

## A Reappraisal of Alfred Métraux's Search for Extra-Island Parallels to Easter Island Culture Elements

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On behalf of the members of the Norwegian Archaeological Expedition to Easter Island in 1955-56, I would like to express our gratitude to the University of Wyoming for the invitation to participate in this Rapa Nui Rendezvous. As we all know, this University was the scientific home of our late friend and collaborator, William Mulloy, and is a most appropriate meeting place for his many friends and followers. No other scholar has devoted so much of his life to field work on Easter Island as did William Mulloy. It was my fortune that I was able to introduce him to this most remarkable of all Pacific islands, at a time when no stratigraphic archaeology had as yet been attempted in any part of Eastern Polynesia.

However, two professional anthropologists had already conducted important research on Easter Island twenty years before us: the Franco-Belgian Expedition in 1934 with the Belgian archaeologist Henry Lavachery and the French ethnologist Alfred Métraux. My own decision to attempt stratigraphic excavations on this easternmost outpost of Polynesia was in part stimulated by my personal contact with both of them, and in part by my own genetic studies of plant and animal dispersal into Polynesia, which had brought me from the University of Oslo to the Marquesas Islands as early as 1937-38.

Lavachery, who later became a collaborator in my own volume on Easter Island art, was the only archaeologist on the Franco-Belgian expedition, as his French colleague died en route. Lavachery admitted that their team had not attempted excavations because they had not seen evidence of deep soil accumulation, and Métraux, as ethnologist, had assured him that, as the island was so far east, the Polynesians must have found this lonely spot so late that all their remains must be left on the surface.

Stratigraphic excavations started by us in 1955, and followed up by Sergio Rapu and many other Chilean and foreign archaeologists after him, have brought to light buried masonry walls and statue types not known when Métraux made his study of local culture traits, and thus his conclusions merit a re-appraisal in the light of recent evidence.

Métraux came to Easter Island with strong preconceived ideas of homogeneity in the local population and culture. Visitors prior to him, from Roggeveen in 1722 to Routledge in 1914, had argued that the Easter Islanders were a visibly mixed stock, a claim strongly maintained by the islanders themselves. Métraux was rather blunt on this point, and concluded his book *The Ethnology of Easter Island* (1940) with this statement: "The aim of this book has been to show that Easter Island is a local Polynesian culture which developed from an archaic and undifferentiated Polynesian civilization."

It must be admitted that at that time the most absurd theories had been advanced in the anthropological literature, proposing that the islands of Polynesia had been peopled by Caucasians, Phoenicians, Mongolians, Cushite, Indians, In-

donezians, Melanesians, Alpines, Negroids, or mixtures between two or more of these, or even autochthonous survivors of a sunken landmass. Routledge (1919: 221), confronting all these speculations, had made no attempt to trace the origins of Easter Island culture elements, but she returned from the Pacific convinced that two different peoples had mingled to form the population she had seen on Easter Island. She spoke of families with red hair and skin whiter than her own, and at the time she quoted the British anthropologist Keith, who measured the crania she brought back and said that the Easter Islander were "absolutely and relatively a long-headed people and in this feature they approach the Melanesian more than the Polynesian type."

Métraux (1940: 24-30), however, violently refused any blood relationship with Melanesia, and quoted the American anthropologist Shapiro who analyzed the blood samples the Franco-Belgian expedition brought back and claimed that any such theory "does violence to known facts."

But Métraux (*ibid*) also excluded the possibility of any influence from the other side of Polynesia and wrote: "Several authors have attempted to show parallels between Easter Island culture and the civilization of the South American Indians. These parallels are so fanciful or naive that I do not think it worthwhile to discuss them here."

His companion on the Easter Island expedition in 1934, Lavachery (1939) never shared this opinion, and confronted with the result of our Easter Island expedition two decades later, he wrote the introduction to our volume on *The Art of Easter Island*, where he concluded (in Heyerdahl 1975:15): "Undoubtedly, as with so many problems of this island, we ought to direct our attention to South America, as Thor Heyerdahl has now taught us to do."

The opinions of the two first professional anthropologists to conduct research on Easter Island did thus not concur, and as discussions of the origins of Easter Islanders continue it is pertinent to update the arguments with information that was not available to them.

I have dealt at length elsewhere (Heyerdahl 1961: 33-43, 68-74) with the various reports the Easter Islanders themselves gave the first foreign visitors about their mixed origins of their own ancestry. Every single record on this topic from the visit of *Topaze* in 1868 when the first missionaries had just landed and learnt to speak with the islanders, until and including the first Chilean government expedition which landed in 1911, consistently and with no exception, reported that according to the Easter Islanders themselves their island had been settled twice, and the earliest arrival came from the east.

The first scholarly discussion on this topic began in 1870 at a Royal Geographical Society meeting in London, when Palmer (1870: 110), the surgeon on the *Topaze*, reported that the Easter Islanders claimed that their island had been peopled twice, and the statues were carved by an earlier people. He also pointed to the similarity of the tusk-shaped Easter Island

reed-floats to the *titora caballitos* of Peru. The Andean authority Sir Clements Markham then pointed to the Tiahuanaco ruins and statues and said: "It was impossible not to be struck with the resemblance of these remains and those on Easter Island" (ibid).

The first detailed interview with the Easter Islanders were made by the half-Tahitian A.P. Salmon who learnt to speak their language fluently and became interpreter for all further visitors between 1877 and 1886. Commander Clark in 1882 (p.144) reported to the British Admiralty: "Mr. Salmon says that, after long talks with the natives on the subject, they all say they originally landed on the north side of the island, at Anakena, and came from the East in two canoes . . ."

