract

Megalithic stones are a global prehistoric phenomenon. From unworked to shaped on all sides, they are an artifact category retaining a strong natural character. Central Nicaraguan megalithics are examined here with this broad perspective in mind. In moving away from traditional categorizations of typology and class, contextual data are used to gain insights into the assemblages in which these stones occurred. It is argued that megalithics in Nicaragua were not isolated but usually grouped, thereby creating an internal structure for sites of ceremony. The choices involved in creating these assemblages in turn suggest communally shared efforts, technology and memories.

Introduction

Megaliths are deceptively accessible things. Defined as extremely large monoliths, megaliths can be either carved or unworked. Carved examples are commonly referred to as stone sculptures or statuary, but both share their purpose in being placed as landscape markers, and in monumental architectural settings. They are highly visible, relatively resistant to decay, and despite their hardness, also highly malleable. They seemingly emit unequivocal messages; anthropomorphic carvings underlining strict messages, perhaps even a visual language. Yet in spite of this apparently unambiguous nature, stone sculpture is still poorly understood. The social microcosm they seem to coordinate, revolving around moral values, collective remembrance and group identity, has often remained beyond the reach of archaeology. Much of archaeological research into stone sculpture views it as an imperfect mirror of the maker's cultural intentionality, and accordingly studies have often analyzed these stones as instruments in political propaganda or as expressions of religious norms.

The archaeological discipline meanwhile has returned to fundamental questions concerning its objective of study. Is it culture or process, or perhaps both? This evaluation resulted in a broadening of approaches toward the archaeological record, involving concepts such as ethnicity and identity, and also agency, memory life history of places and practice (Dobres

and Robb 2000; Joyce 2009; Meskell and Joyce 2003; Pauketat 2003; Thomas 1996). It seems this broadening only slowed down somewhat around the turn of the millennium, to be followed by the current period in which archaeologists can assert many theoretical positions as long as they are ready to be held accountable for their choices (Johnson 2010:232). In the background, even broader debates in the social sciences roared concerning the nature of change and what makes human societies that what they are. While certainly with merit, much of these new insights have proven to be a hard to reconcile with archaeological research. This poor match has resulted in a stream of archaeological arguments that present sophisticated interpretive questions, but how successful this is combined to case studies is many times less convincing. I argue that this is due to the methodological struggles to tie together a culture-based focus, often found at the core of archaeological research in many regions, with an emphasis on social life, habitual behavior and historical practices, central to contemporary approaches in social theory. This struggle however needn't be a fundamental ontological disconnect. In fact, with its ability to recognize human action in the archaeological record, archaeology is the discipline *par excellence* to tease out how people's practices resolved around material object categories, such as for example, large stones. As Tim Pauketat and Sue Alt argue, "only archaeologists possess the necessary spatial and temporal controls over the multiple lines of genealogical, biographical, and historical data on the many practices, events, landscapes, and bodies necessary to properly evaluate ... large-scale patterns" (2005:232). Archaeology is thus in an excellent position to employ context data in analyzing both the long term development of cultural traditions as well as studying the way megaliths and people influenced each other. The combination of macro- and microscale foci on material traces, environmental conditions and landscape features, allow archaeology to identify scenarios of use and utility. These datasets can then function as limiting networks to restrain possible interpretations and come to a better understanding of how consequential stone sculpture in Nicaragua has been.

Account centering on interpretive perspectives on monumental uses of stone, have had little impact in the archaeology of Nicaragua. In part this may be due to the at times high level of abstraction in such narratives, in claiming that landscapes and monumental sites had meaning, but stopping short of explaining how exactly this played out in society or what this meaning essentially was. Megaliths have been peripheral to interpretation in Nicaragua; they are seen as objects reflecting shamanic practices of some sort, but ideas as to why and how remain underdeveloped, largely due to lack of control over chronology and context.

In this paper I explore stone sculptures at the site of El Gavilán (formerly known as Nawawasito) near El Ayote in the central region of Nicaragua. I combine a study of the megalith's material characteristics and analyze contextual practices to see what these particular stone objects meant in their time of use.

