

# MESOAMERICAN EVIDENCE OF PRE-COLUMBIAN TRANSOCEANIC CONTACTS

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## Abstract

In this article we discuss the results of the re-examination of a terracotta head of supposed Roman origin found in a pre-Hispanic burial offering near Mexico City. A thermoluminescent age test performed in 1995 at the Forschungsstelle Archäometrie in Heidelberg, Germany, set the age limits of the artifact at  $1780 \pm 400$  B.P., which is consistent with the Roman-origin hypothesis. A review of the circumstances of this discovery did not demonstrate any sign of possible post-Columbian intrusion and permits the acceptance of the object as the first hard evidence from Mesoamerica to support pre-Hispanic transoceanic contacts between the Old and New Worlds.

The issue of pre-Columbian transoceanic contacts between the Old and New Worlds has generated more controversy among professional anthropologists than any other area of American anthropology. Although for different reasons, the subject has been of great interest to nonspecialists. For historians, anthropologists, and archaeologists, the importance of the problem lies in the theoretical implications that the answer holds for the understanding of the impulses and mechanisms that have caused the appearance of new values and lifestyles in pre-Hispanic societies. For instance, if it can be proved that, between the beginning of the Neolithic age and the fifteenth century A.D., sporadic contacts occurred between cultures of the Eastern and Western hemispheres, a series of significant cultural similarities between these cultures could be explained satisfactorily as a result of cross-cultural interaction (Alcina Franch 1985; Ekholm 1964; Heine-Geldern 1964, 1966; Jett 1983; Kirchoff 1964; Meggers 1975; Sorenson 1971). Conversely, if it is assumed that the oceans that surround the American continent—the Atlantic and the Pacific—represented an impenetrable barrier during the same period, a solution must be sought within other paradigms, such as the duplicated invention derived from the universal psychic unity of humankind or from the impact of similar ecological, social, and technological conditions.

With a problem of this sort, it is essential to recognize the existence of (and distance oneself in explicit terms from) certain fantastic speculations that have perturbed scientific studies of pre-Columbian contacts from the sixteenth century to the present day. We are referring to several hypotheses that have tried to explain the populating of America and the appearance of the Native American civilizations as a consequence of the arrival of immigrants from Atlantis, the Ten Lost Tribes of Israel, the flotilla of Alexander III the Great, and so forth (Bernal 1979:21–36; Willey and Sabloff 1974:23–26). Derived originally from Judeo-Christian canon law, these dilettante hypotheses have been converted into

basic reason for interested laypeople. Regrettably, this marginal aspect also has resulted in an efficient tool used to discredit the subject of transoceanic contact by identifying it with the sort of science-fiction literature mentioned above. Such considerations of possible interactions between the Old World and pre-Columbian cultural systems have not been debated in serious terms, even with the appearance during the last decades of a considerable amount of encouraging and competent research whose authors are among the most distinguished Americanists, such as Betty Meggers, David Kelley, José Alcina Franch, Gordon Ekholm, Paul Kirchoff, John Sorenson, and Paul Tolstoy (in Sorenson and Raish 1996).

The purpose of this paper is to present the results of a re-examination of a terracotta head once believed to be of Roman origin (Heine-Geldern 1961), found in Central Mexico in 1933. It is a mold-made piece measuring 2.5 cm in height, 1.7 cm in length, and 1.9 cm in width. Judging by the break at the neck, it must have been part of a larger figurine. The piece represents a male person with nonindigenous facial features, a beard and moustache, wearing a truncated cap (Figure 1a,b). In stylistic terms, the specimen has no known parallels in pre-Columbian art, and Ernst Boehringer, a specialist in Classical Archaeology and ex-president of the German Archaeological Institute, has argued for a Roman origin. He determined that the head was made between the second and third centuries A.D. (Heine-Geldern, cited in García-Payón 1961:2).