The German Commander Geiseler (1883: 43) reported that the islanders were divided in two groups, those who said they had come from the east and landed in Anakena, and those who said their ancestors had come from the west and landed in Vinapu.

In 1886 Paymaster Thomson became the first to spend a whole night with Salmon personally interviewing the learned *tangata rongoro-rongo* Ure Vaeiko, who recited a tablet text he pretended to read but probably knew by heart. The text recorded (Thomson 1889: 526-532) in detail the story of how Easter Island first became settled: "The island was discovered by King Hotu Matua who came from the land in the direction of the rising sun." Defeated in war in his large former fatherland to the east, he embarked with three hundred chosen followers in two large vessels, each 15 fathoms long and one fathom deep, and upon a voyage of 120 days they found the island "by steering towards the setting sun". Thomson wrote: "It is difficult to account for the statement, so frequently repeated throughout the legend, that Hotu Matua came from the eastward and discovered the land by steering towards the setting sun. . . ." The text recorded by Thomson even described the non-Polynesian climate in this great kingdom to the east: "In this land, the climate was so intensely hot that the people sometimes died from the effect of the heat, and in certain seasons plants and growing things were scorched and shriveled up by the burning sun."

Upon the Chilean annexation of Easter Island in 1888, the first Easter Islanders learnt to speak Spanish, and the Chilean meteorologist E. Martínez, who lived a year among the Easter Islanders in 1891, told the subsequent investigator on Easter Island oral history, Dr. Knoche (1912: 873-874) the very same traditions and found the tribal memories of Hotu Matua's arrival still so vivid among the elder people that one of them sat and wept with emotion on the day of the year which marked this ancestral event.

During his personal visit to Easter Island as member of the Chilean government expedition in 1911, Dr. Knoche was, like Martínez, able to converse directly with the population in his own language with Spanish-speaking islanders as interpreters. He assembled all the elders, once in the presence of between sixty and seventy interested islanders and wrote (Knoche 1925: 239, 251): "In former times there were two races that mainly differed through the size of their ears." And (ibid, 228): "We know from the traditions that the island was peopled twice, the first time by the *Long-ears* and the second by another race, the *Short-ears*. According to the myth the

Long-ears had been the builders of the monuments, yet the Short-ears, who came to the island later, had under the command of the Long-ears apparently . . . helped. On this part we are informed in detail by the myth on the Long-ears and the Short-ears." Also Knoche (ibid, 243): "We were told that the written tablets were not the product of the present population, but by those of an earlier immigration."

After the Chilean government expedition, Vives Solar visited Easter Island, and recorded for the third and last time the oral history told in Spanish language before the elders disappeared. The traditions about the Long-ears and the Short-ears told to him are so similar in every respect to those narrated by Knoche that it is clear it was obtained from the same old informants.

The next visitor to Easter Island was Mrs. Scoresby Routledge, an archaeologist and the most important investigator until the Franco-Belgian expedition arrived. Her problem was that none of her party spoke either Rapanui or Spanish, and for information they were entirely in the hand of an English-speaking ex-soldier educated in Chile. Juan Tepano was personally ignorant of his tribal past, and embraced western civilization at a time when his own generation were experts in copying old art and inventing new stories about the past.

Geiseler (1883: 43) and Knoche (1912: 871) were well aware of the fact that foreign visitors had now put such information into the mouth of the Easter Islanders that the younger ones could tell that Hotu Matua came from Galapagos, the Tuamotus, Hotu-iti, as well as the Marquesas. Routledge (1919: 282) stated that "Juan put the home of the first immigrants in the Paumotu; as a young man his knowledge of legend was a step further from the original, but it was often useful in summing up the general impression he had received."

The Franco-Belgian expedition twenty years later ended up with the very same Juan Tepano as their only interpreter and main informant. Easter Island traditional history recorded after the Chilean government expedition in 1911 may therefore be considered as extremely dubious. It remains to affirm that unanimous testimony recorded from direct interviews on Easter Island prior to World War I concur in stressing that the present population on Easter Island found another people on their own arrival. Under the rule of the island discoverer Hotu Matua they came to the island from the east, carved the giant *moai* and practiced ear extension. A second arrival came later and after a period of coexistence the newcomers defeated the others and became the rulers of the island.

Due to the many efforts on distorting the unanimous testimonies of the early records, I feel it pertinent to stress this point which is basic to the understanding of what to accept as genuine local tradition. After half a century of complete acculturation the modern Easter Islanders have now reassumed the profound interest in the genealogy and oral history of their own ancestors, an interest which was so typical for their own forefathers and neighbours both throughout Polynesia and in the Inca Empire prior to European arrival. Personally now acquainted with three generations of Easter Islanders, I feel we owe it to them to consider nineteenth century Easter Islanders as greater authorities on Rapanui oral history

than any foreign visitors since the day an ex-soldier became an authority in the eyes of foreigners just because he spoke English.

The great merits of the Routledge and Lavachery-Métraux investigations are therefore their own research and accumulation of still available ethnographic and archaeological data. Neither of them attempted stratigraphic excavations. Routledge (1919: 186) attempted to dig around the base of a *moai* standing below the quarries in Rano Raraku, and hitting upon a broken one fractured by the neck, she assumed it was a head carved with a peg to be set in the ground. The subsequent Franco-Belgian expedition did not attempt any excavation at all, and spread the false assumption into the literature on Polynesia that all Rano Raraku images were only heads set on pegs, and that there were three types of Easter Island *moai*. One type with full body and concavities for eyes, erected on *ahu* platforms. A second also with body but no eye concavities, set up as roadside decoration, and a third mere blind heads set up in Rano Raraku.

