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Bethany J. bin Beyyette

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Copán, Honduras

A Multiethnic Melting Pot during the Late Classic?

Rebecca Storey

To talk of identity and ethnicity of past populations is to talk of something usually identified with agency, dynamism, and fluidity, which will be based here on the somewhat indirect evidence of archaeological artifacts and context. It may also be that identity and ethnicity, as studied in contemporary societies, is a modern concept that would have had little meaning to past peoples. The chapters in part 1 of this volume discuss the difficulties of defining ethnicity and identity in ethnohistoric and contemporary Maya. In fact, Restall and Gabbert warn about inferring ethnicity from material remains. Marken, Guenter, and Friedel, from the view of archaeologists, agree that it is unclear how the Classic period Maya self-identified. They do point out, as many other researchers have done, that the elite shared much material culture, texts, and cosmological ideas among the various important centers but also had their own clearly local traditions and concerns. In contrast, the various Maya populations present today clearly have ethnic identities and are only slowly accepting a pan-Maya identity (Samson, this volume).

So, in the past, did the people at least distinguish similar Maya-like peoples from non-Maya groups? Based on material remains and art, Maya are clearly differentiated from other Mesoamerican peoples in the pre-Columbian past. Also, as discussed below, there are clear examples of what we define as Maya deliberately using "foreign" identity and material elements. Of course, we know that individuals also have several potential identities besides a possible ethnic one; gender, social rank, occupation, age are all dimensions important to an identity. While some cultures

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may not be amenable to this kind of analysis, the pre-Columbian Maya do seem to be a candidate because of the distinctive material remains and their context recovered archaeologically, although what people called themselves and how they conceived differences are at this point unclear.

Ethnic identity is one that can be based on cultural and biological traits, often imputed by others to a group. This does not mean that people do not internalize ethnic identities, but the anthropological study has tended to concentrate on "post-Colonial situations" and "ethnogenesis," whereby peoples are active in defining and refining their identity when faced with more powerful ethnic groups (Hill 1996; Castillo Cocom, Rodriguez, and Ashenbrener, this volume). Studies of ethnic identity in the past are rarer but present (Jones 2002; Buzon 2006), although like these studies of Romanization and Ancient Egypt, they are often of situations where there is historical documentation to support a worldview that allows ethnic identification. The pre-Columbian Maya did recognize and depict "foreigners" (Demarest 2004), so a sense of Maya and non-Maya may have been present. The question of whether there were "different" ethnic Maya in the past has been little investigated before now, but as other contributions to this volume attest, there is evidence that such distinctions may have been made. The important Classic Maya center of Copán on the southeastern edge of the Maya world, at the time a frontier, may provide a good case study for the question of Maya identity.

Bioarchaeology can contribute to the study of identity and ethnicity in two ways: by biological relatedness derivable from skeletons and by the archaeological context in which the skeletons were recovered. The two sources of information are important, but they can interact in complex ways. The mortuary treatment given an individual is a strong source of identity and ethnicity, and different groups can be distinguished by their burial practices. However, some skeletal indicators can reflect genetic relatedness, so the biological information potentially informs about endogamy/exogamy and the mixing of different populations through time. Thus, the mortuary treatment could be exhibiting a uniform identity, influenced by those other dimensions of identity listed above, but the biological information could be revealing intermingling with nearby groups with different identities. The history of this particular case would then be different than one in which there was a "dominant culture" where enclaves of peoples with different ethnic identities were still present. In this latter case, the biological information could reveal that there is either a fairly strict separation of biological pools or a great deal of intermingling and relatedness within that society in spite of differing enclaves. After all, identity and ethnicity are culturally defined, and the biology will not necessarily pattern the same way.

A comparison will be made here between one of the major centers of the Late Classic Maya period, Copán, and the Formative village of K'axob, using potential

skeletal indexes of relatedness and the cultural patterns of mortuary treatment. It is expected that K'axob will show more uniform identity because of its smaller size and location in the heart of the Maya lowlands, while Copán may reveal a more complex situation because of its larger size, history, and location at the Maya frontier.

COPÁN AND THE SOUTHEASTERN MAYA PERIPHERY

Copán, the great Classic period Maya center in Honduras, was on the southeastern frontier of the Maya world. While it was definitely linked culturally to the lowland Maya of Guatemala and Belize, it has long been thought that this was the result of a lowland Maya incursion into the Mesoamerican, but non-Maya, peoples living in the area (Fash 2004). Recent archaeological work and epigraphic decipherment of Maya hieroglyphs have shown that this is indeed likely what happened. Artifacts and residences from the Late Early Formative to the proto-classic (circa 1000 BC to AD 400) indicate that non-Maya peoples were living in the Copán Valley (ibid.). Then in AD 426–27, an individual named K'inich Yax K'uk Mo' (Shining Quetzal Macaw) arrived in Copán and founded a royal center and dynasty that lasted until AD 822 (Sharer et al. 2004; Stuart 2004). He had apparently received the insignia of office elsewhere (perhaps in the great city of Teotihuacan in central Mexico, the dominant place during the Classic period), at least according to the texts. He was depicted in later iconography with the trappings and insignia of Teotihuacan (ibid.), and his early constructions and ceramics are definitely Teotihuacan-inspired (Sharer et al. 2004).

This founder seems to have the isotopic signature of an individual from the Petén (perhaps Tikal) region of the lowland Maya (not a central Mexican from Teotihuacan), while his wife was local to Copán (Buikstra, Burton, and Wright 2004). The importance of this is that it represents the arrival of and colonization by Mayan-speaking peoples in the area and the clear linking of Copán with lowland Classic Maya cultural patterns. These patterns remained dominant and influential in the area until its abandonment as part of the Classic Maya collapse at the end of the Classic period. The Late Classic period (circa AD 650 to 1000) represents the apogee of Copán in terms of population size and variety and extent of residences. This period dominates the burial sample.

