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Forming Identities: An Overview of Intentional Cranial Modification in the Caribbean.

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Abstract

This paper will discuss the practice of intentional cranial modification or head shaping among the indigenous societies of the pre-Columbian and early colonial Caribbean. Intentional cranial modification is a permanent alteration of the human skull shape, caused by the restriction and redirection of skull growth in the first years of life. Although the degree of expression varies depending on the location and force of pressure exerted, the practice usually results in a striking and unmistakable alteration. Anthropological, ethnohistorical and archaeological case studies from a wide range of different cultural and geographical contexts suggest that the altered head shape is used as a means of expressing (elements of) social identity, such as gender, social status or group affiliation.

This paper will analyze the practice of intentional cranial modification among the indigenous societies of the Caribbean in order to investigate the social motivations behind head shaping (i.e. which element(s) of identity are expressed through altered head shapes). The site of El Chorro de Maíta on the island of Cuba will be used to demonstrate the important contributions of this research to our understanding of identity among past indigenous societies.

Key words : Bioarchaeology, Intentional Cranial Modification, Identity

Résumé

Cet article aborde la pratique de la modification intentionnelle du crâne parmi les sociétés indigènes Caraïbes de la période précolombienne et du début de la période coloniale. La modification intentionnelle du crâne est une altération permanente de la forme du crâne humain, causée par la restriction et la réorientation de la croissance du crâne dans les premières années de la vie. Bien que le degré d'expression varie en fonction de l'emplacement et la force de pression exercée, la pratique se traduit généralement par une altération frappante et indubitable. Des études anthropologiques, ethnohistoriques et archéologiques de différents contextes culturels et géographiques suggèrent que la forme de la tête modifiée est utilisée comme un moyen d'exprimer des éléments d'identité sociale, comme le sexe, le statut social ou l'appartenance à un groupe.

Cette recherche permettra d'analyser la pratique de la modification intentionnelle du crâne dans les sociétés indigènes de la Caraïbes afin d'enquêter sur les motivations sociales derrière la modification du crâne (quel(s) élément (s) de l'identité sont exprimés à travers des formes modifiées du crâne). Le site d'El Chorro de Maíta sur l'île de Cuba sera utilisée pour démontrer les contributions importantes de cette recherche pour notre compréhension de l'identité des dernières sociétés indigènes.

Resumen

En este artículo se discutirá la práctica de la modificación cefálica intencional entre las sociedades indígenas de la época precolombina y del período colonial temprano del Caribe. La modificación intencional del cráneo es una alteración permanente de la forma de la cabeza del ser humano, causada por la restricción y la reorientación del crecimiento del cráneo en los primeros años de vida. Aunque el grado de expresión varía dependiendo de la ubicación y la fuerza de la presión ejercida, la práctica por lo general resulta en una alteración llamativa e inconfundible. Estudios de casos antropológicos, etnohistóricos y arqueológicos de una amplia gama de contextos culturales y geográficos sugieren que las forma de alteración de la cabeza se utiliza como un medio de expresar aspectos de la identidad social como el género, el estatus social o la pertenencia a un grupo.

El centro de esta investigación es analizar la práctica de la modificación intencional del cráneo entre las sociedades indígenas del Caribe a fin de investigar las motivaciones sociales que se encuentran detrás de la modificación intencional de la cabeza. Es decir, qué elemento (s) de la identidad se expresa o expresan a través de las formas de alteración. de la cabeza. El sitio de El Chorro de Maíta en la isla de Cuba se utilizarán para demostrar las importantes contribuciones de la investigación a nuestra comprensión de la identidad entre los sociedades indígenas pasadas.

Forming Identities

In recent years, the miscellaneous fields that comprise the social sciences have seen a marked increase in the study of identity expression and formation. Although numerous studies have focussed on the expression of elements of personal identity in a myriad of ways, the term identity – derived from the Latin *idem* or same – can also be viewed as comparative in nature: describing what unites a group of people based on a chosen feature. Studying these two aspects of identity - which occur simultaneously within a person – in archaeological societies will allow for a better understanding of past individuals and societies.

This article will discuss the potential use of intentional cranial modification as an expression of identity among the pre-Columbian and colonial indigenous inhabitants of the Caribbean archipelago. Furthermore, it will discuss the facets of identity which can be expressed through an altered head shape based on a global comparative study of intentional cranial modification in archaeological, ethnohistorical and anthropological research. An overview of the occurrence of the practice within the circum-Caribbean will be provided. The case of El Chorro de Maíta on the island of Cuba will serve as an illustration of the way in which altered head shapes be used to provide insight into past indigenous identities.