Stone sculpture as a subject-matter

“These stone figures, often of colossal size, are of two different descriptions,—those which closely represent the human figure in dignified repose, and have a mild, inoffensive expression of countenance, and those which do not so closely represent the human figure, often a combination between man and animal, and have a wild, terrifying expression of countenance” (Pim and Seeman 1869:127).

The scientific interest in stone sculpture goes back a long way, and has been present in the archaeological investigation of Nicaragua from the mid 19th century onward starting with the central Nicaraguan travels of Emmanuel von Friedrichsthal (Geurds 2010a; Van Broekhoven 2002). The enduring character of this object category and its evocative associations to questions of monumentality and memory provided for this steady stream of attention, particularly in neighboring Mesoamerican hot-beds of monumental sculpture such as the Preclassic period, the Classic Lowland Maya or among the Late Postclassic Mexica. Further south, archaeology in Nicaragua has awarded stone sculpture its due attention as well (Bruhns 1982, 1992; Falk and Friberg 1999; Haberland 1973; Navarro Genie 2005; Richardson 1940; Zelaya Hidalgo et al.1974), sculptures were provenance to different parts of Nicaragua, in particular the Zapatera and Chontales styles southwest and north of Lake Nicaragua. But for several decades now this interest seems to have largely dried up (but see works by Navarro Genie). Predominant reason for this is this break in research interest was the ongoing lack of contextual data (cf. Bruhns 1992).

Other than around Boaco, Juigalpa and Acoyapa in the Chontales department, stone sculptures and megaliths are found on the islands in both Lake Nicaragua and Lake Managua, in particular on Zapatera and Momotombito. In the past, statues were also recovered around the cities of Leon and Matagalpa. If one looks at the places where megaliths have been reported to have been brought from and compares this to the total distribution, one can observe that the area within Nicaragua is expanding in combination with emerging data on the

high density of megaliths at individual sites. Moreover, many of the newly reported locations of stone sculpture are in areas where they were previously not known to have been produced.

The example of El Gavilán on the upper Siquia is currently probably the best documented example, but sites with megaliths have also been reported for the area between Matagalpa and Muy Muy (Kuhl personal communication 2010), and we have the case of the large cache of columnar basalts just south of the Cascas de Flor de Pino site on the Caribbean coast near Bluefields (Gassiot and Estevez 2004: Fig 3). The Central Nicaragua Archaeological Project is currently cataloging all of these locations, parallel to following up new newly reported megaliths from, in particular to the northeast of El Gavilán. Not all of these sightings result in sites with more than a few carved or unworked fragments but the presence of encountering carved *in situ* megaliths is a function of decreasing accessibility and a conscientious local population.

Central Nicaraguan landscapes

“There must have been a large Indian population in the grassy districts of Chontales. A great number of ancient tombs, met with in almost every direction, sufficiently attest this. These tombs are found in plains having a rocky soil and good drainage. The Indians never selected ill-drained sites for their villages, and many of the healthiest towns built by the Spaniards are in localities originally selected by the Indians” (Pim & Seeman 1869: 126).

To understand sites of prehistoric monumental stone sculpture and megalithics, a contextual, landscape-based approach is fundamental. Befitting the wider preoccupation of archaeology with spatial analysis, the conspicuous object category of megalithic stones must be seen in light of their action radius. The importance of knowing context relates not only to the study of the megalithic technology, involving procurement, quarrying, carving, transportation and so forth, but extends to include placement, maintenance and potential discard or loss of interest. The location of megalithics is not merely a setting or background, it is indeed a *context* in its etymological meaning; it is the *fabric* of their formation. The biography of these stones is set in the surrounding landscape and to the ones who quarried them such ties to the land will have been significant in choosing which stones to take from where and for what purpose.

The central Nicaraguan landscape is not a homogenous ecological unit; it is in fact marked by a high degree of geographical diversity. The relief in the region is dominated by the

Nicaraguan watershed which trends NW-SE across most of the country. This is a volcanic belt composed of Late Tertiary (Pliocene) igneous rocks, predominantly meshed in with sedimentary rock. Due west, the hilly terrain gives way to rolling plains, gradually leveling out into the plains near the shores of Lake Nicaragua. Most of the watershed is marked by rolling plateaus, with the exception of the western extremity, the Amerrisque mountain range.