But what happened to the non-Maya peoples already there when the Maya arrived? Were they absorbed into the Maya world biologically as they were culturally? Or did they remain somewhat isolated and distinct within the Copán polity? Were the elite Maya the main ones who did the colonizing, in which case the commoners might represent more of the non-Maya peoples (de Montmollin 1995)? The ethnohistorically known Quiché Maya stressed their cultural distinctiveness

and foreign descent through definitely different material items from those of the general populace (Henderson 1992), so it is possible that the Copáneco elite did the same. Because Copán was on the periphery of areas with other peoples, did it become a magnet for nearby non-Maya peoples as a place to settle? Certainly, Copán maintained links and trade with lowland Maya to the north and non-Maya peoples to the east, although the evidence of interchange seems stronger with the east than it is for the Petén heartland (Webster 1992). Recent research by Canuto and Bell (this volume) reveals that in a nearby valley that was part of the Copán polity, the El Paraíso center had characteristics similar to the Late Classic Maya elite at Copán, while the center of El Cafetal seemed to express a determinedly different, non-Maya identity for a time. Such are the complexities of trying to study identity in the past, especially in what was most likely a very dynamic frontier. This also makes Copán a good place to investigate whether the Maya might be viewed as multiethnic, especially during the Late Classic period.

THE FORMATIVE VILLAGE OF K'AXOB

K'axob is an agricultural community near Pulltrouser Swamp in northern Belize. Excavations were focused in the southern sector, Pyramid Plaza B, where testing found well-preserved and accessible Formative deposits under the patios of the later Classic period construction (McAnany 2004a). Plaza B was the largest construction in this area and seems to have been the focus of the sector. While very informative, the excavations were limited in areal extent and did not uncover all of each residence or the entire Formative community. Thus, what is present is only a sample, which is influenced by where the excavations were placed in the basal platforms. Although K'axob had a Classic period occupation, only the pre-Classic individuals are discussed here.

K'axob is part of the founding Maya communities in this part of the Maya lowlands. Founded in the Middle Formative (circa 800 BC) as a small settlement with generally perishable dwellings, it grew during the Late Formative and developed clear evidence of an internal social hierarchy (ibid.). However, K'axob remained a small player in the region. The local top power was Lamanai, the very long-lived Maya central place, whereas villages like K'axob were at the bottom of the power scheme (ibid.). Nevertheless, the evidence from K'axob was of a largely autonomous place where political control from outside seemed to have been unobtrusive and inhabitants had pride in their village that seemed to permeate the material remains and their context (McAnany 2004b). Although it was close to three other, larger Late Formative Maya settlements—Nohmul, San Estevan, and Cuello—K'axob nevertheless had distinct ceramics that differentiated it from other communities:

"As institutionalized power relationships began to dominate the social landscape, individual communities responded by emphasizing their own unique attributes[,] thus establishing and attesting to their place within society" (Bartlett and McAnany 2000:118). Because it was relatively small during the Formative, K'axob may have especially felt it was imperative to distinguish itself. The long, 1,000+-year history of some residences (McAnany 2004a) attests to the stability and probable close interaction among the residents of this Formative village.

The importance of K'axob is that it represents a clearly Maya village to contrast with the larger, perhaps more multiethnic people of Copán. The main possible confounding factor is the time difference between the two populations, as K'axob is from 900 years to 500 years older. However, the interest is in seeing what kind of biological variation might be present in K'axob as opposed to Copán, so the time difference is not the focus of the analysis. The results are preliminary, as not all the data that could be used as indicators of identity or biological distance have been analyzed.

METHODS FOR STUDYING BIOLOGICAL INDICATORS OF ETHNICITY AND IDENTITY

While comparison of the DNA of individuals and populations would be the best way to determine biological relationships, such analysis is still too slow and complex to be realistic for comparing many skeletons, although the ability to recover ancient DNA is improving all the time. Thus, we must use phenotypic traits to study the possible underlying genotypes, although they are not likely to be as sensitive as DNA. Both cranial and dental metrics have been used successfully to study biological relationships and provide results comparable to genetic ones (Relethford 2002). Non-metric cranial and dental traits, sometimes called discrete traits, can also be used, but only dental metrics will be used here. The crania at Copán and K'axob were generally poorly preserved, and not enough metrics are available for biodistance analysis. The underlying thesis of this type of study is that populations that exchange mates and interact with one another are phenotypically more similar, while populations that do not exchange mates become more different. This is certainly true on an interregional basis, but biodistance analysis can also be used at the site level of analysis, even at the intra-cemetery level (Jacobi 2000). The analysis compares the similarity and amount of variation present in dental metrics, since these are partially heritable. The more they are similar, the more closely related biologically are the individuals/subsamples. The more variation present in the metrics, the more genetic heterogeneity is present, which could be a possible indication of different ethnicities in a sample.

There are a few other recent studies of biodistance for the Maya. Rhoads (2002) used dental metrics and dental non-metric morphological traits on the Copán skeletal sample to look at biological differences and the presence of non-Maya individuals in the Copán Valley. There is overlap in some of the dental measurements, but the Copán sample here is divided into different subsamples, and there is no attempt to replicate her study. Instead, the statistical methods used are different, including Bayesian discriminant analysis, discriminant functions, and principal component analysis. The results of this study will be compared with those of Rhoads, especially since morphological traits will not be used.

Jacobi (2000) also used dental measures and non-metric morphological traits to study biological relationships within the Colonial period Tipu Maya skeletal sample. His purpose was to look for families and possible Spanish presence among the individuals buried in a Catholic Church. Jacobi used discriminant function analysis as well. This method looks at how well the measures can classify individuals into particular groups. In his case, Jacobi was testing the similarity of the burials inside the church, which might have been Spaniards or a Spanish admixture, with those buried outside. Jacobi found no differences by location of burial, and all of the individuals appeared to have been Maya.