Métraux and Lavachery disagreed on the origin of the colossal monuments although both considered them to be non-Polynesian and of local origin. What today we recognize as unfinished statues in the niches of Rano Raraku's quarry, were at that time proposed by Lavachery (1935: 184) to be giant reliefs intended to remain in the mountain. He suggests that the idea of free-standing statues evolved locally from these decorations of a sacred mountain. Métraux (1940: 293) did not support this view. He accepted a theory by Kenneth Emory that the idea of carving the statues evolved from the unshaped upright stones in the *marae* enclosures of Tahiti or the Tuamotus. He pointed to some unworked stone pillars he had seen set up on an Easter Island *ahu*. This was in turn found untenable by Lavachery (*Op. cit.*) who discovered they had been recently set up to imitate the earlier *moai*, and concluded: "The substitution was an act of decadence and not of primitivism, and may in no case be considered as evidence of evolution from the form of stone uprights to that of statues."

Subsequently the Norwegian Archaeological Expedition to Easter Island and Eastern Polynesia visited the two sites in the Marquesas with monumental stone statues to check if they could be chronologically older than those on Easter Island. During excavations in 1956 we obtained C-14 dates from carbon beneath the platforms supporting the main statues in Puamau Valley on Hiva Oa and Taipu Valley on Nukahiva (Heyerdahl and Ferdon, 1965, Vol. 2: 136-137). The dates range from AD 1316+/-100 years for Hiva Oa and AD 1516+/-80 years in Nukahiva. These dates fall within the second period of statue erection on Easter Island and can in no way be considered as ancestral to the Easter Island *moai*.

Aware of the fact that the Polynesians were wood carvers rather than stone sculptors, Métraux (1940: 308) was led to assume that, when fishermen from some wooded island elsewhere in Polynesia ended up on Easter Island and found their new home scarce in wood but rich in stone, they started to quarry the volcano wall, until they matched the masters of ancient Peru in the art of handling giant stone. Today we know this theory is not valid. Studies of pollen and roots traces show that Easter Island was not barren when the first

seafarers arrived. To the contrary, it was man who cleared the woodlands for agriculture and to gain access to open quarries in the crater wall. The island had been as wooded as Mangareva and the other islands in the nearest outposts in Eastern Polynesia and was the home of the endemic *toromiro* tree and the useful Chilean palm, otherwise unknown outside Chile.

To update Métraux, search for extra-island parallels, we cannot omit discoveries not available at the time of his studies. The pioneering study of the Rano Raraku quarry by Routledge in 1914-15 was followed in 1955-56 by stratigraphic excavations of our expedition. Arne Skjølsvold conducted excavations inside and outside the crater and we were able to show for the first time that all the statues left unfinished and all those standing partly buried awaiting transportation were of the same type as those abandoned along the road during transport, and but for the lack of eyes they were not different from those that had stood on *ahu*. Métraux (1940: 293) had been misled by the dig of Routledge, who found a head broken at the neck and buried in silt below the quarry. This caused him to state: "The fundamental difference between the images of Rano Raraku and those on the *ahu* terraces lies in the shape of the base. The Rano Raraku images were originally destined to be planted in the ground, for they taper into a sort of peg, whereas the *ahu* images have expanded bases." And: "The images with pegged bases were never intended to be placed on the stone platforms. . . but were to be erected in the ground as secular objects to ornament the landscape and mark the boundaries of districts and highways."

Our investigations (Heyerdahl 1989: 223-227) proved Routledge (1919: 185-186) correct when she suspected that the roadside statues had fallen from an upright position while on the way to some *ahu*. On arrival to their destination they were jerked up the slope to the *ahu* platform, finally to obtain inlaid eyes and a red *pukao* topknot.

The statues seen by the members of the Franco-Belgian Expedition were of a single type, following the same characteristic Easter Island prototype as the basalt image brought by Palmer from Orongo. That style was strictly local and typical only for Easter Island. However, in 1955-56, Skjølsvold (1961: 360-362) at Rano Raraku, Mulloy (1961: 133-135) at Vinapu, and Ferdon (1961: 231) at Orongo, excavated three types of images typical for Tiahuanaco. The most remarkable was the realistic sculpture of a plump giant with a goatee, carved in a kneeling position with hands on thighs and soles of feet turned back to be seen from behind.

Totally different was a rectangular pillar-like statue of red scoria, standing on stunted legs with hands on abdomen. A third was equally aberrant for the island world, but just as typical for Tiahuanaco as the others: it was a rectangular flat stone head with huge round eyes, thick lips and flat nose branching upwards into two curved eyebrows. All three seem to have no relation to the subsequent legless and standardized *moai* bust. Skjølsvold (1961: 361-362) wrote about the kneeling statue: "The nearest parallel to our specimen is to be found on the east side of the Pacific, in the old Andean culture area of Tiahuanaco. . . the similarity between this Tiahuanaco statues from South America and our specimen is so great that it can scarcely be put down to chance. . . which implies that

there is a connection between these two examples of ancient stone sculpture in the Andes and on Easter Island.”

The main difference is that the former is carved with marked ribs while the latter has none. However, subsequently Sergio Rapu (Heyerdahl 1989: Pl.199) has excavated fragments of Early Period sculpture in Anakena, and one was part of a kneeling statue with buttocks and feet turned behind; another was the torso of a statue with ribs indicated clearly. When Claudio Cristino, Patricia Vargas, and their team from the University of Chile began the most thorough surface survey on Easter Island, they located another full body kneeling statue inside Rano Raraku crater.