The recent contextual data document at the El Gavilán site in central Nicaragua, provides a new and rich arena in which to study the role and effect of megaliths in their geological setting. This paper brings together some of the data that has recently been emerging as part of the Central Nicaragua Archaeological Project (CENAP) and looks at how the analysis of megalithics can be re-conceptualized in accordance with contemporary research methods and interpretive approaches.

Research overview 2011

Initially documented in 2009, research at the El Gavilan site has until now included two fieldwork seasons in 2010 and most recently in January of 2011 (Fig x). Specific goals for this fieldwork include: (1) Complete a topographic survey of the Nawawasito site, in order to map the location of the complete sculptures and associated architectural features, (2) Creation of a photographic registry for the Nawawasito sculptures, documenting their state of deterioration, (3) Continue an excavation program of 50 x 50 cm shovel pits (initiated in 2010), in order to determine the extent of the site, verify the presence of habitation traces and, if possible, collect carbon samples for dating purposes, and (4) Develop protective measures to limit risk of looting and preserve the integrity of the site.

El Gavilán was mapped using a terrestrial HD laser scanner (Fig x). The generated point cloud was subsequently georeferenced by means of a differential GPS. The locations of the sculptures were inserted in this topographic map by means of a Total Station. This resulting map now provides the baseline for future archaeological and heritage related activities at the site and will enable the monitoring of sculpture degradation caused by environmental factors, mainly meteorological conditions and anthropogenic activities.

In order to begin to address whether the archaeological site was an area of continuous human habitation or one of peripheral activity with periods of abandonment, a total of 50 shovel tests were dug in the southeast and northeast periphery of the site (Fig x). The results yielded

ceramics and lithics (mostly debitage fragments) in very low quantities. The ceramics encountered are predominantly small red body sherds made from local clays, rich in iron oxide. The ceramics is in a poor state of preservation and generally under 5 cms in size. Some surface decoration are present, mostly in the form of striations and linear thumb impressions along the vessel rime (Figs x). In addition, small fragments of dried clay were recorded indicating the presence of wattle-and-daub walls. Whereas small quantities of pottery would otherwise perhaps point to temporary camp sites, the latter wall fragments significantly complicate such an interpretation, instead indicating at least semi-permanent settlement at some point in time at el Gavilán. It should be noted however, that due to time constraints, the shovel testing has until now not been extended to include the northwest and southwest sectors of the site. Whether Nawawasito was thus a multicomponent site or not cannot yet be ascertained at this time.

Geophysical Prospecting

In terms of scale, engineering complexity and architectural refinement, the El Gavilán site is not categorically different from other traces of monumentality known in Nicaragua today. What does set it apart is the diverse range of stone materials employed. In order to begin address the practices of megalith technology at El Gavilán, a classification of the lithic materials used on site was established, including the types of rock used for the megaliths, as well as material used for construction of ceremonial mounds. Four rock types were identified, consistent with the observed diversity of rock material at the Juigalpa museum. Once having identified this lithology, a study of the geophysical characteristics of the surrounding area was conducted, to identify possible spots of origin for stone materials processed at the site. Based on coinciding petrology, general morphology and overall proximity to El Gavilán, the raw materials for the construction of the monumental mounds and the creating of the megaliths appear to come from a hinterland area of some 1.5 to 2.0 kilometer distance. However, this preliminary finding will still require testing by petrographic techniques. Small samples taken from the site will be compared with samples from outcrops to see if these rock types are indeed identical.

Ground-penetrating Radar Study

In collaboration with the Geophysical department at INETER, the central area of the site, including Structures 1 and 2 were included in a GPR study (Fig x). A grid of closely spaced north-south and east-west transects was walked in order to cover an 80 by 80 square meter

area including the entire monumental sector of the site. In addition, a smaller grid was completed to include Structure 3, one of the larger earthen mounds at the site. Most of the data processing, including reflection profiles and horizontal imagery is still pending completion and should reveal whether Structures 1 through 3 contain any relevant subsurface features.