Sex of the skeletons was estimated using standard techniques (Buikstra and Ubelaker 1994). For those with enough cranial and pelvis preservation, morphology was used to estimate sex. For more fragmentary remains, discriminant function measures were calculated based on metric measurements of those sexed through morphology (considered to be of known sex). For Copán, the sex estimations are felt to be good. The K'axob individuals were more fragmentary than those at Copán, so the sex estimations are more tentative. However, individuals that could not be sexed or cases where the estimation was weak are not studied here. Only individuals sexed with clear morphological traits or where there were at least some morphological traits combined with strong discriminant functions are included in the analysis. Nine females and twenty-three males in the K'axob sample, fifteen males and fifteen females in the rural Copán sample, and sixty-five females and forty-four males in the elite 9N-8 residential compound met the criteria. These constitute the sample that will be analyzed.

The dental measurements taken were the buccolingual breadth (bl) and the mesiodistal length (md) to 0.1 millimeter, the same measurements used by Jacobi (2000), as discussed by Kieser (1990) (see figure 10.1 for an illustration of these measures). All of them were measured by the author, and most teeth were measured several times to check for intra-observer error, which was minimal and non-significant. Where slightly different measures resulted from the multiple measures, the mean of these was used for each tooth present for an individual. The main difference from the practice of Jacobi and Rhoads is that if both right and left teeth were present,

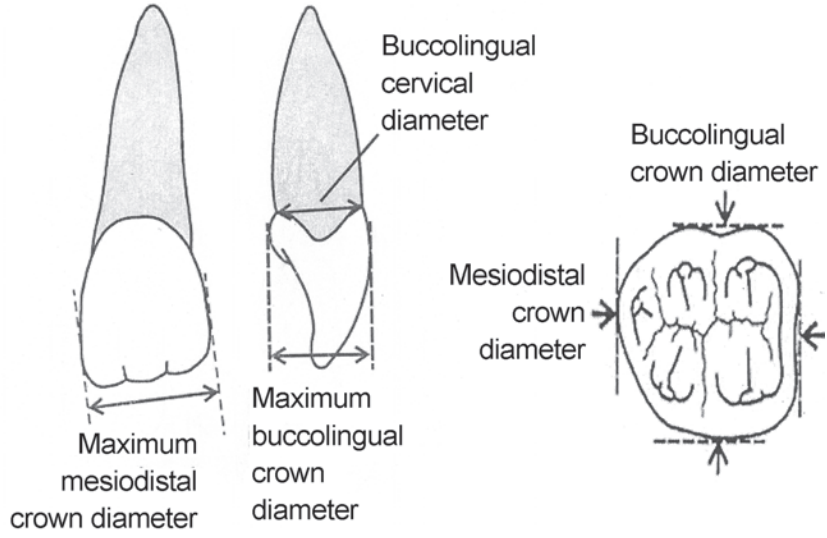

Figure 10.1. Dental measures taken on Maya skeletal samples (adapted from Hillson et al. 2005, used with permission)

the measurements that would result in the larger crown area were selected. The differences were usually at most two-tenths to three-tenths of a millimeter. It is felt that the measure of size differences between males and females is better calibrated when the largest teeth are used.

First, the variation in the dental metrics between males and females in each sample was compared, using both bivariate and multivariate methods (SPSS version 12 and 16). This variation has to be tested before variation between samples can be measured and interpreted. Here, both univariate and multivariate methods were used, although all analyses have the problems of small samples, which affects the ability to find statistical significance. Next, an overview of mortuary treatment was conducted to determine if any differences might indicate ethnic identities present in Late Classic Copán as opposed to K'axob. The information from both the biological relationships and the cultural patterns of mortuary treatment provides at least a preliminary indication of whether an important center of Late Classic Lowland Maya civilization was more multiethnic than most researchers have assumed.

POST-MARITAL RESIDENCE

However, more than just ethnic identity can influence possible markers of biological relationship. At an even finer level of analysis, patterns of marriage and

post-marital residence are important determinants of the pattern of biological relationship. While there are always exceptions, in most societies it is expected that a newly married couple will live either near the husband's family, virilocality, or with the wife's family, uxorilocality. The result is that one sex is typically more mobile than the other, and relatives are spread out over various sites. Thus, the sex with more variability in phenotypic traits is the mobile sex, the one marrying in, while the sex with less variability is non-mobile. Members of the latter sex will be more similar because they stay among relatives. Thus, the variability between males and females needs to be studied before comparisons between K'axob and Copán can be made.

The pre-Columbian Maya are generally considered patrilineal or patrilocal, based on dynastic successions and ethnohistorical evidence, and the present-day Maya are patrilineal (McAnany 1995; Restall 1996). This means one should expect females to marry within their husbands' communities and thus be more heterogeneous, while the males of a site or residence would be more closely related. Post-marital residence is often not that simple. It could be that elites held to the pattern more strictly, while commoners tended to marry locally. In that case, males and females would be different among the elite but not as much among commoners. While K'axob is not likely to have been a totally endogamous village, mates would probably have been mostly from a restricted local area. Thus, the differences between males and females might not be very marked. There are status differences, but they are less marked than in the Late Classic, so even elite males and females here may have similar variability in phenotypic traits.

The Copán sample can be divided into several possible subsamples that might have differences. Thus, individuals from the neighborhood of Las Sepulturas, which is near the Acropolis center of the polity, might differ from the dispersed, lower-status rural people from the sustaining area. The former sample comes from an elite compound, 9N-8, the largest in Las Sepulturas. While it definitely housed an elite lineage, the compound had over 200 structures and 10 patios. With so many residents, those of the noble lineage were likely a minority, and the rest were either distant relatives or unrelated retainers. It is possible that the rural people and the retainers might have been non-Maya biologically or maybe indistinguishable and that mates were local. It is also possible that elite males and females might have come from some distance. Thus, the hypothesis here is that one could find a significant difference between males and females in some Copán subsamples as opposed to those of K'axob, where the difference is expected to be non-significant. This hypothesis reflects the likely distance of mates in the two societies. One cannot assume that males will be the less mobile sex, even though that is the patrilocal pattern.