Because this object was discovered during controlled excavation and within a pre-Hispanic context without traces of alteration (García Payón 1961:1, 1979:1, 1979:204–206), it meets the criteria for acceptance as a reliable evidence of pre-Columbian transoceanic contacts between the Old and the New Worlds. However, the difference between the supposed age of the piece and that of its context, the absence of a well-established chronology, and above all the poor reputation of the studies on possible pre-Columbian

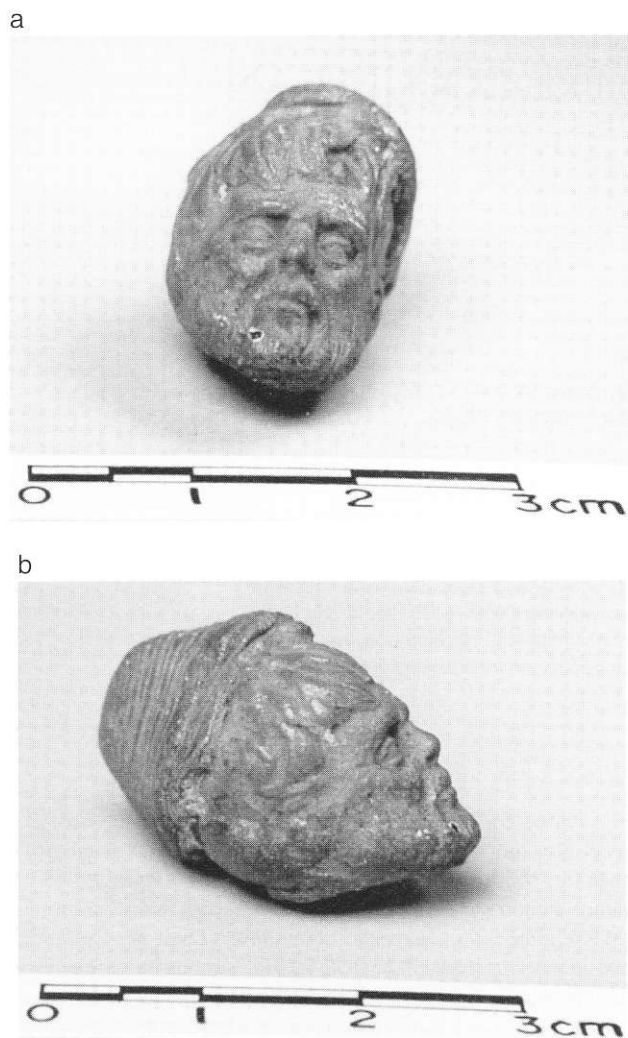


Figure 1. Frontal (a) and lateral (b) views of the Tecaxic-Calixtlahuaca head (photograph by R. Hristov, 1993).

contacts have given rise to certain doubts concerning the origin and time of manufacture of the figurine. Since 1992, we have performed a careful study of the circumstances of its discovery, and this study has not demonstrated any sign of possible post-Columbian intrusion. Thermoluminescent analysis performed in 1995 at the Forschungsstelle Archäometrie in the Max Planck Institut für Kernphysik in Heidelberg, Germany, dated the terracotta head to  $1780 \pm 400$  B.P., which is consistent with the Roman-origin hypothesis. These findings permit the acceptance of the figurine as the first hard evidence of transoceanic contacts between ancient Mediterranean and Mesoamerican civilizations.

#### THE FIND: RESEARCH BACKGROUND

As a result of an agreement between the Dirección de Monumentos Prehispánicos (today the Instituto Nacional de Antropología e Historia) and the Gobierno del Estado de México, exploration and restoration works were performed from 1930 to 1938 in the archaeological zone of Tecaxic-Calixtlahuaca (Anonymous 1968:11). The site is located in the Toluca Valley, approximately 65 km west

of Mexico City. Its main center is the summit and northwestern slope of Tenismo, or Calixtlahuaca Hill, with coordinates of  $19^{\circ} 20' 35''$  latitude north and  $99^{\circ} 41' 22''$  latitude west (Figure 2).

According to the associated pottery, the earliest cultural deposits may be dated to the Middle Preclassic period (1300–800 B.C.; see García Payón 1941:214–218), and the site continued to be occupied until the end of the Late Postclassic period (A.D. 1250–1521). Between the seventh and ninth centuries A.D., the Matlatzincas, an indigenous tribe whose language pertains to the Otomí-Mazahua linguistic family, repopulated the zone and inhabited it until A.D. 1510, when it was conquered and destroyed by the army of the Aztec emperor Moctecuhzoma Xocoyotzin. Since then, the settlement has remained abandoned, with the exception of some areas to the northeast used for maize and maguey cultivation from Colonial times to the present day.