Intentional Cranial Modification

The practice of intentional cranial modification[1], also known as head shaping, is the redirection of natural cranial growth to create a permanent alteration of the human skull shape. This is achieved by placing pressure on the skull during the first year of life when the infant skull is still malleable. The compression of the skull is produced by a modification device, often made of wooden boards or tightly wrapped textiles. The exact location(s) of pressure determine the resulting shape of the skull. The degree of modification ranges from very mild changes to extreme alterations and can be influenced by a variety of factors including the age of the infant when modification is first commenced, the period of time during which the modification device is operative, the tightness with which the device is applied, and the materials of which the device is constructed. The changes to the shape of the skull are permanent, but leave no other mental or physical side effects (Dembo and Imbelloni 1938; Dingwall 1931; Gerszten and Gerszten 1995; Littlefield *et al.* 2005; Moss 1958; Oetteking 1930; Tubbs *et al.* 2006).

Numerous classification systems have been devised since scholarly interest in the topic of intentional cranial modification started. Two of these have often been used in Caribbean archaeology: the system devised by Hrdlicka (1920) and the classification of Imbelloni (Dembo and Imbelloni 1938). Although the terminology is different, both systems are almost completely compatible allowing for comparisons between different datasets using either of these classifications (see Table 1). This research has opted to use the system by Hrdlicka (1920), since the terminology is based on osteological descriptions. The fronto-occipital type of modification is produced by placing pressure on the front and back of the skull, often using wooden boards or tablets. The orientation of the board at the back may vary, resulting in the subdivision between parallel and vertical modification (also seen in figures 1 and 2). This type of modification creates a broad and short cranial vault. Circumferential modification is created by wrapping the skull with tight bandages. This produces a long and narrow skull shape.

Hrdlicka	Imbelloni
Fronto-Occipital (Parallel)	Tabular Oblique
Fronto-Occipital (Vertical)	Tabular Erect
Circumferential	Annular
Oblique	-

Table 1. The classification systems devised by Hrdlicka (1920) and Imbelloni (Dembo and Imbelloni 1938).

The striking and clearly visible nature of altered head shapes lends itself perfectly to use as a communicative signal. Cross-cultural comparison of the social motivation behind intentional cranial modification - based on archaeological, ethnohistorical, and anthropological evidence – has suggested it is used as a marker of (elements of) identity (Gerszten and Gerszten 1995; Tiesler 2010; Torres-Rouff 2003; van Duijvenbode 2010). Several characteristics of head shaping restrict the types of identity which can be expressed by altered head shapes. The custom must be commenced relatively soon after birth, since cranial development and expansion are at their peak during the first year of life (Breisch *et al.* 2010; Tubbs *et al.* 2012). Therefore, any identity displayed by an altered head shape must be present either at birth or its construction must commence immediately afterwards. Furthermore, the permanent nature of head shaping means that only lasting identities can be displayed through intentional cranial modification. These elements point towards so called ascribed identities: those identities assigned to a person at birth by relatives or society[2] and often based on kinship ties (Babic 2005; Emberling 1997; van Duijvenbode 2010). Crucially, this suggests that identities marked by altered head shapes can provide archaeologist with vital clues on social organization.

Motives for Modification

A comparative study of the reasons behind intentional cranial modification has shown a number of reoccurring motivations

1 - The term deformation is often used in research on the subject and originates from the medical definition of the term: '*alteration of a body part that is developing normally until a mechanical force is applied*' (Bronfin 2001:193). Although correct in a medical sense, the term deformation tends to have a negative connotation in archaeological and anthropological research. This study therefore prefers the more neutral modification or head shaping.

2 - This line of argument is further supported by the fact that the modification is created by an adult and is not a conscious choice of the infant. Ethnographic evidence shows that women – often the mother, female relatives or the midwife – play an important role in the creation of the altered head shape (Dingwall 1931; FitzSimmons *et al.* 1998; Tiesler 2005).

(van Duijvenbode 2010). These will be briefly discussed here and illustrated using examples from archaeological and ethnographical cases.

Altered head shapes are considered beautiful and sometimes even the norm in numerous societies where cranial modification is practiced. Among the Arawe of New Britain (Papua New Guinea) '*the motive appears to be purely an aesthetic one – the "long head" is admired and is considered attractive to the opposite sex*' (Blackwood and Danby 1955:173). Furthermore, almost the entire population is subjected to the practice and the few individuals without or with a very mild degree of modification are teased with their appearance (Blackwood and Danby 1955:175). This aesthetic motivation has also led to a difference in the degree of modification between males and females: Arawe women tend to have more extreme altered head shapes then men because this is considered more attractive. The same emphasis on female beauty can be seen on the Dutch island of Marken at the beginning of the 20th century. Here, mild alterations to the skull shape are created using traditional caps which enhance the roundness of the skull (Barge 1912). However, gender differentiation can also be expressed through the use of two different modification techniques. On the Indonesian island of Sulawesi, several groups used a modification device consisting of three boards to alter the heads of boys. The motivation behind this particular shape was to terrify the enemy and thus girls were subjected to a different technique using wrapped bark to create a more beautiful appearance (Dingwall 1931:128).