For the univariate analysis, the between-sex variance was tested for statistical validity using the F-test for equality of variance and the Shapiro-Wilk test for normality (as suggested by Schillaci and Stojanowski 2003). Tables 10.1, 10.2, and 10.3 contain the means and standard deviations (in mm) plus the F-test results for the 9N-8 compound, rural Copán individuals, and the K'axob village. While all of the teeth could be used, the use of polar teeth (UI1, LI2, the canines, first premolars, and first molars) is often felt to be best and avoids possibly redundant information (Schillaci and Stojanowski 2003; Rhoads 2002). The comparisons of the sixteen means and SDs reveal that the 9N-8 compound had eleven measures with greater male variability, while females had five (table 10.1). Rural Copán had nine measures with greater male variability and seven in which females had more variability (table 10.2). K'axob was the same as rural Copán, with nine male and seven female measures having greater variability (table 10.3).

Although not presented in the tables, the elite 9N-8 residence had three measures that failed the normality test (males—UP1lb, UClb; females—UM1md). For rural Copán, six measures failed the normality test (males—UCmd, UI1lb, UI1md, LClb, and LCmd; females—UClb). In K'axob, only LM1md for both sexes was non-normal. These measures could not be used in testing for significant variation (defined as $p < 0.05$) between the sexes in each site. For the F-test between the sexes, there was no significant difference in K'axob. Rural Copán had only one significant difference (LI2lb) between the sexes out of ten possible comparisons, and 9N-8 had ten measures that were significantly different in variance between the sexes (see table 10.1). The difference may result from the fact that the rural and K'axob samples are small, while 9N-8 often had more than thirty in each sex for testing. Thus, as hypothesized above, the 9N-8 compound may reveal more variability in mates, as well as differences in genetic lineage (perhaps also tied to differing identities of elites and commoners). Also, as discussed, K'axob mates do seem to come from the local population.

Multivariate analysis is needed because it considers the total pattern of variability (Schillaci and Stojanowski 2003). A variety of methods have been used, but one of the basic methods is discriminant function. It is the only multivariate method used on dental metrics by Jacobi (2000) and one of the techniques used by Rhoads (2002) and Schillaci and Stojanowski (2003). Thus, it is the technique used here, pending further research. It assumes multivariate normality and equality of variance-covariance matrices of the data (Norusis 2008). Thus, the measures that are non-normal should not be used. As is usual with any statistical procedure, one should test to make sure the data meet the assumptions, which in SPSS means using Box's M (ibid.). However, the ratio of the log determinants of the variance-covariance matrices can provide a measure of which sex has more variability (Schillaci

Table 10.1. Copán 9N-8 Compound skeletal sample polar teeth measures

Measurement	*Number*	*Mean*	*SD*	*F-Test p =*
UM1lb–F	34	11.0	0.52	0.000
M	33	11.6	0.53	
UM1md–F	34	10.6	0.48	
M	32	11.1	0.46	
UP1lb–F	40	9.5	0.56	
M	36	9.6	0.77	
UP1md–F	40	7.4	0.42	0.136
M	36	7.7	0.50	
UClb–F	47	8.2	0.52	
M	34	8.8	0.57	
UCmd–F	47	8.1	0.46	0.007
M	32	8.4	0.57	
UI1lb–F	39	7.1	0.44	0.000
M	31	7.5	0.47	
UI1md–F	41	8.5	0.46	0.002
M	28	9.0	0.58	
LM1lb–F	40	10.6	0.51	0.007
M	29	10.9	0.57	
LM1md–F	41	11.6	0.55	0.001
M	29	12.0	0.50	
LP1lb–F	48	7.8	0.56	0.006
M	31	8.1	0.50	
LP1md–F	48	7.0	0.50	0.131
M	40	7.2	0.44	
LClb–F	52	7.5	0.49	0.000
M	34	8.1	0.56	
LCmd–F	52	7.1	0.36	0.000
M	33	7.5	0.46	
LI2lb–F	44	6.1	0.34	0.004
M	30	6.5	0.51	
LI2md–F	43	6.1	0.45	0.001
M	30	6.5	0.36	

Table 10.2. Copán rural skeletal sample polar teeth measures

Measurement	*Number*	*Mean*	*SD*	*F-Test p =*
UM1lb–F	9	11.4	0.50	0.594
M	7	11.5	0.79	
UM1md–F	9	10.7	0.73	
M	7	10.9	0.91	
UP1lb–F	10	9.6	0.39	0.133
M	8	10.0	0.66	
UP1md–F	10	7.5	0.76	0.555
M	8	7.7	0.54	
UClb–F	12	8.2	0.90	
M	11	8.8	0.48	
UCmd–F	12	8.2	0.53	
M	11	8.5	0.32	
UI1lb–F	8	7.1	0.46	
M	6	7.2	0.10	
UI1md–F	8	8.4		1.19
M	6	8.8	0.39	
LM1lb–F	4	11.0	0.69	0.822
M	7	11.1	0.72	
LM1md–F	4	11.8	1.09	0.901
M	5	11.7	0.78	
LP1lb–F	11	8.0	0.45	0.562
M	8	8.2	0.78	
LP1md–F	10	7.1	0.42	0.344
M	8	7.4	0.72	
LClb–F	11	7.5	0.61	
M	11	8.2	1.1	
LCmd–F	11	7.1	0.54	0.1
M	11	7.7	0.97	
LI2lb–F	8	6.2	0.27	0.006
M	7	6.8	0.42	
LI2md–F	9	6.2	0.53	0.304
M	6	6.5	0.5	