The terracotta head was found at the end of 1933, during the excavation of Mound 5. This mound and Mound 6 were constructed on an artificial terrace on the northwest slope of Tenismo (Calixtlahuaca) Hill (Figure 3). The exploration of these structures began with Mound 6, which turned out to be a pyramidal platform of three superimposed levels and was built of uncut stones set with mud (García Payón 1979:204; Figure 4). Only the north and west corners of the first level could be identified; all of the outlines of the second one remained; of the third one, only the foundation remained (García Payón 1979:204). Following the ini-

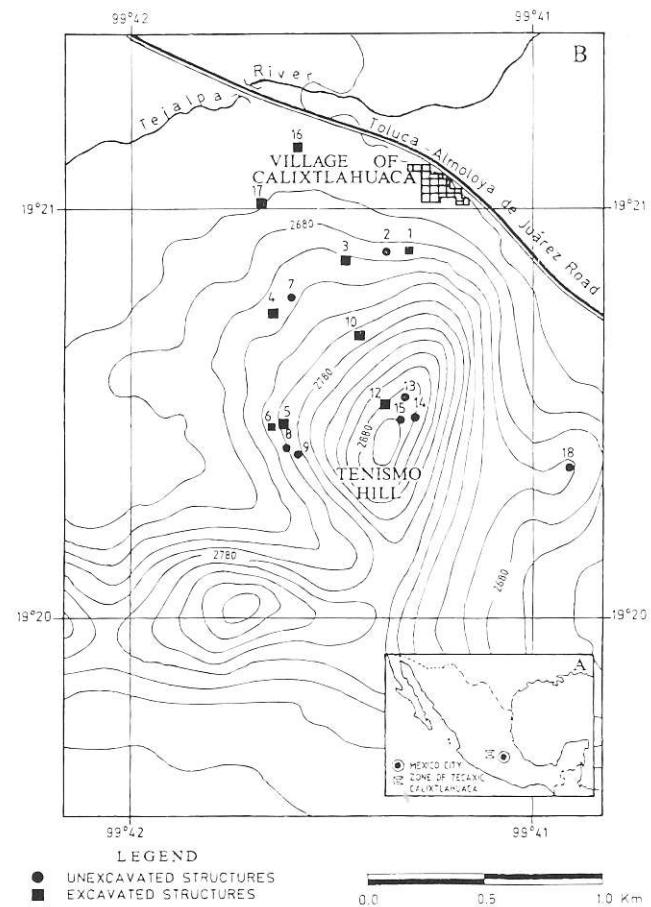


Figure 2. Location maps of the archaeological zone of Tecaxic-Calixtlahuaca in Mexico (inset) and structures in the zone (after García Payón 1936:18).