It has been suggested by Houston *et al.* (2006:45) that the altered head shapes encountered among the Maya are imitations of their Maize God. The head shape of this deity is similar to the conical shape of a cob of corn. Yet the Maize God is simultaneously associated with the concept of beauty in Maya mythology. Thus, the imitation of this deity might be related as much with aesthetic notions as with religious reasons. Another motivation often provided is the relation between the altered head shape and the ancestors. Among several indigenous societies in Peru, the altered head shape is said to resemble the mountain which is the mythological place of origin for their people (Blom 2005; Schijman 2005). Similarly, some investigators report a likeness between a totemic ancestor and the modified skull, as has been claimed by Agrand for the serpent on the South American Mainland (Agrand in Dingwall 1931:219) and Herrera Fritot for the turtle in the Caribbean (Herrera Fritot in Rivero de la Calle 1960:252). However, it should be stressed that these interpretations are not based on ethnographic or ethnohistoric information but represent an explanation created at a later date by the researcher.

The expression of group identity – often based on kinship ties or a perceived common ancestor – is a motivation cited for numerous groups throughout both prehistoric and historic times. Research on Andean populations has consistently shown group identity as a key motivation behind the altered head shapes (Blom 2005; Dingwall 1931; Hoshower *et al.* 1995; Torres-Rouff 2003). The importance of expressing group affiliation has also been reported for several African peoples, such as the Mangbetu, Manvu, Poto and Ngombe of Congo and the Bali and Bamum of Cameroon (Ricci *et al.* 2008). The practice of intentional cranial modification can also be used to express the social class or rank of an individual. During the European Medieval period, the French and Italian aristocracy used bindings to create an altered skull shape which expressed their elevated social standing (Dingwall 1931; Gerszten and Gerszten 1995; Tubbs *et al.* 2006). These shapes were copied by the lower classes in an attempt to improve their social standing after which the custom of head binding was quickly abandoned by the aristocracy. The custom persisted among the lower classes and a survey carried out at the beginning of the 20th century proves each region created its own distinct head shape (Delisle 1902). In this example, the meaning of intentional cranial modification shifted from an expression of social distinction to a marker of geographical origin.

Head shaping in the Caribbean Archipelago

Altered head shapes have long been recognized in both the Caribbean archaeological record and the (ethno)historic sources describing its indigenous inhabitants. A brief overview of remarks regarding altered head shapes in several ethnohistorical sources will be provided here. The attention will then shift towards the archaeology and a compilation will be provided of all cases of intentional cranial modification in Caribbean skeletal assemblages to date.

Ethnohistory

Christopher Columbus was the first to note the altered head shapes of the indigenous population he encountered on his voyages. On the 13th of October 1492 he remarked:

'*Y todos de la firente y cabeça muy ancha, más que otra generación que fasta aquí aya visto*' (Columbus 1990:44).

Fernandez de Oviedo confirms that the altered head shapes described by Columbus are in fact the result of intentional cranial modification when he provides a slightly more detailed description: '*tienen las frentes anchas [...]. Esta manera de frentes se hace artificialmente: porque, al tiempo que nascen los niños, les aprietan las cabezas de tal manera en la frente y en el colodrillo, que, como son las criaturas tiernas, las hacen quedar de aquel talle: anchas las cabezas delante e detrás, e quedan de mala gracia*' (Fernández de Oviedo 1959:64).

This description seems to be the basis of the following statement by Charlevoix : '*They flattened their heads by art, thus reducing the size of their forehead, which pleased them greatly. To do this, their mothers took care to hold them tightly pressed between their hands or between two little boards, which, by degrees, flattened the head, whereby the skull hardened in a molded shape*'. He adds that this look increased their '*ferocious appearance*' (Charlevoix in Fewkes 1907:29).

Although these descriptions provide some insight into the process of cranial modification, there is only one extensive description of the practice being performed on an infant in the Caribbean. Leblond (2000 [1767-1773]) visits the island of St. Vincent on his travels in the region between 1767 and 1773 AD and witnessed head shaping taking place among the Caribs of St. Vincent. The modification device consists of two light but solid wooden boards at the front and back of the skull. The board in the back has a hole around the occipital protuberance, so as not to flatten this region of the skull. The boards are connected with vines and cotton pillows are placed between the skull and the boards to prevent injury. The modification device is kept in place for nine days at a time, up to three or four months of age. Leblond describes a bulging of the infant's eyes, a common side effect of increased intracranial pressure. Furthermore, he describes the results of the modification as creating a flattened frontal and curving parietals.