Table 10.3. K'axob skeletal sample polar teeth measures

Measurement	*Number*	*Mean*	*SD*	*F-Test p =*
UM1lb–F	6	11.2	1.00	0.241
M	13	11.8	0.79	
UM1md–F	6	10.3	0.47	0.894
M	14	10.7	0.54	
UP1lb–F	7	9.5	0.99	0.746
M	17	9.6	0.37	
UP1md–F	7	7.3	0.48	0.96
M	17	7.4	0.23	
UClb–F	5	8.5	0.38	0.583
M	19	8.7	0.7	
UCmd–F	6	7.9	0.7	0.636
M	19	8.3	0.43	
UI1lb–F	3	6.9	0.25	0.647
M	13	7.2	0.52	
UI1md–F	3	8.5	0.10	0.838
M	13	8.7	0.33	
LM1lb–F	3	11.2	0.51	0.333
M	13	10.8	0.85	
LM1md–F	2	11.6	0.42	
M	12	11.5	1.36	
LP1lb–F	8	7.9	0.54	0.477
M	14	8.0	0.67	
LP1md–F	8	7.1	0.50	0.189
M	14	7.2	0.48	
LClb–F	7	7.8	0.53	0.696
M	15	8.0	0.73	
LCmd–F	7	6.9	0.57	0.065
M	15	7.4	0.36	
LI2lb–F	6	5.9	0.54	0.673
M	9	6.1	0.78	
LI2md–F	7	6.3	0.40	0.306
M	10	6.3	0.32	

and Stojanowski 2003). Here, the log determinants of males and females were compared to obtain a preliminary measure of variability.

The largest sample is from 9N-8. The measures that were non-normal were not entered into a stepwise analysis, which yielded only one measure—LCmd. The Box's M was 0.702, so the variance-covariance matrices are equal. The discriminant function was only 77 percent accurate, less than the 80 percent preferred. Forty individuals were involved in determining the function, which is less than half. However, these individuals clearly displayed equality of variability, and the log determinants were 2.072 for males and 1.893 for females, indicating slightly more male variability, although not a significant amount. For all practical purposes, males and females have similar variability.

The Copán rural sample had small samples and much missing data, such that of the possible thirty sexed individuals, the maximum of twenty-three had the upper canine, which, unfortunately, is non-normal and "fails" the Levene test. Because the UI1, UC, and LC did not meet the assumptions, the other teeth were entered into a stepwise analysis, which yielded LI2lb and LM1md as the best measures. These measures resulted in a DF that is 100 percent accurate, with a Box's M that indicates assumptions are met. This means there is definitely sexual dimorphism in these measures. The log determinants for the matrices are 5.704 for males and 7.301 for the females, indicating that females are more variable, although again this difference is not significant. Only seven individuals in this sample could be analyzed this way, so the small samples here will probably make it hard to find true difference. The females seem more mobile, which fits with a patrilocal post-marital residence pattern.

For K'axob, an imbalance between the numbers of males and females, plus the missing values, made it hard to calculate a discriminant function. In fact, using only the measures that met the assumptions, there was no function because only males were available. Using a variety of combinations, the UClb and LClb could finally be used. The function had a reasonable accuracy of 83 percent. Also, the Box's M indicated met assumptions at $p = 0.798$, and the log determinants were 2.672 for males and 4.0 for females, a pattern similar to rural Copán. But again, no statistical significance in variability between males and females was found in any of the Maya samples in the multivariate analysis, as might be expected for rural Copán and K'axob. However, the univariate results for 9N-8 indicate significant differences, and males were generally more variable. Perhaps analysis between the sites will provide further evidence for that pattern.

VARIATION BETWEEN MAYA SITES

Having found at this point no difference in variability between males and females in the three samples, comparisons can be made between the sites. The sexes were combined to try to increase the sample sizes, which could be justified on the basis of there being no multivariate significance between the sexes. Again, there was only one significant difference in the sixteen tooth measures among the sites as measured by the F-test: the lower I2lb measure. Checking the post-hoc tests, which break down the F-test results into two-by-two contrasts among the sites, only rural Copán and K'axob were close to significance for this measure; actually, 9N-8 did not differ significantly from the other two samples. Thus, the tooth measures generally found that this phenotypic indication of biological relatedness shows that these sites did not show excessive variance that might indicate clear Maya/non-Maya populations.

The treatment at death also provides information on identity, as societies have traditions and rituals appropriate to the disposal of a body that differ from other ethnicities and religious traditions. For example, the Maya buried at the Tipu chapel were definitely buried in a Christian way, generally extended with head to the West, compared with prehispanic burial patterns (Jacobi 2000). The Maya, like other prehispanic Mesoamericans, buried their dead under and around residences, and the graves contained varying amounts of furnishings. Shell (both marine and freshwater) and greenstone (in the form of jadeite, fuchsite, and serpentinite) were very prestigious and valuable materials for individuals in the prehispanic world (Bartlett 2004; Isazu Aizpurúa 2004). Some recognizably Maya lowland mortuary customs have been summarized (Welsh 1988). According to Welsh, these customs include generally primary interments, flexed bodies in smaller graves and extended ones in large tombs/crypts, and differences in amount and value of grave furnishings according to social status, with rulers and elites having much more elaborate treatments. There was also a tendency to place a ceramic bowl over or under the head of the deceased. In general, males and females had similar types of grave furnishings and mortuary treatments. Some regional patterns have also been defined in which some of these customs were more prevalent, such as extended burial at some sites and flexed bodies in others (ibid.).

K'axob definitely has some of these customs but also some important differences. There were only twelve individuals around a single domestic residence from the earliest period (800–400 BC), so the larger Late Formative sample (400 BC to AD 250), sixty-five adult individuals, will be described. However, the earlier burials are in a residence that became larger and more elaborate and the center of the southern sector of K'axob (McAnany 2004b). Primary interments were more common, 63 percent, but secondary interments were also common at 37 percent. Among primary interments, extended burials were the most common (44%), but flexed (20%) and seated (36%)

positions were almost as common (this latter position was not stressed by Welsh but is found at many other Maya sites). Most notable was the number of interments with multiple individuals, some with secondary and primary interments with sequential placements or in one single episode (Storey 2004a). These multiple, secondary burials became the most common type by the end of the Late Formative among those of highest status, when ancestral shrines became more public (McAnany 2004b).