Site conditioning

A parallel project initiated in 2011 is to develop adequate measures of protection for the site and in particular the megaliths. This will include cleaning, repositioning and roofing for many of the intact sculptures, while maintaining a low-budget (and therefore more feasible) financing structure. The landowner, the El Ayote municipal authorities as well as *Patrimonio Cultural* and the *Museo Nacional* have expressed an interest in supporting these plans. The former two parties have already conditioned the 8 kilometer gravel access road between El Ayote and the site itself. Whilst El Gavilán is not an immediate tourist magnet due to its remote location, the sheer unique character of the site alone merits its conditioning and protection.

The El Gavilán Site

A unique characteristic of the megaliths at El Gavilán is the mixed use of different rock types, including columnar basalts, ignimbrites, andesites and some carbonate rock. This implies the harvesting of geomorphologically distinct stones from different quarries, but beyond that is also raises the issue of how different features, such as color, texture, weight, shape, hardness attracted the attention of those interacting with them. Apart from the basalts, ignimbrites also vary significantly in texture and macroscopic composition. The immediate surrounding environment of El Gavilán is composed of basalts, andesites, ignimbrites (pumice-rich pyroclastic flow deposits), and a number of breccia conglomerates. In spite of this diversity however, nearly all megaliths are of local origin, with the carbonate rock still being undetermined as to its origin. While some stones may have already been lying loose at the surface, others were likely quarried from rock outcrops and other exposed areas. Differences in the mass of rock would have made some efforts to collect these blocks considerably more challenging than others. The site of origin for the columnar basalts, located some 1.5 kilometers southwest of the archaeological site illustrates this. This outcrop is situated at the top of a hill, with a peak elevation of some 150 meters above the site, and the Nawawas river prevents traversing the shortest distance between outcrop and site.

Upon initial documentation in 2009 and subsequent survey, mapping and test excavations in 2010 and 2011, the site yielded a significant number of stone sculptures stylistically related to the corpus of anthropomorphic sculptures prevalent in the region bordering Lake Nicaragua to the north (Geurds 2010b; Geurds et al 2009). At least 13 sculptures were found to be nearly completely intact and another 31 were counted based on large fragments. All monoliths displayed considerable weathering in the form of discoloration, leaching, and animal induced damages. Roughly two-thirds of the entire corpus displayed modified exterior surfaces in the form of low relief and incision carving. The unworked stones are between 4 to 6 feet tall fragments of columnar basalt, an igneous rock which cools to form conspicuous polygonal joints, resulting in tall and narrow columns (Fig x). As such, the monoliths, even though in their 'natural' state, present the beholder with a distinct anthropogenic quality.

As the builders of El Gavilán utilized both carved and unworked megaliths at the site, the question is raised how in their analysis the distinction between artifacts (carved stone sculptures) and unworked natural materials should be drawn. This subject is raised for different NW European case studies by Richard Bradley (2000) and is relevant for this example from Nicaraguan as well. The presence of unworked stones at El Gavilán and their incorporation in the monumental architectural setting, asks us to consider their significance relative to their carved counterparts. This combination, taken together with the presence of megaliths with different points of origin, are indicative of the fact that particular stones, with particular characteristics were purposefully chosen to be removed from the landscape in order to be curated within the architectural core of the site. Whilst cost-benefit calculations, joined by technological skill-capacity, undoubtedly also played a role in procuring these massive stones from areas peripheral to the site, it is argued here that this was not the only determining factor. Distinctive characteristics of rock types occurring in the landscape were known to communities residing in the region, and only some of those types qualified for incorporation in the El Gavilán site.

As mentioned, the site is centered around two quadrangular stepped mounds, which have most of the megaliths in their immediate vicinity (Fig x). The construction of these mounds followed a regiment of processing river sand at the base level of the mound, combined with inserting boulders with much smaller rocks. The combination of differently sized rock material with sand as a form of binder increased structural strength. In other words, these

mounds are not simple accumulated heaps of uncarved rocks, seemingly arbitrarily thrown together. This feature was a response of the people building at El Gavilan to the instability of stone mounds in a region of occasional torrential rainfall. The mounds intricate composition is evidence of their constructive efficacy.