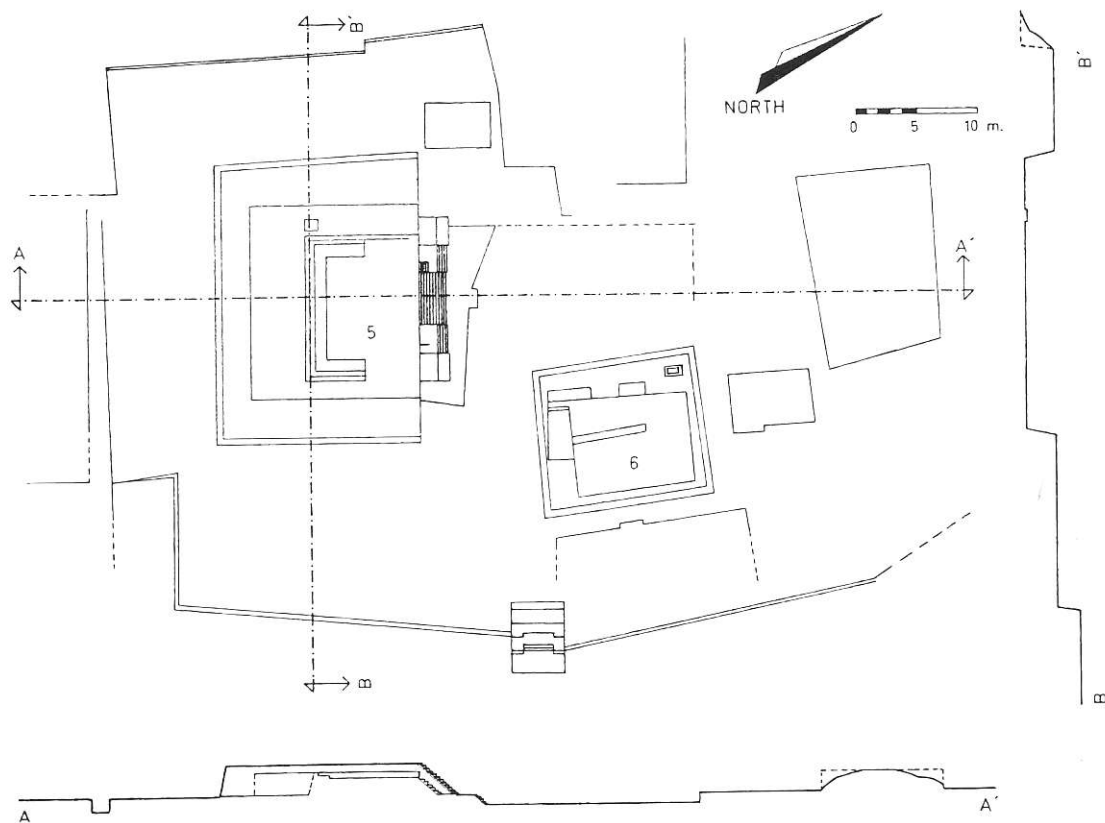


Figure 3. Topographic plan of terrace with Structures 5 and 6 (after García Payón 1981:Plain 10).

tial investigations, the paving was removed from the inner patio that separated Mound 6 and Mound 5, and at a depth of .5–.7 m below the level of the paving “a total of 37 secondary burials” was discovered (García Payón 1979:205). The next step was the excavation of Mound 5, which, after the removal of the surface soil, also turned out to be a pyramidal structure of three levels (Figure 5) similar to Mound 6 but in a better state of preservation. Archaeologist José García Payón, director in charge of the excavation in the zone, described it this way:

dado que la parte superior de la plataforma del monumento número 5, esto es, su tercera época, era mucho más elevada que

la correspondiente a la primera y segunda épocas, decidimos hacer una excavación interior desde la cima, para ver si era posible encontrar los vestigios de las estructuras superiores que pudieran hallarse sobre el piso correspondiente a la primera y segunda épocas. Durante estos trabajos vimos que la superficie de la plataforma de la tercera época estaba formada de dos pisos sobrepuestos y separados entre sí por unos veinte centímetros, y formados con piedra pomez triturada, aplanada y recubiertos de cemento [mixture of lime and sand] (Véase Foto núm. 79); debajo de éstos, pero atravesando el piso de la segunda época que estaba formado de cemento y el de la primera que lo era de laja y tepetate encontramos dos entierros de huesos quemados (Véase Plano núm. 1) que posiblemente cor-



Figure 4. East view of Structure 6 (photograph by R. Hristov, 1996).



Figure 5. East view of Structure 5 (photograph by R. Hristov, 1996).

respondieron a dos principales personajes y un buen número de piezas culturales pertenecientes al último periodo, esto es, al azteca-matlatzinca. Además de varias piezas de cerámica, se encontraron dos brazaletes de concha (Lámina CXXXVI); un pectoral del mismo material (Lámina CXXXV) cuentas de azabache, y cuatro de barro recubiertas con una fina lámina de oro (Lámina CXI, núms. 13 y 14); cuentas de cristal de roca y cabeza de ocelotl del mismo material (Lámina CXI); una pipa (Lámina CXXX, núm. 11) una plaquita de oro (Lámina CXL) un trozo de tubo de cristal de roca (Láminas CX, núm. 22 y CXI, núm. 19) restos de mosaicos de turquesa (Lámina CXI, núm. 17) cabecitas de cobre (Lámina CXXXIX, núms. 9–11), dos sellos (Lámina CXXVIII, núms. 1 y 6)<sup>1</sup> y una cabecita de barro que consideré extraña a la región [our emphasis]. Todos estos objetos estaban esparcidos, como si nubieran sido tirados, y algunos de ellos, especialmente el pectoral que se halló formado de tres manojitos, fueron bañados, ya en el agujero, con copal derretido [García Payón 1979:205–206].