Obviously, this event witnessed by Leblond takes place in the Lesser Antilles more than 250 years after the first contact between indigenous societies and Europeans and should therefore not be extrapolated without question to the prehistoric inhabitants of the entire Caribbean archipelago. Interestingly however, the head shapes encountered in the archaeological record are consistent with the modification device described by Leblond suggesting some degree of continuity.

These sources provide little to no explanation for the social motivation behind head shaping. A potential motivation is given by Davies:'*As soon as the children are born, the mothers make their foreheads flat, and press them so that there is a descent backwards, for besides that the form of the forehead is accounted one of the principal pieces of beauty among them, they affirm, that it facilitates their shooting up to the top of a tree standing at the foot of it, wherein they are extremely expert as being brought up to it from their childhood*' (Davies 1666:338). However, this explanation is generally regarded as unreliable (Dingwall 1931) and is perhaps based on a misunderstanding or mistranslation.

The only reliable indications of motivation do not pertain to the indigenous population of the Caribbean but to later colonial immigrants. Leblond (2000 [1767-1773]) and Young (1971 [1795]) both indicate that the practice of intentional cranial modification was copied by the Black Caribs of St Vincent, who observed its use among the indigenous population of the island. According to Leblond, this free black population adapted the custom to their needs, using their altered head shapes to set them apart from runaway black slaves. These reports by Leblond and Young on intentional cranial modification on St. Vincent illustrate two important yet opposite points. Firstly, the custom of head shaping persisted well into the 18th century among some communities in the Lesser Antilles, demonstrating the social integration and stability of the practice. Secondly however, the adoption of altered head shapes by Black Caribs demonstrates the result of intercultural contact and mimicry and recalls the potential flexibility behind head shaping and its social motivations.

Archaeology

The practice of intentional cranial modification is described in early studies of Caribbean skeletal remains by Gosse (1855), Poey (1865), Rodriguez Ferrer (1876), Brooks (1887) and Llenas (1891) to name but a few. The interest for intentional cranial modification peaked in the 20th century, an occurrence which coincides with the increasing focus on craniometrics in physical anthropology. Caribbean researchers, mainly from Cuba and the Dominican Republic, focused on cranial measurements and the physiological side of cranial modification. Herrera Fritot' 1946 description of several crania from La Caleta in the Dominican Republic is an excellent example of this period of research.

His Cuban colleague Rivero de la Calle produced a landmark study of the practice among Cuban indigenous societies. Building on the work of Herrera Fritot and other Cuban scholars, he suggests the practice is linked solely to the agricultural population of the island, whereas the pre-agricultural societies do not create altered head shapes (Rivero de la Calle 1960, 1966). This implicitly links cranial modification to the expression of large scale group identity and perhaps even ethnicity in prehistoric Cuba.

Dominican researcher Pina Peña (1972) presents a theory on the origin of the practice: he suggests it was introduced on the islands by a migration of ceramic agricultural societies from the Orinoco-Amazon region with an Arawakan linguistic affiliation. To date, no evidence has been encountered suggesting head shaping was present during the Lithic or Archaic periods of habitation on the Caribbean islands. This enforces the notion that the practice was either introduced or invented during the Ceramic Age.

This theory on the relation between the migrations in the Early Ceramic Age and the introduction of cranial modification has been elaborated upon by Dr. Crespo Torres. He has proposed that the introduction is linked to the presence of Huecoid groups on Puerto Rico in the Early Ceramic Age, based on the earliest indirect evidence of the practice: greenstone pendants from the La Hueca site on Vieques. Crespo Torres (2000, 2005, 2010) attributes the sloping forehead of the human heads depicted in these amulets to intentional head shaping. The lack of burials solidly attributed to the Huecoid people is rather problematic in this regard, since direct evidence is therefore lacking. One female burial from the site of Morel on Guadeloupe has been tentatively linked to the Huecoid component of that site based on the affiliated grave goods by Durand and Petitjean-Roget (1975). The skeletal remains have been dated to 2410±120 BP by radiocarbon analysis, confirming the burial belongs to the early habitation phase of the site (Delpuech *et al.* 1995). The published image of the cranium shows that the remains have unfortunately been encrusted in beach rock – a common problem for artifacts from the site of Morel - and that several parts of the skull are missing. Furthermore, the skull has not been placed in the correct physical anthropological angle and the landmarks necessary to orient the skull are mostly obscured by the encrustations. This makes the determination of the angle of the frontal bone and therefore the presence of frontal flattening impossible from the photographic evidence.