Much guesswork has been published through the years about why Rano Raraku and the roadside images were blind whereas those that stood on platforms had eye sockets. In 1975 ( 228-229, 247), this author gave his reasons for why he suspected that the finished statues must have had inlaid eyes. The proposal was rejected with the argument that inlaid eyes on stone statues were not a Polynesian custom. Two years later, Rapu could announce that his team had excavated the first eye-inlay from a Middle Period statue in Anakena. On subsequent excavation of the same site in 1986, Sonia Haoa, who had dug up the first eye, also found the first eye from an Early Period statue. The argument that inlaid eyes on stone statues is not a Polynesian custom is still valid. It is an American custom (Heyerdahl 1989: 227,229,248).

When Métraux spoke about East Pacific chronology in 1940, he could not know what we have subsequently learned: modern carbon dating from South America and Easter Island place the *ahu* walls on the island precisely within the frame of the Tiahuanaco culture in the Andes, which flourished with overlapping periods from the earliest centuries AD until it collapsed about AD 1150. Geographically, its religious and political influence stretched from the highland of the Andes down to the desert coast below Lake Titicaca, the nearest land to Easter Island, and with such highly important pre-Inca ports as Matariki, Ilo, and Arica. In Ilo, a name familiar from Polynesian mythology (Heyerdahl 1951: 243-244), extensive excavations are carried out at present by Peruvian archaeologists, showing a direct contact with highland Tiahuanaco, and at the same time testifying to a maritime activity reflected in funerary models of reed boats and balsa rafts. There is no stone suitable for carving in Ilo or elsewhere along the Peruvian coast. But in the highland, Bolivian archaeologists (Heyerdahl 1965: pl. 233) have in recent years exposed buried masonry walls of the Akapana pyramid, which display the same exquisite fitted megalithic masonry technique as the best in Easter Island and in Cuzco. It shows that the Incas in Cuzco only inherited this art from their cultural predecessors in Tiahuanaco. There is nothing but open water between the coast of Peru and the islands with stone statues in Polynesia, and we know from our voyage with the *Kon-Tiki* (Heyerdahl 1948) and Kitin Muñoz' (1990) voyage with the *Uru* that both the balsa raft and the reed ship of ancient Peru could reach Polynesia. Métraux' claim that there is neither geographical nor chronological links between the stone works of Easter Island and Peru is thus no longer valid.

Métraux (1940: 290; 1957: 223-224) only looked to Polynesia and thus found no parallels to the religious and

secular stone structures of peculiar types that dot the open terrain of Easter Island. Finding nothing comparable on other islands, he interpreted all of them as of local origin. Only one of the aberrant structures was interpreted by Métraux as a secular dwelling, since it was still in use as such in missionary times. This was the so-called *hare paenga*, a low hut of *totoro* reeds covering a framework of sticks tied together in the shape of an overturned boat, thickest in the middle and curving to pointed ends. The sticks were set in rows of holes drilled in shaped foundation stones of hard basalt, and the boat-shaped outline marked by these foundation stones could be seen almost everywhere. This strange house type must have survived from a very early period, for *paenga* stones could be found displaced and reused as mere fill in crudely built circular walls and *ahu* platforms of later periods. Métraux (ibid. 417-418) admitted that this important house form on Easter Island was “entirely different” from any Polynesian type in every aspect, including the funnel-shaped door, which was “unparalleled in Polynesia”. So far this house has been found nowhere else, but *paenga* stones, indistinguishable from those of Easter Island, can be seen in Tiahuanaco, also out of context and reused in walls of temple platforms (Heyerdahl, 1975: Pl. 307 d.).

Métraux (ibid. 189-190) admitted that the Easter Island stone structures, known to the present Easter Islanders as *hare moa* and *tupa*, were completely non-Polynesian, but he was misled by his informant Juan Tepano to believe that the former was a “chicken coop” and the latter a “watch tower for turtle”. The *hare moa* is a well-built oval stone structure usually with two round holes in the stones barely large enough for a chicken to get in. Ferdon (1961: 383) opened one in 1956 and found that it was almost compact inside with only an extremely narrow interior channel, wide enough for a secondary burial of loose bones, but too small to be useful as a chicken coop. In fact, Hervé (1770: 123) pointed out that the Easter Islanders housed their chickens in thatched-over runways, and Geiseler (1883: 10-11) was informed by the early islanders about the original purpose of these particular stone structures: “Deceased of high rank were in earlier times placed in specially built stone houses with two round holes for the escape of the soul. . . .”

The *tupa* is an even more impressive stone structure often of huge blocks with a tiny square entrance hole into a slab-roofed chamber. Twenty-seven of them remained at the time of our visit and Mulloy (1961, Report 12), who excavated the *tupa* of Hiramoko, excluded that they were originally built for turtle watching. Many of them were built inland, and those that might have overlooked the sea had an entrance so small that a turtle could not be seen unless it crawled in the door. Whereas such structures are unknown elsewhere in Polynesia, they are characteristic remains from the Tiahuanaco period on the nearest land to the east, in the arid slopes from the Pacific coast up to the area around Lake Titicaca.