Two aspects of this discovery require special comment. The first concerns the mound in which the head was found. García Payón (1961:1–2), in the only work about it published during his lifetime, reported that the head belonged to the burial offering found in Mound 6. He cited as a source the unpublished second part of his manuscript on the archaeological zone in Tecaxic-Calixtlahuaca (the first part was published in 1936 and reprinted in 1974). In this second part (published in 1979), however, he stated that the head was found in Mound 5 (García Payón 1979:204–206), and the description of the place of the discovery corresponds with that mound, which we have been able to confirm during the several visits made to the zone. This imprecision, although not of crucial importance, must be taken into account.

The second aspect relates to the chronology of the burial offering in which the head was found. Heine-Geldern (1961:117) dated the burial offering to the twelfth century A.D. However, what corresponds to the twelfth century A.D. is not the offering itself, but the building level under which it was buried (García Payón, cited in Marquina 1951:224). The pottery of the Azteca-Matlatzinca pe-

riod, which was incorporated in the offering, is considered by García Payón as belonging to the period A.D. 1476–1510 (García Payón, cited in Marquina 1951:224), that is, between the first conquest of Tecaxic-Calixtlahuaca by the Aztec emperor Axayacatl (Chimalpain 1889:148, cited in García Payón 1936:198) and the destruction of it by the last Aztec emperor Moctecuhzoma Xocoyotzin (*Códice Mendocino* 1925; Ixtlilxóchitl 1891:332; Tezozomoc 1878:626, cited in García Payón 1936:215). Therefore, the burial and the offering should have been deposited some time between the mentioned dates, that is, between A.D. 1476 and 1510.

With regard to the fate of the piece after the discovery, García Payón (1961:2) wrote:

Durante varios años conservé esta cabecita en mi poder y sólo la mostré a contadas personas que la tomaban como una curiosidad; durante el año de 1959 se presentó en México el Dr. Robert Heine-Geldern del 'Instituto für Völkerkunde' de la Universidad de Viena, quien me pidió le mostrara la citada cabecita y se llevó a Viena unas fotogradias de ella. Posteriormente en ocasión de la Reunión del último [34th] Congreso Internacional de Americanistas que se verificó en Viena en 1960, me envió una carta solicitando la cabecita de barro, la que fue llevada a Viena por el Dr. Ignacio Bernal.

Posteriormente supe de voz viva por el Dr. Ignacio Bernal que dicha cabecita había sido presentada por el Dr. Heine Geldern en la última reunión de dicho Congreso, y en la Revista 'Archaeology', Vol. XIII, No. 4, 1960, p. 288 apareció una simple nota mencionando su presentación y que se consideraba dicha pieza como de origen romano [Haberland 1960].

During the decades following this discovery, it was cited and discussed in many publications (Alcina Franch 1969:16–17; Genovés 1972:32; Gordon 1971:68–69, 175; Jett 1971:30; Kelley 1971:60; Prem 1980:16; Riley et al. 1971:450; Sorenson 1971:223; Wuthenau 1970:51) but without any reference to its whereabouts. After some difficulties in 1992, we were able to locate the head (Hristov 1994:68), which is kept in storage in the Museo Nacional de Antropología (Catalog No. 20-1416) in Mexico City. Since then, we have carried out exhaustive research on the find (Hristov and Genovés 1998a:51, 1998b:12) that, since the beginning of 1995, has been part of the project *Registro y fechamiento de las posibles evidencias arqueológicas de Mesoamérica, relativos a previos contactos transatlánticos*, codirected by Santiago Genovés and Romeo

<sup>1</sup> Most of the plates and maps from García Payón's manuscript on the Tecaxic-Calixtlahuaca archaeological zone were lost during the earthquake in Mexico City in 1985 (Fernando García Payón, personal communication 1996). Of the photographs, plates, and maps cited in this paragraph, only Photograph 79 can be found in García Payón (1981) under the same number.