Archaeological Evidence

Intentionally altered skulls have been discovered on most of the numerous Caribbean islands, as can be seen in Table 2. This compilation shows all sites with reported intentional cranial modification in the Caribbean archipelago known to the author at the time of publication.[3]

Site	Island	Period	C-14 Date	Type of ICM	Source
Canashito	Aruba	Unknown		ICM (?)	Tacoma 1959 Tacoma *et al.* 1991
Santa Cruz	Aruba	Ceramic Age		FO	Koeze 1904 Wagenaar Hummelinck 1959
van Heekeren/Du Ry	Aruba	Unknown		FO P	Tacoma 1980
Imperial Lighthouse Caves	Bahamas (Abaco Islands)	Unknown		Potential FO	Keegan 1982
New Providence	Bahamas	Unknown		FO and FF	Winter 1991
Preacher's Cave	Bahamas (Eluethera)	Ostionoid *c.* 600–1500 AD		FO P and FF	Carr *et al.* 2007
North Bannerman Town Cave	Bahamas (Eluethera)	Unknown		FO	Keegan 1982
Unknown	Bahamas (Eluethera)	Unknown		ICM	Drew 2009
W Emyss Bight / Wemyss Bite Cave	Bahamas (Eluethera)	Unknown		FO	Drew 2009 Keegan 1982
3-D Cave	Bahamas (Grand Bahama Island)	Unknown		FO	Keegan 1982
Port Boyd Cave	Bahamas (Rum Cay)	Unknown		FO	Keegan 1982
Hillcrest	Barbados	Suazoid *c.* 1100–1500 AD		FF	Drewett 1991
Rooi Seroe Noka	Bonaire	Unknown		ICM	Feriz 1959
Banes	Cuba	Unknown		FO P	Rivero de la Calle 1960
Cantillo y Monte Cristo	Cuba	Unknown		FO P	Rivero de la Calle 1960
Cayo Salinas	Cuba	Unknown		FO P	Rivero de la Calle 1960
El Chorro de Maíta	Cuba	Mellaican Ostionoid *c.* 1400–1650 AD		FO P and V	Valcárcel Rojas *et al.* 2011 Van Duijvenbode 2010
El Salado	Cuba	Subtaino		FF	Rouse 1942
Jauco	Cuba	Unknown		FO V	Rivero de la Calle 1960
La Plantana Cueva no 1	Cuba	Taino		ICM	Harrington (in Tabio and Rey 1966)
La Sierra	Cuba	Unknown		FO P	Rivero de la Calle 1960
Maisi	Cuba	Unknown		FO P	Rivero de la Calle 1960
Monte Cristo	Cuba	Unknown		FO P	Rivero de la Calle 1960
Ovando	Cuba	Unknown		FO P	Rivero de la Calle 1960
San Lucas	Cuba	Taino		ICM	Harrington (in Tabio and Rey 1966)
De Savaan	Curacao	Dabajuroid	600 ± 20 BP	FO	Haviser 1990 Tacoma 1987
Andres	Dominican Rep.	Ostionoid		FF	Ortega 2005
Boca del Soco	Dominican Rep.	Ostionoid and Chicoid		FO P	Luna Calderon 1985
Cueva de Berna	Dominican Rep.	Unknown		C (?)	Veloz Maggiolo *et al.* 1977
El Atajadizo	Dominican Rep.	Ostionoid and Chicoid	1410 ± 80 BP 1110 ± 80 BP 935 ± 80 BP	FF	Luna Calderon 1976
Escalera Abajo	Dominican Rep.	Unknown		ICM	Luna Calderon 1980
Juan Dolio	Dominican Rep.	Colonial		FO P	Drusini *et al.* 1987
La Caleta	Dominican Rep.	Ostionoid and Chicoid	1220 ± 85 BP 965 ± 85 BP 780 ± 50 BP 740 ± 30 BP 670 ± 70 BP	FO	Herrera Fritot and Youmans 1946 Ortega 2005

3 - Although great care has been taken to include all known sites and assemblages, it is of course possible that a site or reference is missing from this overview. The author would like to apologize for any potential oversights and stress that every addition to this overview is more than welcome.