More widespread and obviously more important than *tupa* are the circular stone walls often clustered together as contiguous rooms and, when not built on naked rock, are sometimes used as garden plots for the modern islanders, protecting their plants from the introduced domestic herds. Naturally, Tepano interpreted their presence as intended for

this purpose. But such structures were excavated in 1955-56 by both Skjølsvold (1961: 295-303) and Ferdon (1961: 305-311) who reported them to be walls of dwellings of a type new for Polynesia. In his discussion on Easter Island house types, Ferdon (ibid. 336-338) writes: "With the possible exception of Hawaii, prehistoric masonry-walled dwellings are absent in Polynesia, as in the corbeled roof and the concept of tightly grouped, contiguously walled houses as found at Orongo. It is, therefore, interesting to note that to the east. . . in western South America, masonry dwellings of several different types are common. Thus, religious and/or secular structures having masonry walls and corbeled roofs are found from northern Peru to northern Argentina, while single room circular dwellings and multiple, contiguously walled rooms of dry masonry construction, which often lack lateral doorways as with the Easter Island thick walled houses, are found in the Atacama region of northern Chile and in Highland Bolivia. Since these are not the only trait similarities to west central South America revealed by our investigation on this island, the possibility that masonry houses were introduced to Easter Island from this land mass must be considered."

Nothing is more consistent in Polynesian culture than the common religious belief in the pan-Polynesian gods Tiki, Kane, and Tangaroa. Métraux (1940: 341-405) was well aware of this as he looked for the principal Easter island gods Make-Make and Haoa inside Polynesia. But he wrote: "The most striking feature of Easter island religion is the unimportance of the great gods and heroes of other Polynesian religions."

Indeed, if wind-driven Polynesian fishermen landed on Easter Island and there was nobody there, why should they adopt foreign gods and begin to build enormous monuments in honor of their ancestors with long ears and offer first-fruits and sacrifices to Make-Make and his fellow deity Haoa?

Excavations in Orongo and the orientation of some important *ahu* have suggested to Ferdon (1961: 250-251) and others after him that there are traces of some form of sun worship on Easter Island. But the most important aspect of Easter Island religion is in the Middle and Late Periods, as stressed by all early visitors and scholars, is the local bird-man cult. Métraux (op. cit.) also stresses the extraordinary importance of the bird cult, the bird-man with the egg and the social structure built around the annual bird-man competition. Yet he finds: "The complex of the bird cult. . . had no parallel in the rest of Polynesia."

We do not have to go further on this important point, than referring to the pre-Inca reliefs our Norwegian-Peruvian team is now excavating in Tucume, Peru, where temple walls showing a bird-man cult contemporary with that of Easter Island abound. Bird-man cult, as shown by Ferdon (1961, p.255) is typical for pre-Inca cultures from Tiahuanaco and northwards, but never before have bird-men been found directly depicted as navigators on board reed ships at sea with cabin on deck, a number of oars, and surrounded by fish, swimming sea birds, and rows of bird-men with eggs in their hands. (Heyerdahl et al. 1995: pls. 109-11, 114,115,170,171)

These excavations, still going on, like others along the Peruvian coast, confirm what the Peruvian archaeologist Walter Alva (ibid. 38-67) discovered in 1987 when he began

excavations at Sipan: Throughout the first millennium AD and until the Inca conquest of the coast about 1480, aboriginal Peruvian navigators traded north and south all along the Peruvian coast. Northwards to Ecuador and Panama in search of tropical *spondylus* shell, and southwards past Ilo and Arica to the central Chilean coast where they obtained the treasured *lapis lazuli* from the only quarries for this stone in all America. Scholars can no longer ignore the archaeological evidence rapidly emerging all along the Pacific coast of Peru during the last half decade, that there was a web in interrelationship between all the coastal valleys all through the first millennium AD, based on intensive and long-range maritime trade.

Petroglyphs of ships with shaped outlines unlike dug-out or plank-built canoes are common on Easter Island. Best known of these is one discovered in Rano Raraku by Skjølsvold (1961: 31-353) when he excavated the buried body of a statue. It was subsequently mutilated by vandals.

Smith (1961: 203, fig. 57) discovered another of these sickle-shaped ships with two masts, similarly incised on the abdomen of a 10 meter tall statue overthrown face down from Ahu te Pito Kura during the civil wars. Smith had to dig himself under the fallen giant to find this incision so it was carved when the *moai* was still standing

Nor can there be any doubt about the antiquity of still another such ship petroglyph found by Mulloy (1961: 117) when he excavated the facing stones of Ahu No. 2 in Vinapu. The petroglyph was discovered 55cm below the surface talus and 5 cm above the pavement, and Mulloy described it as a vessel with mast and three superimposed sails. He wrote: "These petroglyphs could have been made either in Early or Middle period times, but probably not later, as the surface would have been covered with talus."

Also Ferdon (1961: 236-240) reported corroborative evidence from Orongo where he discovered mural painting of sickle-shaped reed-boats on the walls and ceilings of a stone house, together with paintings of faces with the typical weeping eye ornament decorating the Easter Island *ao* paddles, and unknown in Polynesia but characteristic of Tiahuanaco period in Peru. The boat paintings discovered by Ferdon represented sickle-shaped ships with one to three masts carrying superimposed sails, and upon pointing to the former use of reed-ships along the Pacific coast of South America, Ferdon (ibid. 237) commented: ". . . it is possible, if not probable, that such boats once existed on the island."

As a result of the decadence following the civil wars, no sea-going ships were built by the disorganized tribes surviving on Easter Island when the Europeans arrived. Roggeveen (1722: 9) and Behrens (1722: 133) mention only tiny skiffs, obviously one-man *pora*, that came out to visit his ship. La Pérouse subsequently saw two tiny patched-together outrigger canoes, capable, like *pora* of holding two men. They were obviously of Polynesian origin but so poorly constructed that Métraux made no attempt to track down their exact prototype in any specific area within Polynesia.

The *rongo-rongo* tablets have always been, and still are, the greatest enigma on Easter Island, as script is unknown elsewhere in the Pacific island territory which covers half of our planet.