Hristov and sponsored by the Consejo Nacional de Ciencia y Tecnología de México (CONACYT).

In a preliminary study of the piece, Hristov (1994:69) attracted attention to the fact that a reliable dating of the piece could resolve the controversy about its age and in part its origin. In 1994, we discussed the methods available to obtain a more accurate chronology of the find with Günther Wagner, Director of the Forschungsstelle Archäometrie of the Max Planck Institut für Kernphysik at Heidelberg, Germany, and Peter Schaaf of the Instituto de Geofísica at Universidad Nacional Autónoma de México in Mexico City. The small dimensions of the head made it extremely difficult to take enough of a sample to date it by either thermoluminescence or radiocarbon with a mass accelerator. As an alternative solution, Günther Wagner (personal communication) suggested the thermoluminescent age test, which, although less accurate than a routine dating, required a sample of only 100–150 mg of drilling powder that was taken from the broken part of the neck without affecting the artistic value and the integrity of the figurine. The sample was taken by Peter Schaaf and Romeo Hristov and taken personally by Schaaf to the Forschungsstelle Archäometrie. According to the results obtained, the manufacture period of the head is  $1780 \pm 400$  B.P. (Sample K-717). A preliminary discussion of the procedure can be found in Schaaf et al. (1996).

## DISCUSSION AND CONCLUSIONS

Two main objections against the evidence have been presented thus far. The first one, formulated before the thermoluminescent analysis, is that the terracotta head is a Colonial-period object introduced in an unclear way in a pre-Hispanic context; in fact, it is catalogued as such in the Museo Nacional de Antropología in Mexico City. This supposition, however, is not based on any concrete fact. On the one hand, the three undisturbed floors under which the burial was found and, above all, the gold pieces of the offering are clear indicators that the context did not suffer any alteration during the Colonial period. On the other hand, the result of the thermoluminescent age test clears away any doubts that the piece was manufactured approximately a millennium before the celebrated voyage of Columbus in 1492.

The second objection is that the artifact was imported by the Spaniards during the first decades after the Conquest and re-used in a funerary context dating to the early Colonial period. This idea is more consistent than the previous one, but neither has been supported by any data in the description of the excavations. As mentioned previously, the settlement was destroyed and abandoned in A.D. 1510, that is, about a decade before the Spanish Conquest. If we assume that the burial dates to Colonial times, we would expect to find traces of clear intrusion through the three superimposed floors of the pyramid, under which the offering was deposited, especially if we bear in mind that complete repairs probably were not performed due to disuse of the structure.

Without going into the thorny problem of the possible cultural impact that such a finding implies, the discovery of this piece raises the following main questions: (1) Where and when was the head manufactured? (2) How did it arrive in the central Mexican highlands? (3) How is it possible that an object more than 1,500 years old was found in an archaeological context, dated between the last quarter of the fifteenth century A.D. and the first decade of the sixteenth century A.D.?

With regard to the first question, Robert Heine-Geldern (1961:117) expressed the opinion that it "comes from the Helle-

nistic Roman art circle. Its explicit naturalism makes us think it can be dated to the second century AD." One and a half decades later, Melgarejo Vivanco (1975:8–9), when referring to the metal objects found in the offering, stated his doubts concerning the reasonableness of dating the head before the eighth century A.D. Hristov (1994:69), based on the imprecise chronological placement of the context in which the piece was found, explored the possibilities of relating it with a probable arrival of Vikings to the Atlantic coasts of Mesoamerica between the tenth and eleventh centuries A.D. The results of the thermoluminescent age test make both hypotheses untenable and clear away any doubt that the discussion will return to Heine-Geldern's proposal of the Hellenistic-Roman origin of the figurine. We hope that future stylistic and trace-element analyses will permit us to determine, in more accurate terms, the place and date of the manufacture of the head. We asked for an opinion on the matter by Peter Higgs of the Department of Greek and Roman Antiquities at the British Museum, Paolo Liverani of the Musei Vaticani (personal communications 1996), and Joan Mertens of the Department of Greek and Roman Art in the Metropolitan Museum of Art in New York (personal communication 1997). Although it was not possible to reach definitive conclusions, none of these scholars doubted the Roman origin of the artifact.