However, at all times, primary interments were common in residential structures. At K'axob, there were no stone crypts or tombs but simple earthen graves and some cists with caps. The head-covering-the-vessel pattern was also present. This is probably related to the lack of more formal grave constructions, as has been speculated: "lower class people, by contrast, were almost always buried with dirt in the face" (Haviland and Moholy-Nagy 1992:53). Thus, this treatment was probably intended to give the deceased more respect. Thirteen males, nine females, and one child had a bowl over their heads. Only four of the adults were young, probably under age thirty. Thus, this treatment was probably limited to select individuals, reinforcing the idea that it was intended for higher-status individuals. Six females and fifteen males had shell artifacts. Four females and six males had greenstone artifacts as grave furnishings.

A comparison with some of the mortuary treatment of 111 individuals during the Late Formative at the nearby larger site of Cuello shows a general similarity with K'axob (Robin 1989). The seated position (25) was the most common at Cuello, but extended (10) and flexed (15) positions were also common. There were more primary than secondary interments associated with the residential platforms. Most graves were simple earthen and cist types, but there were five crypts as well. Since K'axob is a village, it is probably not surprising that it would lack some of the more elaborate types of treatment present in Maya lowlands during this period. Nonperishable grave goods were present with 77 percent of the individuals at Cuello, which is close to the 70 percent at K'axob, indicating that providing grave furnishings was a pattern for Maya interments at this time. In contrast, 64 percent of the individuals had a ceramic vessel over the head, a higher proportion than at K'axob (27%). This Cuello pattern seems to indicate that perhaps placing a ceramic vessel over the deceased's head was a more common custom, a way to protect the head after burial.

While there are always likely to be differences between Maya sites, some dependent on differences in status, definite patterns are seen in the Late Formative: primary and secondary interments; extended, flexed, and seated positions for a primary interment; grave furnishings; and a vessel covering the skull. Burials vary by status within a site, with those of high status having more valuable grave furnishings and elaborate tombs. Burials, especially primary inhumations, still predominate in and around residences. Does the Late Classic period still have these patterns, or will

there be changes because of the differences in the period? A comparison of patterns between the elite residence 9N-8 and the more modest residences of rural residents at Copán is found in table 10.4.

The pattern of residential burials and of differences according to status continues into the Classic period, although the elaboration of the highest statuses becomes more evident in the placement of shrines, pyramids, and elaborate stone tombs with valuable jadeite and shell in abundance, as is evident in many lowland Classic Maya centers (Martin and Grube 2000). At Copán, the Acropolis is the locus of several royal burials and also of other individuals characterized by elaborate mortuary treatments (Buikstra, Burton, and Wright 2004; Storey 2004b). At the large and elite residence 9N-8, however, primary interments strongly dominate for both males and females. This is an example of both continuity with and difference from Late Formative K'axob and Cuello. 9N-8 is a residence and thus has mostly primary interments, while the secondary, protracted mortuary treatments seen in K'axob and Cuello are reserved solely for the very top of the social hierarchy in the Acropolis, reflecting the greater inequality present during the Classic period.

Even most of the multiple interments at 9N-8 are primary inhumations, again a contrast with K'axob. This indicates the pattern of direct burial of individuals shortly after death and almost no disturbance of the body thereafter. Simple earthen pits are still the most common grave type, although more formal constructions are present. This is probably the case because stone is rare around K'axob but common at Copán. For body position, strong majorities of males and females are flexed, while extended and seated (only five females and five males) positions are rarer. It is more common to find individuals with no imperishable grave furnishings at 9N-8 compared with K'axob. There is, however, a statistically significant difference in the numbers of grave furnishings between the sexes, with males having more furnishings. A minority of individuals have shell and greenstone grave furnishings, but these types of artifacts are present with a larger proportion of the individuals of known sex at K'axob. The difference in greenstone items between males and females in 9N-8 is significant (Fisher's exact test). Again, this reflects the more unequal and stratified society of the Late Classic versus the Late Formative.

The Copán rural sample, which might be made up mostly of non-Maya, seems to have a very similar mortuary treatment to 9N-8, especially in the proportions of primary versus secondary interments and in body positions. There is a slight increase in the proportions that have grave constructions as opposed to simple earth graves than is the case in 9N-8. The rural males are mostly without grave furnishings, while the majority of females have them. The number of furnishings is very similar between the sexes. In 9N-8 most males do have items, but half the females do not; the differences in these proportions are not significant (Fisher's exact test $p = 0.25$).

Table 10.4. Comparison of mortuary treatment in Late Classic Copán

Sample	*Primary Interments*	*Single Interments*	*Body Position*	*Grave Type*	*Grave Furnishings*	*Exotics*
9N-8						
Males	92%	45%	63% flexed	49% earth	41% none	69% none
			18% extend	31% formal stone tombs	41% 1–17 items	31% 1–8 greenstones shell rare
			10% seated	20% cobbles		
Females	2%	73%	74% flexed	51% earth	50% none	12% 1–5 greenstones
			9% extend	12% formal stone tombs	49% 1–7 items	1 individual 123 shell beads
			8% seated	37% cobbles	1 individual 125 items	
Rural Copán						
Male	75%	99%	89% flexed	33% earth	58% none	100% none
			11% extend	17% forçmal stone tombs	42% 1–4 items	
				50% cobbles		
Female	87%	99%	87% flexed	40% earth	40% none	80% none
			13% extend	50% cobbles	60% 1–4 items	20% 1–2 greenstones no shell
				1 in formal stone tomb		

The differences in the proportions of the males and females with greenstone in the rural versus the 9N-8 sample are also not statistically significant (Fisher's exact text). The smaller rural sample may be impoverished in its mortuary treatments, but the differences do not seem to be characteristic of a different mortuary tradition.