Script was common from Mexico down into Meso-

America. The references to picture writing on boards among the Cuna Indians of Panama, as well as in the Temple of the Sun when the Spaniards conquered Peru (Molina, 1570: 4; Gamboa 1572: 200; Montesinos 1642: 18, 32, 58, 62) are discussed at length elsewhere (Heyerdahl 1975: 203-245), but the origin of the *rongo-rongo* is unknown and all attempts to decipher them have failed.

As is well known, the family of the ruling Inca who preserved their history on written boards were called *orejones* by the Spaniards because they practiced ear extension. That this custom was also formerly practiced by one group of Easter Islanders, as recorded in the legend, is borne out by their images in stone and wood and by records from early voyagers who saw Easter Islanders with earlobes so long that they tied them behind the neck so as not to be disturbed by them during work. Smith (1961: 206, fig. 56, pl.23) found two ear-spools of jewel box shell during excavations at Ahu te Pito Kura. Métraux (1940: 235) admits: "Deformation of the ear lobes to introduce wooden or bone plugs is restricted in Polynesia to Easter Island." This custom was borrowed by the Inca from their predecessors in various parts of Peru. In our excavations at the coastal bird-cult site of Tucume, traditional and mythical heroes are depicted as Long-ears; and when we recently opened a mummy bundle containing a person of high rank, we found him robed in a beautiful multi-colored feather-cloak and with huge silver ear plugs in his lobes. Some, but not all, of the chosen maidens buried with him were also Long-ears, with wooden ear-plugs artistically inlaid with shell.

The well known emblem of rank on Easter Island was the double-bladed *ao* paddle, a ceremonial paddle with a blade at either end, carried in the hand at public gatherings. As is well known, the upper and lower blades are slightly asymmetrical, as the upper blade is more rectangular with its lower corners carved like the pending ear lobes of a conventionalized human mask, sometimes carved and painted, but always with a feather crown on top of the head. Paddles with a blade at either end are unknown in Polynesia. Métraux (1940: 209) described them but concluded that they "had nothing to do with navigation and are not derived from any known implement." He did not look towards South America, where double-bladed paddles are known both from the south and north coast. And, as shown by the present author (Heyerdahl 1975), on the north coast double bladed paddles are depicted on pottery from the Lambayeque-period, and there they are carried in the hands of chiefs as badges of rank, as on Easter Island. Both chronologically and in the specific details of the conventionalized design, they are perfect prototypes for the Easter Island *ao*, even to the representation on the upper blade of a stylized human face with ear-plugs, and feather crown on top. The symbolic importance of the *ao* paddle has survived in Peru as on Easter Island until historic times. A miniature of a double-bladed paddle in silver was recently excavated by our resident archaeologist Alfredo Nárvaez, in Tucume, in a hoard of offering from Inca time including minute models of a vast variety of objects. Although only 8.1 cm long with blades 1.7 cm wide, the details are diagnostic of an *ao*. (Heyerdahl et al. 1995: pl. 177)

The Easter Islanders had two other types of important

paraphernalia carved from wood and worn as pectorals around the neck: the crescent-shaped *rei-miro* and the ball-shaped *tahonga*. Both are given attention in Métraux' (1940: 236) survey, but again he was forced to conclude: ". . . the wooden crescents. . . are without any parallel in Polynesia." And: "The wooden balls, *tahonga*, are paraphernalia particular to Easter Island."

Crescent shaped pectorals of wood are not reported from South America, but recently small crescent-shaped pectorals of gold and silver, terminating in a bird's head on either end as on Easter Island, have turned up archaeologically on the north coast of Peru and are on exhibit in the site museums of Lambayeque and Tucume. The variety of the Easter Island *rei miro* in the shape of a fish is carved as a pectoral on the chest of the main figure on the Gateway of the Sun in Tiahuanaco .

Other extremely common artifacts found all over Easter Island, are pointed bone needles perforated near the blunt end to hold a thread. Outside New Zealand, sewing was unknown in the Polynesian island world. Failing to find bone needles, so important to the Easter Islanders, on other islands from which they could have come, Métraux (1940: 215) admitted that this was another anomaly in the local culture. This he explains by pointing to still another anomaly in their customs: "Easter Island is the only place in Polynesia where strips were fastened together by sewing. Elsewhere in eastern Polynesia the strips were felted together, in western Polynesia they were pasted."

It seems strange that the little group of fishermen, assumed to have founded the aberrant Easter Island culture, also should resort to the use of needle and thread neither thought of nor needed on all the other islands. Bone needles, however, indistinguishable from those on Easter Island, are common in Peru and numerous in the prehistoric middens of Ilo, on the Pacific coast below Tiahuanaco.

The extremely aberrant fishhook types of Easter Island have been dealt with at length elsewhere (Heyerdahl 1961: 415-438), and it suffices here to recall the exhibit "Across the Pacific" arranged by Gordon Eckholm and Heine Geldern at the American Museum of Natural History in 1947. The specialized composite hook with stone shank, bone point and barb, as well the remarkable one-piece incurved stone hook from Easter Island, were exhibited together with the very same types from the South American coast below Tiahuanaco and islands off California. The entire Polynesian fishhook complex is linked to the New World. A circum-Pacific study of fishhook distribution (Anell 1955) shows that the custom of fishing with hook and line must have spread very early from Arctic Asia into Northwest America. The composite stone and bone type of Easter Island can be seen in archaeological material excavated in Vancouver Island (Victoria Provincial Museum) as well as in the site museums of Ilo and Arica below Tiahuanaco. On the Asiatic side the importance of fishhooks peters out towards the south. A hook has recently been found in Cambodia and one on Okinawa, but none in any part of Malaysia or Indonesia.