The search for answers to the second question has not been free from controversy either. Heine-Geldern (1961:119), in emphasizing the remarkable artistic similarities between the civilizations of Southeast Asia and Mesoamerica, suggested a probable trans-Pacific reimportation of the figurine between the third and seventh centuries A.D. by means of a Chinese or Hindu ship. He also observed, however, that "we cannot exclude, of course, the possibility of an importation, perhaps accidental, by means of the Atlantic Ocean" (Heine-Geldern 1961:119). This second alternative was thoroughly examined by Alcina Franch (1969:16–17) who considered it "much more logical" than the first one. The hypothesis of the trans-Atlantic importation is supported by the Mediterranean origin of the find and by data from Classic sources (Cary and Warmington 1963:43–72, 111–131) concerning ancient voyages in the eastern part of the Atlantic between the second half of the first millennium A.D. and the first centuries of the Christian era. We must also take into account the recent discovery of a Roman settlement dated between the first century B.C. and fourth century A.D. on the Lanzarote island, Canary Archipelago (Atoche Peña et al. 1995), thus confirming that during the period of manufacture of the head there had been attempts at exploration toward the west of the middle Atlantic. Several ocean currents that reach the Antilles and the Mexican Gulf have their origin in the zone of the Canary Archipelago and, as Pericot (1962:17, cited in Alcina Franch 1969:16) pointed out, "it is perfectly credible to think that at one time, during those centuries, a Mediterranean ship could have been swept away from the Canary Islands, Madeira or Cape Verde to the American coasts." One such unintentional voyage was recorded in the eighteenth century A.D. (Gumilla 1741:327–328, cited in Alcina Franch 1955:878), and it is not only credible but also rather probable that other such voyages had occurred in ancient times.

Since the 1970s, there has been no mention of the supposed incapacity of the ancient Mediterranean ships to carry out trans-Atlantic voyages; it is the right moment, however, to recall that even the more rudimentary crafts (such as the papyrus raft) have at least a 50% probability of successfully completing an Atlantic crossing (Genovés 1972b, 1972c; Heyerdahl 1971).

How could the head, once it arrived on the American coast, reach the Matlatzincas in Tecaxic-Calixtlahuaca? From historical sources,

we know that, during the rule of Aztec emperor Moctecuhzoma Ilhuicamina (A.D. 1440–1469), the Matlatzincas were Aztec allies during two military expeditions, one in the area of the Mixteca Alta (what is now the state of Oaxaca, Mexico) and the other in the Huasteca, namely the area of the Gulf Coast of Mexico (Tezozomoc 1878, Chapters XXIX and XL cited in García Payón 1936:173–176). During the latter expedition, the Matlatzincas were especially distinguished and returned with a rich booty (García Payón 1936:175–176). If the idea of a trans-Atlantic importation is accepted, it is not illogical to think that the head (or the complete figurine) was taken to Tecaxic-Calixtlahuaca as part of the booty from Huasteca.

The most persuasive explanation for the discrepancy of more than a thousand years between the manufacture date of the piece and when the burial offering was placed is that it is one of the various Mesoamerican cases of re-use of objects from earlier eras. Between the 1940s and the 1980s, about two dozen such findings were reported (see summary in Navarrete 1982:159–162) from the Maya area, the coast of the Gulf of Mexico, and the Valley of Mexico. This practice is derived from the function of such objects as symbols of a particular descent group (real or invented) that formed part of identity patterns through which the elite differentiated themselves from the non-elite, thus justifying their position of authority (Matos 1979:17). From Central Mexico, the most relevant examples are some Olmec, Teotihuacan, and Toltec pieces found in Aztec burial offerings inside the Great Temple of Mexico-Tenochtitlan. We especially emphasize the small greenstone Olmec mask that was found in Offering 20 and is considered a “three-thousand-year-old object in a five-hundred-year-old context” (Matos 1979:17).