These Late Classic patterns do contrast with K'axob. When the proportion of primary versus secondary interments at K'axob is compared with each Copán sample,

Fisher's exact test is highly significant between 9N-8 and K'axob ($p < .001$) and very close to significance with the rural sample (Fisher's exact text $p = 0.07$). The pattern of flexed burials in the Late Classic is also significantly different from K'axob's extended and seated positions. The Late Classic has more stone tombs and cobblestone grave constructions, but K'axob is in an environment with little hard stone, so this difference is probably purely environmental. Shell is rare at Copán and more plentiful at K'axob, but again, this may be an environmental difference, since K'axob is in Pulltrouser Swamp and near the coast. Greenstone artifacts in the grave furnishings are found with a minority of individuals at all samples. The other real difference with K'axob, in addition to types of interment and body positions, is the lack of individuals with ceramics over or under the head in Late Classic Copán, which Welsh (1988) identified as a general Maya mortuary custom. Might this be an indication of non-Maya influence at Copán? This might reflect the fact that most high-status individuals were in tombs, and many individuals at 9N-8 might be retainers or distant relatives or of lower status in the rural area, which would not merit the "no dirt in the face" treatment (as noted by Haviland and Moholy-Nagy 1992).

Future research will determine how different this pattern is at Copán, especially since at Dos Pilas, for example, at least one individual is depicted with an inverted bowl on the head (Wright 2006:70). However, Wright (ibid.) noted that the location of grave furnishings was not always recorded for her Pasión skeletal samples, so it was not used in her comparative analysis of mortuary treatment. At K'axob, in contrast, a Classic period skeletal sample is available, although the total numbers have not yet been determined. During the Early Classic, for example, the crania of seven out of nine interments had a head-covering vessel (Storey 2004a). In Late Classic K'axob, preliminary analysis indicates that about 58 percent of the burials had a head-covering vessel, some with clear kill holes (although preservation hampers this determination for many vessels). There also seems to be a pattern of sequential burial, with secondary interments placed with primary ones (McAnany 1997). These patterns represent continuity from the Late Formative. Also continued from earlier patterns, many burials are linked to termination/dedication rituals of buildings before new construction was begun (see Storey 2004a).

At Copán, there are a few secondary interments with primary ones, but there is less clear linkage of interments to termination or dedication rituals for buildings, as at K'axob. Individuals are often buried around buildings at Copán, with only a minority buried within structures, which means that many fewer individuals could have been involved in such rituals. Thus, there is distinctiveness to the mortuary treatments at Late Classic Copán that may be indicative of non-Maya influence among much of the population, with only individuals buried in formal tombs and crypts in the Acropolis and 9N-8 (the highest elites) having treatment similar to

that at other Maya centers such as Tikal, where formal tombs and rich offerings are typical of the highest elites (Harrison 1999). These elite individuals may be the ones who identify most clearly with Maya elites at other centers, whereas other individuals in 9N-8 and the rural area seem to have formed perhaps a hybrid Maya/local identity. This hybrid identity could have been formed over the centuries, since the arrival of the first ruler, and it may be most evident in mortuary treatment. If anything, the biological evidence of phenotype is for probable long-term intermarriage among all of the peoples present, as it shows no real difference between the 9N-8 compound and the rural skeletal sample. The evidence of Canuto and Bell (this volume) indicates that such "hybridity" of Maya and local residents seems to become present toward the end of the Late Classic in the nearby valley of Paraíso, so the Copán Valley may have been distinct throughout the Classic period. This is an interesting question that will be researched further. Additional research and comparison of the Classic period sample from K'axob may provide stronger patterns for identity than are presented here.

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REFERENCES CITED

Bartlett, Mary Jane. 2004. "Ornaments of Bone and Semiprecious Stone." In *K'axob: Ritual, Work, and Family in an Ancient Maya Village*, ed. Patricia A. McAnany, 353–64. Monumenta Archaeologica 22. Los Angeles: Cotsen Institute of Archaeology, University of California.

Bartlett, Mary Jane, and Patricia McAnany. 2000. "'Crafting' Communities: The Materialization of Formative Maya Identities." In *The Archaeology of Communities: A New World Perspective*, ed. Marcello Canuto and Jason Yaeger, 102–22. London: Routledge.

Buikstra, Jane D., Price J. Burton, and Lori Wright. 2004. "Tombs from the Copán Acropolis: A Life History Approach." In *Understanding Early Classic Copán*, ed. Ellen Bell, Marcello Canuto, and Robert Sharer, 29–50. Philadelphia: University of Pennsylvania Museum.

Buikstra, Jane, and Douglas H. Ubelaker. 1994. *Standards for Data Collection from Human Skeletal Remains.* Arkansas Archaeological Survey Research Series 44. Fayetteville: Arkansas Archaeological Survey.

Buzon, Michele R. 2006. "Biological and Ethnic Identity in New Kingdom Nubia: A Case Study from Tombos." *Current Anthropology* 47 (4): 683–95. http://dx.doi.org/10.1086/506288.

Demarest, Arthur. 2004. *Ancient Maya*. Cambridge: Cambridge University Press.

De Montmollin, Olivier. 1995. *Settlement and Politics in Three Classic Maya Polities*. Monographs in World Archaeology 24. Madison, WI: Prehistory.

Fash, William L. 2004. "Toward a Social History of the Copán Valley." In *Copán: The History of an Ancient Maya Kingdom*, ed. E. Wyllys Andrews and William L. Fash, 73–102. Santa Fe: School of American Research Press.

Harrison, Peter D. 1999. *The Lords of Tikal: Rulers of an Ancient Maya City*. London: Thames and Hudson.