In all parts of Polynesia, fishermen and farmers alike ate *poi*, the fermented dough produced by pounding breadfruit or taro root with special pounders carved and polished in bell-shape form as the principal tool in stone, apart from stone

adzes. This created another problem for Métraux in his attempt at bringing the Easter Islanders from any one specific island in Polynesia. The pan-Polynesian *poi*-pounder was conspicuously absent on Easter Island as was the custom of eating *poi*.

Another custom considered diagnostic of Polynesian culture is the *kava*-drinking ceremonies. Whereas betel-chewing spread into the West Pacific from Southeast Asia there is an abrupt demarcation line between Melanesia and Polynesia where betel-chewing is unknown and *kava*-drinking ceremonies begin. No memory of such a custom, so extremely important in tropical Polynesia survive on Easter Island, and no effort has been made to produce a salivary ferment from other vegetable fibers, such as could have been done from *yuca* which was found on Easter Island on the arrival of the González expedition in 1770 (Langdon 1988).

Stone adzes, used to carve wooden paraphernalia and the bits of wood for patched-together two-man canoes, did clearly show a link to Polynesia. Métraux found two types of polished and hafted adzes on Easter Island, and our subsequent expedition found more. They were clearly made for wood-working. Métraux (1940: 276) states that the first kind was clearly Polynesian, but represented a type so widespread in that area that it was insufficient evidence on which to link it with any particular place of origin. The second type he felt must have been developed locally, as he found nothing to match it in Polynesia: "it would seem . . . that the Easter Islanders broke away from the rest of Polynesia before the specialization of the adze took place."

Numerically, the mason's handpick surpassed the carpenter's adze on Easter Island. This utterly non-Polynesian tool, until recently found by the thousands discarded in the quarry areas, was an unhafted implement of hard basalt, chipped to fit the grip of one hand and pointed at one or both ends. Métraux (ibid) could point to no similar instrument in Polynesia. However, this tool, called *toki*, was used for stone work in South America were, as is well known, the pan-Polynesian term *toki* is the general term for stone ax among aboriginal tribes in Chile.

Métraux's study of Easter Island culture elements was exhaustive. He left no stone unturned, in his effort to trace down a specific area within Polynesia from where the Easter Island culture elements might have come. He found none. The two flimsily put-together outrigger canoes seen by the early Frenchmen and the stone adze that indicated the Easter Islanders must have left Polynesia before the other types developed, brought him nowhere. What was remarkable, he found all the other elements typical for Easter Island culture to be non-Polynesian, no matter whether he studied the religious and secular structures or the artifacts and customs. But we find them all to be shared with aboriginal American cultures. And we do not find them scattered just anywhere in America: they are all characteristic of two culturally interrelated areas on the coast of what became the Inca territory.

Métraux approached the Easter Island problems as an ethnologist at a time when scholars at large knew Peru as a land ruled by highland Inca until the Spaniards arrived. He may be excused for not knowing what students of Polynesia no longer can ignore: that the long coast to the east of

Polynesia, at intervals from Ecuador to northern Chile, was the home of interrelated and highly maritime high-cultures which based their economy not only on agriculture and ocean fishing, but long-range coastal trade. We do not know with certainty yet when this maritime activity developed, but the presence of *lapis lazuli* brought from the central coast of Chile, together with *spondylus* shell obtained in Ecuador found in the royal tombs on the north coast from the third century AD indicate that it began earlier than any date obtained from Polynesia. And excavations all along the Peruvian coast show that these important maritime societies flourished, with intervals of El Niño floods and destructive wars, for millennia until finally conquered by Inca forces about 1480, two generations prior to Spanish arrival. Today it can only be ascribed to a lack of information when Polynesianists deal with the progress in Americanist archaeology as matters irrelevant to Pacific island research.

The scarcity of Polynesian culture traits is just as remarkable as the abundance of American culture parallels on Easter Island, and both these facts require an explanation. Why did the Polynesians, who linguistically dominate on Easter Island, abandon their own gods, and their own customs? How could they have come so late, and yet so quickly learn to build houses and monuments like the most advanced mainland culture to the east? Is it true, as they told the first Europeans, that they found Long-ears on the island before them, and that they toiled for them for two hundred years until they revolted and took over the rule of the island, at a time when they had forgotten their own gods, their *poi* and their *kava* drinking ceremonies?

With an academic background in biology and genetics, the present author dealt as early as in 1952 (Heyerdahl: 427-498) with evidence accumulated within the field of ethnobotany, of Polynesian contact with aboriginal people on either side of their own island domain. Little has subsequently been added or subtracted from the list of plants except in the field of palaeobotany, but much has been written in deliberate attempts at eliminating valid genetic proof of South American contact.

Most vigorous have been the attempts at proposing excuses for the presence on Easter Island of such well known plants as sweet potato, manioc, gourd, *tatora* and Chile pepper whereas plants less known to the average anthropologist but equally important as genetic proof of human contact have been overlooked.

Those who have participated in the debate will know that upon half a century of efforts at arguing that the sweet potato and the gourd were brought from South America to Polynesia or vice versa by Europeans, are now confronted with archaeological sweet potato from Mangaia island in Polynesia dated to A.D. 1000 (Heather and Kirch 1991: 887-89), and its extreme importance within the Polynesian triangle from Easter Island to New Zealand has never been doubted. In Peru dried sweet potatoes are found as burial gifts in pre-Inca tombs, and in the site museum at Arica on the South American coast below Tiahuanaco, dried sweet potatoes are on exhibit together with Chile pepper from a local tomb carbon dated by Chilean archaeologists to about 1800 B.C..