Besides the Tecaxic-Calixtlahuaca head, García Payón (1961:2) reported two other similar heads. The first one “is said to be in the Museum of Chicago,” and the second one is cited as “being found in Querétaro [and] is the property of Mr. Víctor Blanco Labra.” In 1993, Hristov checked in detail the collection of pre-Columbian terracotta figurines in the Field Museum of Chicago, but it was

impossible to identify any piece similar to the one found in Tecaxic-Calixtlahuaca. There is no such artifact in the pre-Columbian collection of the Art Institute of Chicago according to Richard Townsend, Curator of the Department of Asia, Africa, and the Americas (personal communication 1993).

The second piece was found, in 1952, in the excavation of a pit in the basement of Mr. Blanco Labra’s house in the city of Querétaro, Mexico. It was a terracotta head about 2–3 cm in height and represented a female face with bun hairstyle. As far as Blanco Labra (personal communication 1993) could remember, the object was associated with human bones and pottery sherds. The head was lost in 1985, and a more detailed speculation, based only on the above-mentioned information, does not seem prudent. Judging by a drawing of the artifact that Blanco Labra showed us, however, the identification of it as being of Roman origin seems incorrect. The information concerning the context of the discovery (as far as we know) cannot guarantee that the object is from pre-Hispanic times.

To conclude, we emphasize the need to refine the use of archaeological arguments to support the hypotheses of pre-Columbian transoceanic contacts between the Old and New Worlds. Such arguments are the decisive factor in proving any such hypothesis (Ingstad 1968; Seaby 1978:369–370, 377–382, cited in Buttrey 1980:12), but they have been the subject of unscrupulous speculations too often to hope that the evidence presented will be easily accepted. In addition to the above-mentioned objects, a few more findings of artifacts from Central America and the Caribbean of probable Mediterranean origin have been reported (Genovés 1972a:74, 80–84; Sorenson 1971:223; Vaillant 1931:243–245) that deserve critical and impartial verification of the circumstances of their discoveries and the establishment of reliable chronologies based on absolute dates or meticulous stylistic and technological analyses. Such procedures are slow, laborious, and not always a pleasant experience, but they are the only means to reduce the possibility of mistakes and frauds and make a statement of the proposed hypothesis.

## RESUMEN

En el presente artículo se discuten los resultados de la re-examinación de una cabezita de terracota de supuesto origen romano, encontrada en una ofrenda funeral pre-Hispánica cerca de México, D.F. El análisis de autenticidad por medio de termoluminiscencia, llevado a cabo en 1995 en Forschungsstelle Archäometrie in Heidelberg, Alemania, ha establecido los límites cronológicos del artefacto a  $1,780 \pm 400$  años a.p., lo cual es consistente

con la hipótesis de origen romano. Por otro lado, la revisión de las circunstancias del descubrimiento no ha revelado indicio alguno de posible intrusión post-Colombina, lo cual permite la aceptación de dicho objeto como la primera evidencia fidedigno de Mesoamérica, relativa a contactos transoceánicos pre-Hispánicos entre el Viejo y el Nuevo Mundo.

## ACKNOWLEDGMENTS

This study is a result of the joint efforts and discussion among the four authors and was generously supported by the Consejo Nacional de Ciencia y Tecnología de México (CONACyT), Grants 5393-H0994 and 3362-T9309, and the Forschungsstelle Archäometrie in Heidelberg, Germany. Permission to take the sample for the thermoluminescent age test was granted by the Museo Nacional de Antropología in Mexico City. We thank Richard Townsend, David Kelley, John Sorenson, Peter Higgs, Charles Stanish, Paolo Liverani, Felipe Solís, Mari Carmen Serra, Erendira Camarena,

Luis Torres, Fernando García Payón, Víctor Blanco Labra, Carlos Navarrete, Enrique Ariño Gil, and Pablo Atoche Peña for useful information and suggestions. Assistance with the preparation of the English version of the manuscript was provided by Alejandro Mendoza, Claudia Harriss, John Sorenson, Suzanne Ekholm, Stephen Jett, David Freidel, Joanne Harrison, and Anna Halasz. Gerardo Jiménez and Rúben Gómez of the Departamento de Diseño Gráfico at IIA-UNAM were kind enough to prepare the drafts. Of course, any error of facts or interpretation is the responsibility of the authors.

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