Several dozen smaller earthen mounds are located in a 100 meter perimeter around these two mounds. At least five of those earthen mounds exceed three meters in height and twelve meters in diameter, and testing confirms they were built in one singular event. Even though clearly ceremonial in nature, the El Gavilán site was not a 'sacred void', to borrow David Parkin's (1991) term, with human limited to sporadic ritual activity. Further testing of several of the lower mounds in the southeastern and northeastern periphery have produced dried clay fragments typical of wattle-and-daub walls, thus pointing to (semi-permanent) habitation at some point during El Gavilán's life history.

BETA	MATERIAL	CONTEXT	MEASURED AGE	2 SIGMA CALIBRATION
294642	charcoal	Shovel, Layer 40-50 CM	2050 +/- 30 BP	Cal BC 150 to 140 /Cal BC 110 to Cal AD 20
294641	charcoal	Exc. Unit, Layer 50-60 CM	1360 +/- 30 BP	Cal AD 650 to 710 /Cal AD 750 to 760
294640	charcoal	Exc. Unit, Layer 50-60 CM	1350 +/- 50 BP	Cal AD 640 to 780

Table 1: Radiocarbon samples taken from El Gavilán

Earliest activities at El Gavilán now known were around the second or first century BC (Table 1). At a significantly later period, a process of monumentalization of the site was initiated by constructing two public mounds consisting of mainly basalt boulders. Most of these boulders were sized in a way to be able to be carried between two persons. Two radiocarbon dates taken from Structure 2 point to a moment of construction between AD 650 and 750. Franck Gorin proposed a date of 800 CE for the Chontales sculptures, based on a single sculpture fragment encountered at the multicomponent site of La Pachona relatively dated by means of associated Monota phase ceramics (Gorin 1989). Adequate descriptions on its stratigraphic location are lacking and the described fragment is no longer present at the site. The radiocarbon dates are the first to be associated to stone sculptures in central Nicaragua.

El Gavilán appears to have been the focus of activities for a prolonged period of time. The

practice of erecting megaliths, including quarrying and carving activities in the immediate vicinity, was time-consuming and likely a shared group activity. The amount of megaliths present and the energy involved in the entire operational chain from procuring, transport, carving through to erecting and maintaining, indicates a persistent practice, not a fleeting burst of activity. On the basis of this it can be hypothesized that the act of placing a megalith was a periodic event aimed at either ancestor veneration, potentially including burial, or reinforcing regional ties between communities. El Gavilán likely was a ritual place produced and maintained for several generations.

The fashion in which the El Gavilán sculptures were carved complicates interpreting them as representations of specific immediate ancestors. Bodily adornments are absent, and facial features and limbs are rendered at an abstract level. The abstraction makes them unfit to serve as icons or indices relating to particular individuals, such as chiefs. The comparison to the majority of known sculptures pertaining to the Chontales style is complicated by this. The primary reference collection, held at the museum in Juigalpa, demonstrates sculptures many of which are adorned with multiple elements of dress, jewelry, weapons, and animal companions (*sensu* Zelaya-Hidalgo 1974). Whilst some of the rudimentary carvings at El Gavilán may be explained through the unforgiving hardness of the basalts used, the fact remains that overall the megaliths are only worked to a very limited degree, even though the majority does feature a minimal form of carving.

Practice makes monuments

How could we envision the El Gavilán site in a processual sense? What can we induce about the nature and the change generated by the acts in relation to the megaliths? The cumbersome task of extracting and hauling these stones, weighing around four tons on average, would have instilled bodily memories in all those involved in the activity. It is widely acknowledged that the construction of megalithic monuments was done by builders who had a detailed appreciation for particular qualities of the used rock types (Joyce 2005; Tilley 2004). The practice of carving the megaliths at or near the El Gavilán site and their placement among the monumental architecture, also included the incorporation of unworked specimens. Columnar basalt, a stone particularly suggestive due to its polygonal natural shape (Fig x), was likely especially selected for incorporation in such ritual settings.