La Cucama	Dominican Rep.	Chicoid		FO P	Veloz Maggiolo *et al.* 1973
Maria Sosa	Dominican Rep.	Ostionoid		FO	Luna Calderon 1982 Ortega 2005
Punta Macao	Dominican Rep.	Ceramic Age *c.* 640–1300 AD		ICM	Tavarez Maria and Luna Calderon 2007
Morel I	Guadeloupe	Huecoid	2410 ± 120 BP	FF	Durand and Petitjean Roget 1991 Delpuech *et al.* 1995
Morel IV	Guadeloupe	Ceramic Age	850 ± 80 BP	FO V (?)	Clerc 1968
Anse à la Gourde	Guadeloupe	Troumassoid *c.* 1000–1400 AD		FO	Hoogland and Weston Pers. Comm.
Unknown	Haiti	Unknown		FF	Drew 2009
Botany Bay Cave	Jamaica	Ceramic Age		FF	Haddon 1897
Bull Savannah #2 Cave	Jamaica	Unknown		FF	Santos 2002
California	Jamaica	Unknown		ICM	Haddon 1897
Cambridge Hill	Jamaica	Unknown		FF	Harper 1961-1962 (in Allsworth Jones 2008)
Great Goat Island	Jamaica	Ceramic Age		ICM	Haddon 1897
Halberstadt	Jamaica	Ceramic Age		FF	Flower 1895
Jackson Bay Cave	Jamaica	Ceramic Age		ICM	Haddon 1897
Pedro Bluff Cave	Jamaica	Unknown		FO	Flower 1891
Richmond Hill	Jamaica	Ceramic Age		ICM	Duerden 1897
Taylor's Hut Cave	Jamaica	Ceramic Age		FO P	Santos 2002
White Marl Cave #1	Jamaica	Ceramic Age		ICM	St Clair (in Allsworth Jones 2008)
Diamant II	Martinique	Unknown		ICM	Petitjean Roget 1970 (in Boomert 2000)
Luquillo Beach	Puerto Rico	Elenan Ostionoid *c.* 800–1350 AD		FO	Roe *et al.* 1990
Maisabel	Puerto Rico	Saladoid and Ostionoid		FO	Budinoff 1991
Paso del Indio	Puerto Rico	Elenan Ostionoid *c.* 900–1200 AD		FO P	Crespo Torres 2000 Pestle 2010
Punta Candelero	Puerto Rico	Cuevas *c.* 660–1010 AD		FO P	Crespo Torres 2000 Pestle 2010
Tibes	Puerto Rico	Cuevas - Elenan Ostionoid *c.* 259–1157 AD		FO	Crespo Torres 2010 Pestle 2010
Utuado I	Puerto Rico	Ceramic Age		FF	Fewkes 1903
Yauco	Puerto Rico	Ostionoid *c.* 600–900 AD		FF	Drew 2003
Hemer's Peninsula	St Croix	Saladoid *c.* 400–450 AD		FO and FF	Winter *et al.* 1991
West Farm	St Kitts	Ceramic age		FO V(?)	Branch 1907
Grande Anse	St Lucia	Troumassoid *c.* 600 AD		ICM (?)	Bullen 1970
Pointe de Caille	St Lucia	Troumassoid (?) *c.* 800 AD	1175 ± 70 BP 1131 ± 70 BP 1150 ± 50 BP	C	Fabrizii-Reuer and Reuer 2005
Magens Bay	St Thomas	Ceramic Age		FF	Hatt 1924
Bloody Point	St. Kitts	Ostionoid (?)		FO (?)	Farr 1993, 1996
Baie Rouge	St. Martin	Ostionoid *c.* 1000–1600 AD		ICM	Henocq and Petit 1999
Palo Seco	Trinidad	Palo Seco *c.* 0–550 AD	1990 ± 70 BP 1480 ± 70 BP	ICM (?)	Bullbrook 1953 Feriz 1959
St Bernard	Trinidad	Ceramic Age		ICM	De Booy 1917

Table 2: An overview of intentional cranial modification in the Caribbean. The types of modification have been abbreviated as follows: FO is fronto-occiptal, C is circumferential, P is parallel, V is vertical, and ICM indicates that modification of an unknown type is present. Bold site names have been (re)analyzed in the author's PhD project. Please note that all contextual information has been reproduced directly from the original sources and that the only attempt at data synchronization so far has been the conversion to Hrdlicka's (1920) classification

The overview confirms the widespread nature of intentional cranial modification in the Ceramic Age. Altered head shapes have so far not been reported from a securely dated Pre-Ceramic context, although it should be noted that skeletal remains found in caves are notoriously difficult to date. In general, the overview clearly shows the lack of contextual information and secure dates in numerous cases. Furthermore, poor physical anthropological descriptions of the crania and the use of several different classification systems create problems in the comparability of the data between different sites and islands. Unfortunately, these factors limit the potential to recognize and explain patterns of intentional cranial modification on a regional level. Therefore, the author's current PhD research project aims to reanalyze several collections.

The Cuban Case

To illustrate the wealth of data that can be gained by a (re)analysis of skeletal assemblages, the case of the Cuban site of El Chorro de Maíta will serve as an example. This site is located in the northeast of Cuba and was first recorded by Rouse in 1942. Guarch Delmonte and a team from the *Departamento Centro Oriental de Arqueologia* in Holguin excavated the site between 1986 and 1987. These excavations focused mainly on the cemetery area in the central western part of the site, although non-funerary spaces were also investigated. Besides human remains, the excavation produced a local variant of Meillacan Ostionoid ceramics and small quantities of European materials. The site was interpreted as a central cemetery – unique in Cuban prehistory – and a surrounding settlement (Guarch Delmonte 1996; Valcárcel Rojas and Rodriguez Arce 2005; Valcárcel Rojas *et al.* 2011).