Haviland, William A., and Hattula Moholy-Nagy. 1992. "Distinguishing the High and Mighty from the Hoi Polloi at Tikal, Guatemala." In *Mesoamerican Elites*, ed. Diane Z. Chase and Arlen Chase, 50–60. Norman: University of Oklahoma Press.

Henderson, John S. 1992. "Variations on a Theme: A Frontier View of Maya Civilization." In New Theories on the Ancient Maya, ed. Elin C. Danien and Robert J. Sharer, 161–71. University Museum Monograph 77. Philadelphia: University of Pennsylvania.

Hill, Jonathan D., ed. 1996. *History, Power, and Identity: Ethnogenesis in the Americas, 1492–1992*. Iowa City: University of Iowa Press.

Hillson, Simon, Charles Fitzgerald, and Helen Flinn. 2005. "Alternative Dental Measurements: Proposals and Relationships with Other Measurements." *American Journal of Physical Anthropology* 126 (4): 413–26. http://dx.doi.org/10.1002/ajpa.10430.

Isazu Aizpurúa, Ilean Isel. 2004. "The Art of Shell Working and the Social Uses of Shell Ornaments." In *K'axob: Ritual, Work, and Family in an Ancient Maya Village*, ed. Patricia A. McAnany, 335–51. Monumenta Archaeologica 22. Los Angeles: Cotsen Institute of Archaeology, University of California.

Jacobi, Keith P. 2000. *Last Rites for the Tipu Maya: Genetic Structuring in a Colonial Cemetery*. Tuscaloosa: University of Alabama Press.

Jones, Siân. 2002. *The Archaeology of Ethnicity*. London: Routledge.

Kieser, Jules A. 1990. *Human Adult Odontometrics*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511983610.

Martin, Simon, and Nicholas Grube. 2000. *Chronicle of the Maya Kings and Queens: Deciphering the Dynasties of the Ancient Maya*. London: Thames and Hudson.

McAnany, Patricia A. 1995. *Living with the Ancestors: Kinship and Kingship in Ancient Maya Society*. Austin: University of Texas Press.

McAnany, Patricia A. 1997. "K'axob Project: Interim Report of the 1995 Field Season." Belmopan, Belize: Submitted to the Department of Archaeology, Boston University.

McAnany, Patricia A. 2004a. "Situating K'axob within Formative Period Lowland Maya Archaeology." In *K'axob: Ritual, Work, and Family in an Ancient Maya Village*, ed. Patricia A. McAnany, 1–10. Monumenta Archaeologica 22. Los Angeles: Cotsen Institute of Archaeology, University of California.

McAnany, Patricia A. 2004b. "Landscapes of K'axob in Deep and Current Time." In *K'axob: Ritual, Work, and Family in an Ancient Maya Village*, ed. Patricia A. McAnany, 11–17. Monumenta Archaeologica 22. Los Angeles: Cotsen Institute of Archaeology, University of California.

Norusis, Marija J. 2008. *SPSS 16.0 Statistical Procedures Companion*. Chicago: SPSS, Inc.

Relethford, John H. 2002. "Apportionment of Global Human Genetic Diversity Based on Craniometrics and Skin Color." *American Journal of Physical Anthropology* 118 (4): 393–98. http://dx.doi.org/10.1002/ajpa.10079.

Restall, Matthew. 1996. *Maya World: Yucatec Culture and Society, 1550–1850*. Stanford, CA: Stanford University Press.

Rhoads, Megan L. 2002. "Population Dynamics at the Southern Periphery of the Ancient Maya World: Kinship at Copán." PhD dissertation, Department of Anthropology, University of New Mexico, Albuquerque.

Robin, Cynthia. 1989. *Preclassic Maya Burials at Cuello, Belize*. BAR International Series 480. Oxford: British Archaeological Reports.

Schillaci, Michael A., and Christopher M. Stojanowski. 2003. "Postmarital Residence and Biological Variation at Pueblo Bonito." *American Journal of Physical Anthropology* 120 (1): 1–15. http://dx.doi.org/10.1002/ajpa.10147.

Sharer, Robert J., David W. Sedat, Loa P. Traxler, Julia C. Miller, and Ellen E. Bell. 2004. "Early Classic Royal Power in Copán: The Origins and Development of the Acropolis (ca. AD 250–600)." In *Copán: The History of an Ancient Maya Kingdom*, ed. E. Wyllys Andrews and William L. Fash, 139–99. Santa Fe: School of American Research Press.

Storey, Rebecca. 2004a. "Ancestors: Bioarchaeology of the Human Remains of K'axob." In *K'axob: Ritual, Work, and Family in an Ancient Maya Village*, ed. Patricia A. McAnany, 109–38. Monumenta Archaeologica 22. Los Angeles: Cotsen Institute of Archaeology, University of California.

Storey, Rebecca. 2004b. "Health and Lifestyle (before and after Death) among the Copán Elite." In *Copán: The History of an Ancient Maya Kingdom*, ed. E. Wyllys Andrews and William L. Fash, 315–43. Santa Fe: School of American Research Press.

Stuart, David. 2004. "A Foreign Past: The Writing and Representation of History on a Royal Ancestral Shrine at Copán." In *Copán: The History of an Ancient Maya Kingdom*,

ed. E. Wyllys Andrews and William L. Fash, 373–94. Santa Fe: School of American Research Press.

Webster, David. 1992. "Maya Elites: The Perspective from Copán." In *Mesoamerican Elites*, ed. Diane Z. Chase and Arlen Chase, 135–56. Norman: University of Oklahoma Press.

Welsh, W. Bruce M. 1988. *An Analysis of Classic Lowland Maya Burials*. BAR International Series, vol. 409. Oxford: British Archaeological Reports.

Wright, Lori E. 2006. *Diet, Health, and Status among the Pasión Maya: A Reappraisal of the Collapse*. Vanderbilt Institute of Mesoamerican Archaeology Series, vol. 2. Nashville, TN: Vanderbilt University Press.