The technological expertise required to successfully and safely complete the procurement of

these megaliths on a periodic basis leads to practices which would have been imprinted onto those involved. The performative nature of the technologically specialized process of quarrying and hauling of megaliths recalls Andrew Jones' argument of the force of remembrance included in technologically specialized tasks (2003).

The El Gavilán site is located at some 400 meters from the confluence of the Nawawas and Siquia rivers and is situated at an elevation of 30 meters from the river course. Some two kilometers to the south, on the bank of the Siquia river, the Lagartera site features several carved boulders and was most likely associated to the El Gavilán ceremonial center. At some 200 meters northwest a further monumental area consists of one mound and a stone sculpture fragment. Roughly 1.5 kilometers to the southwest, across the Nawawas river on top of one of the higher hills in El Gavilán's hinterland, an extrusion of columnar basalts was recorded. An important feature of this rock outcrop is that it bears traces of quarrying. This is indicated by fragments of columnar basalt dispersed in the immediate vicinity of the outcrop. Wedge marks are also visible on some sections of the outcrop. The interpretation of this area as the quarry for the basalt sculptures at El Gavilán is reinforced by the likelihood that the megaliths are compositionally identical to the samples from the outcrop.

Given the circumstance and landscape, a major task entailed would have been quarrying and transporting the raw material – or finished product depending on the purpose of the particular object. As mentioned, samples taken from this outcrop are currently being processed for microscopic analysis by means of thin-sectioning. However, a geophysical pedestrian survey of the perimeter of the site did not yield any other outcrop of columnar basalt, making the encountered location a likely candidate for the quarry. This then allows for some insights into the most likely path of transport for the stones, which most likely would not have been linear, but following the landscape contours and converging at fordable sections of the Nawawas River.

Currently, there is still a limited understanding of the way the site was formed: It is unknown which megaliths are the earliest; if multiple stones were set in one periodic event, or if they followed one by one. Based on the above suggestion that the site was at least 'worked at' for several generations then presumably a level of expertise would have arisen at a technological and social level. The periodic repetition of the operational sequence involved in placing a megalith would have presented an occasion to some to muster cultural know-how, where

others may not have had used that opportunity. At the same time, the practice surrounding megaliths never became the domain of one single individual. These heavy things are rather exceptional in that they always need the collective to create them and maintain them, in contrast to almost all other examples of the local material culture. This in turn, either reinforced or (unintentionally?) created a sense of *communitas* (Joyce 2004). The placed megaliths afterwards returned the favor by providing a commemorative setting for the community itself. The community may have been a singular village or, more likely a regional network of villages from the surrounding region, perhaps stretched along the banks of the Nawawas and Siquia rivers. Accepting this entanglement of people with the megaliths does not mean that it was a process free of politics, precisely the different roles individuals will have played in the practices surrounding megaliths hold the potential for resistance, an awareness which may ultimately have contributed to the halting of intervention in the site and the decay of the sculptures and their associated architecture (sensu Hodder 2011).

Making sense of stones

“Men of science will, . . . , find about Juigalpa, San Diego La Libertad and other places a sufficiently large number [of artifacts] to enable them to throw some light upon the stone age of these extinct tribes” (Pim and Seeman 1869: 127).

The megalithics documented at El Gavilán form part of a wider regional historical practice to sculpt anthropomorphic sculptures. Housed predominantly in the regional museum in Juigalpa and at the National Museum in Managua, the almost all megaliths lack any form of specific contextual data. This an analytical obstacle mentioned by all investigators who have studied these stones before (Bruhns 1992, Thieck 1971). As a result, the focus has been on description and when possible classification. Beyond Nicaragua, comparative studies on megalithics instead now see them as pertaining to areas of ceremonial activity, features in a ritual meeting point for the social world that produced them. The El Gavilán site has opened up the possibility to go beyond regarding stone sculptures as a rock with drawings and involve the study of how stones were selected, shaped and turned into objects with life histories. Having said this, not all stones are equal. As a local museum will not haul in an unworked stone but only a (preferably intricately) carved one, so is iconography dominant over natural forms. This excludes a central finding from discussions on materiality; that carved stones and unworked ones both joined in forming a network of actors.