Recent physical anthropological reanalysis of the skeletal population by Dr. Darlene Weston and a team from Leiden University has reported 133 individuals. Notably, the skeletal population contains a large number of children between the ages of 5 and 9. This peak is not consistent with the expected demographic profile of a society and suggests that the cemetery might be the result of a catastrophic event such as a disaster or epidemic (Valcárcel Rojas *et al.* 2011; Valcárcel Rojas 2013).

Roberto Valcárcel Rojas (CISAT Holguín and Leiden University) is investigating the nature and extent of European and indigenous interaction at the site. This interaction is demonstrated not only by European materials serving as grave goods, but also by differences in the burial position. Thirteen individuals were found buried in an extended position, a clear deviation from the flexed burial position typical for indigenous groups in the Cuban Late Ceramic Age. Although the extended position is rather reminiscent of Christian burials, the orientation of the individual and the placement of the arms vary. There is no strict correlation between the extended burial position and European grave goods. For example: individual 25 is buried in a flexed position but was accompanied by a brass ornament. The interaction between indigenous and European identities in the early colonial period is thus dynamic in nature. The evidence encountered at the site of El Chorro de Maíta has led Valcárcel Rojas (2013) to propose that the remains encountered there in fact represent a very early *encomienda*[4] settlement. Furthermore, some osteological and archaeometrical evidence points to the possibility of different geographical origins for certain individuals buried in the cemetery. The investigators have tentatively identified the presence of an individual of African ancestry and the potential presence of individuals with mixed ancestry (Valcárcel Rojas *et al.* 2011; Valcárcel Rojas 2013).

An analysis of intentional cranial modification at El Chorro de Maíta was executed by the author in the summer of 2009. The sample consisted of 54 individuals[5]: 42 adults, 5 adolescents and 7 children. The sex distribution in the sample is relatively equal with 20 males and 19 females. The prevalence of intentional cranial modification is rather high: 79,6 percent of individuals have an altered skull shape. Furthermore 82,5 percent of the population shares the same type of modification: fronto-occipital parallel (see Figure 1). The overall pattern at the site shows a significant part of society undergoing the same type of bodily alteration.

Figure 1.
Cranium 25 with fronto-occipital parallel modification (Van Duijvenbode)

One clear exception to this pattern is individual 72B. This adult female was buried face down with a large rock placed on the legs. Individual 72B has modification of the fronto-occipital vertical subtype, visible in Figure 2. Besides this clearly different skull shape, Hayley Mickleburgh from Leiden University also discovered

4 - The *encomienda* system was introduced in the Caribbean by the Spanish to regulate indigenous labor (Valcárcel Rojas 2013).

5 - Crania are only included in the sample if the preservation is sufficient for analysis; *i.e.* a reasonable amount of cranial landmarks and features along the vault must be present to allow for a secure determination of the presence or absence of intentional cranial modification.

intentional dental modification. This trait is not usually found among the indigenous population of the Caribbean, although it was commonly practiced on the South American mainland (Valcárcel Rojas *et al.* 2011). Strontium isotope analysis by Jason Laffoon from Leiden University showed the individual had a non-local signature. This suggests she was not born at El Chorro de Maíta or in the immediate vicinity (Valcárcel Rojas *et al.* 2011). Based on these various lines of evidence, a Mesoamerican origin has tentatively been suggested for individual 72B. In fact, the prone burial position of 72B corresponds to the prevalent burial position in several sites from the Yucatan peninsula with a late pre-Columbian or early colonial date. The modification of the skull and teeth match types encountered in the region and the strontium isotope signature is fits with to certain areas of the Yucatan peninsula (Valcárcel Rojas *et al.* 2011).

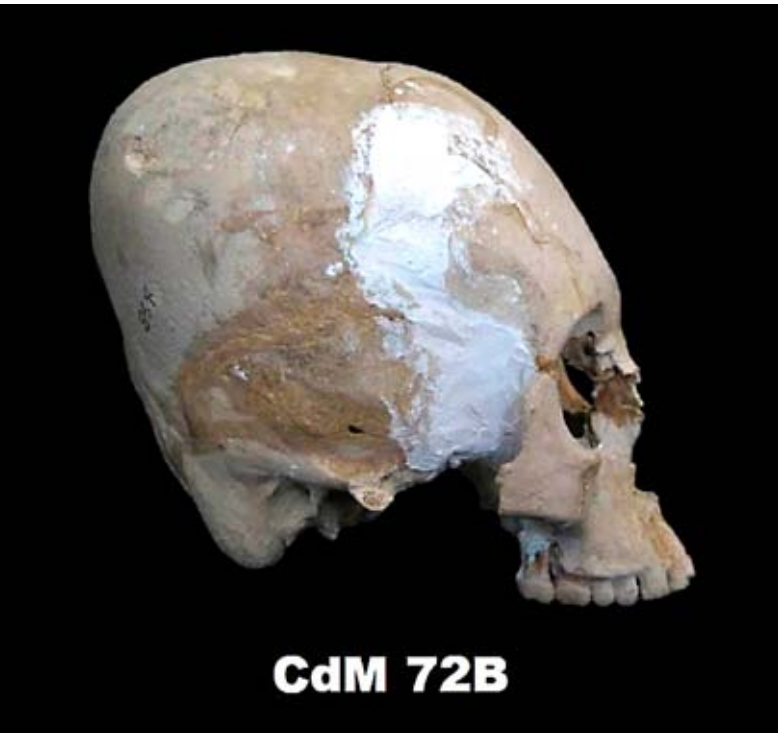

Figure 2.
Cranium 72B with fronto-occipital vertical modification (Van Duijvenbode).