The task for this symposium is to consider the units of meaning we apply when thinking about the archaeology of Nicaragua. This paper has focused on megaliths, a particular feature of the archaeological record present in Nicaragua. It has done so with a specific focus on the relation between megaliths and those who made and maintained them. The question of which culture, ethnicity or language(s) were involved in El Gavilan was not raised. Historical linguistics indicates a regionally dominant role for Misumalpan language family speakers, with Matagalpa being the most likely spoken language. We might consider moreover what it would contribute in terms of understanding this sculptural tradition. In light of such a linguistic association, a comparative view across to northern Nicaragua is perhaps more pertinent than drawing on the well-worn oppositions between 'Chontales Style' and Zapatera Style' sculptures.

Terms such as 'Chorotega', 'Chontales', and 'Mesoamericanization' have been dominant concepts in the field of Nicaraguan archaeology. The University of Calgary investigations (McCafferty 2011) are a testament to the attention such concepts exert. One can only speculate on how research in Pacific Nicaragua would have developed with a different historical paradigm. What if there would be no Gil Gonzalez to coin and represent indigenous ethnicities and their complex social world? What then if we were to do away with these ethnic markers? What if the archaeological record in Nicaragua would be studied perhaps more like colleagues working on the Neolithic of Bronze Age of Europe (for example Bradley 1998)? In the Nicaragua symposium during last year's Anniversary Meeting in St. Louis, the evidential value of early Colonial sources was critically discussed and some raised participants pointed out the problematic nature of the descriptions contained in them. To be sure, these documents have presented archaeologists and historians in Nicaragua with unique information about indigenous society in the first half of the 16th century. I would like to suggest that it is perhaps the ethnicities presented in these documents that are problematic, rather than the sources themselves. The focus on ethnicity is an important element in the archaeology of Nicaragua, but it must be noted that the uses of stone is not a key element in discussions on ethnic groups. Archaeologists have done much work on polished greenstones, discussing their role as exotic social valuables in exchange relations and cosmovision, as well as assessing these stones through detailed analysis. In conceptual texts on the Nicaraguan past, the impact of topics like flaked stone tools and architectural uses of unmodified stone is much more limited.

The ways in which the materiality of stone played a part in indigenous societies in ancient Nicaragua is difficult to assess, and I would argue these difficulties are in part reflecting interpretative practices in Nicaraguan archaeology. For example, the opposition around the role of Mesoamerican cultural traditions in local developments *vis-à-vis* an autochthonous impetus, is perhaps less useful when considering stone sculpture.

'Mesoamericanization' has been raised many times as an important topic for discussion and I suspect it will remain that way in the near future. Archaeology in Nicaragua, to a significant degree thanks to the Calgary project's research focus on ethnicity and the late Prehispanic period, has moved beyond simplistic notions of unexplained Mesoamerica-centric transformations. The recent focus by Larry Steinbrenner (2010) on balancing the causality in cultural change by thoroughly involving the 'Chibchan perspective' in the debate will be a re-orientation in Nicaraguan archaeology with a long-term impact. Nonetheless, and at the risk of stealing some discussant thunder, there is more to Nicaragua than two language families. The focus on interaction parallel to the Pacific coastline is essential, but equally relevant would be expanding the amount of research emphases to include the study of social networks that reached across the volcanic front arc tying together the central and northern interior regions to Pacific Nicaragua.

Returning to the presented material from El Gavilán, a final consideration regarding archaeological methodology is left. A practical implication of considering unworked stones in term of their potential significance for archaeologists working in Nicaragua is how to deal with these objects once they have been observed in the field. What are archaeologists and local heritage custodians to do with them after this initial stage? It seems cynical to advise heritage managers in Nicaragua to start including 'natural stones' in museum collections, the problems of registration, looting and destruction are overwhelming enough already. Yet, perhaps underscoring the importance of including such natural objects in site registration can help. By focusing on macroscopic characteristics of these stones, as is routinely done for soils, the role of unworked megaliths in Prehispanic ritual settings is stressed and a heightened appreciation of the character of monumental sites and the technological accomplishments of its builders is reached.

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