Several potential social motivations for the practice of intentional cranial modification should be considered. Aesthetic reasons are a possible reason for head shaping in the Caribbean region, since several colonial and ethnographic sources mention beauty as a motivating factor provided by indigenous informants. However, one should keep in mind that the continuation of the practice over many generations will result in changed opinions on beauty in such a society and the head shape might be considered aesthetic as a result of the social integration of the practice in stead of being a motivating factor.

The division of modification among males and females is equal, ruling out any differentiation between the sexes. The representation of social status and rank are also considered unlikely, since no correlation between grave goods and intentional cranial modification is present. Furthermore, in this particular case the high prevalence of head shaping means that approximately 80 percent of the population must then share and display the same rank.

The expression of kinship based group identity is the most likely motivating factor for head shaping at El Chorro de Maíta. The relatively high prevalence in combination with a single type of head shape is connected to the expression of large scale group identities in socially stratified societies in the Andean region, as was investigated by Torres-Rouff (2003). The pattern encountered in El Chorro de Maíta is very similar and suggestive of a large scale group identity or ethnicity.

Dividing the sample into different age groups presents an intriguing image. The prevalence among adults goes up to 90 percent, but the prevalence among adolescents and children drops to approximately 60 percent. Although the internal chronology of the burial assemblage is unknown, the assumption that the cemetery is the result of a catastrophic event as suggested by the palaeodemographic profile indicates that the population can be considered (roughly) contemporaneous. It is likely that the children therefore represent the chronologically younger part of the population. There are two potential explanations for the decline in intentional cranial modification among younger individuals. Firstly, European influences on indigenous society could have led to the discontinuation of the practice. The European attitude towards head shaping was distinctly negative during the colonial period, as is witnessed by the outlawing of the practice in the Spanish colonies on the South American mainland in the latter half of the 16th century (Dingwall 1931:164). Furthermore, ethnographic evidence from the Shipibo in Peru demonstrates that outlawing by the Peruvian government in combination with a negative association by outsiders caused an extremely rapid decline of intentional cranial modification (Tommaseo and Drusini 1984). Secondly, the decline might also be explained by a diminished or disappearing importance of the identity expressed through altered head shapes. As discussed above, the expression of group identity is a likely social motivation in the case of El Chorro de Maíta. The integration of people from different origins – indigenous Amerindians, Europeans, Africans and *mestizo* – and the European influences on indigenous society have no doubt impacted the pre-Columbian group identity expressed by the practice. Within the dynamic new community, the group identity was perhaps altered in such a way that the expression through modified head shapes no longer served any purpose (Valcárcel Rojas *et al.* 2011; van Duijvenbode 2010).

The recent reanalysis of the material from the latter site has demonstrated, however, that El Chorro de Maíta is far from a typical or representative site due to the unknown degree of European influence and the convergences of several ethnic identities. Therefore, care must be taken not to assume the situation at El Chorro de Maíta can be used as a template for prehistoric Cuba.

Conclusions

The custom of intentional cranial modification was widespread in the Caribbean archipelago during the Ceramic Age. Although many of the skeletal remains in the overview found in Table 2 have not been securely dated, so far no modified crania have been found related to the Lithic or Archaic age occupations of the island chain. This supports the theory that the practice was introduced or invented in the (Early) Ceramic Age, which is further reinforced by the Huecoid pendants demonstrating modification and the tentatively identified Early Ceramic Age skeletal remains.

However, little is known regarding the motives for modification among the indigenous societies of the Caribbean. It has been suggested that intentional cranial modification is used as a marked of group identity among the societies on the Greater Antilles. The reasons behind head shaping on the islands of the Lesser Antilles has received far less attention and little work has been done so far to enhance our understanding of the role of altered head shapes within these societies.

In all, this overview of intentional cranial modification in the Caribbean demonstrates the considerable amount of work which has already been done regarding the recognition and description of the custom in the region. However, the social motivations behind this practice are still poorly understood and require further investigation and analysis. The study of El Chorro de Maíta has shown the potential for investigating elements of social identity based on intentional cranial modification in the circum-Caribbean, despite the unique intercultural dynamics present at the site.

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