Gourd, as important in prehistoric Peru as all over Poly-

nesia, are common in the earliest cultural layers on the coast of Peru, where Bird (1943) found them in midden deposits at Huaca Prieta from the third millennium B.C.

Much publicity followed Flenley's report (Flenley 1993: 36) that carbon dating from reed fibres in crater lake deposits on Easter Island came out as 30,000 years b.p.. Flenley should have known that *totorá* in carbon-contaminated silt from crater walls are totally undependable for dating, as discovered by us thirty years earlier. Smith (1961: 212, 394) found a human burial wrapped inside a *totorá* reed mat in an Easter Island cave, and had both the bones and the reed wrapping carbon-dated at the University of Michigan. The date for the bones came out as A.D.1600, whereas the reeds outside them gave the date A.D. 300. An error of 1300 years over a period of 350 years should have scared Flenley from trusting his date for *totorá* grown in the same bog.

Flenley has been informed that *totorá* reproduces easily from seeds. Maybe in a laboratory. But the realistic attempt by the Peruvian government to replant *totorá* with seed in fields on the north coast failed. As the *caballitos* of the Peruvian fishermen have now been declared national heritage, truckloads of root-stocks had to be brought up from irrigated fields further south. Flenley (ibid) has his own explanation as to how *totorá* was transplanted to the crater lakes on Easter Island: "Almost certainly its seeds must have arrived on birds feet . . . There is nothing bizarre in such a method of transport . . .".

As is well known, Easter Island gets seasonal visits by sooty terns from the barren rocks of the nearest island Sala-y-Gomez, but not a single bird flies non-stop from Peruvian fields to Easter Island without washing their feet on the way.

When on the initiative of the Swedish palaeobotanist O.H. Selling, borings for pollen samples were first attempted by our expedition in 1955-56, Selling found large quantities of pollen identified by him as an extinct non-Polynesian palm. The palm nuts subsequently found in a cave on the island were not available as an indicator for further identification then, but helped the palm taxonomist Dransfield (*Dransfield et al.* 1984: 750-752) and Flenley (1993: 27-45) to identify this important and highly useful palm as *Jubaea Chilensis*. Flenley (ibid. 32), like Selling, found large quantities of pollen from this extinct palm in his own samples. The palm is one of the rare species with edible nuts, and its huge and solid trunk would immediately solve the problem of timber for megalithic work in the quarries. As with *totorá* seeds, birds could not have brought this nut across the ocean. This palm is strictly endemic to Chile and the current running up the coast had not even managed to bring it across the border to Peru. Yet, when it helps to eliminate conclusive genetic evidence of human agency, even ocean currents can be useful. Grau (1996: 37) proposes ". . . the possibility of dispersion of Chilean palm seeds, carried along into the Pacific by the Humboldt and Equatorial Currents, from the palm groves of the coastal range of South America."

To end this survey of the complex origins of cultural influence on aboriginal Easter Island, we may return to the pages of Royal Geographical Society, where the debate began in 1770 with Palmer's reference to the *totorá caballitos*

In a report to the same Journal, Langdon (1988: 324-

336), more unbiased in his Polynesian research than customary, revealed important flaws in Corney's translation into English of the reports to the Viceroy of Peru by the Spaniards he sent to rediscover the island reported seen by Roggeveen. Corney (1908) in his well known translation for the Hakluyt society, had not translated the Peruvian term *yuca* used in these reports correctly: Langdon states: "The word *yuca* occurs four times in the accounts of the Gonzales expedition that Corney translated, but in no instance did he render it as manioc . . . In the first case, he translated it as taro; in the next, he italicized it and left it untranslated; and in the other two the Spanish word was again retained with footnotes that obscured rather than clarified its meaning."

After clarifying the fact that *yuca* is the term for manioc in various indigenous languages of Peru, Langdon (ibid. 327) states that this plant is repeatedly listed in records from Easter Island by the members of the Gonzales expedition. He quotes an original document from the Peruvian Viceroy Amat's administration, which included a passage of what the expedition found on the island: "The cultivated crops are only sweet potatoes, manioc, sugarcane, *achira*, yams, Guinea plantains, white and pink gourds, and other larger ones for holding water." Langdon discovered that no less than eight separate documents recorded the presence of manioc on Easter Island. The editor wrote in the introduction to Langdon's article: "This paper argues that, in the climate of his time, the translator acted as he did because, simply, he could not believe that manioc could have been present on Easter Island in 1770". Langdon asks (ibid. 330): "What, then, does this long-concealed evidence of Easter Island's manioc mean for the world of scholarship? And why did Corney conceal or obscure it? The answer to the first question must be that manioc may now join the sweet potato (*Ipomoea batatas*) as evidence of prehistoric contact between South America and Polynesia. Moreover, scholars interested in the prehistory of eastern Polynesia must now seriously assess all possible ethnobotanical evidence for such contact, instead of sweeping it under the carpet. . ."

*Achira* like *yuca* are the indigenous Peruvian names for two South American root crops which, like sweet potatoes, are as common in Peruvian archaeology as on the Peruvian market today. Thus three of the principle root crops were found cultivated in Easter Island fields by the first Europeans to study local agriculture and write reports for posterity. Skottsberg (1956: 412) has pointed to the remarkable fact that *tavari* (*Polygomem acuminatum*) is the only fresh water plant growing in the Easter Island crater lakes together with the *totorá*. It is a South American species at home in Lake Titicaca and used as medical plant both there and on Easter Island. Nobody has proposed that it hang on to the feet of the bird that flew with *totorá* into the craters of Easter Island. And there has been silence as to the means of transport of the three root crops of which the sweet potato shared with the rest of Polynesia its old South American name *kumara*.

Let us end this survey of the complex origin of Easter Island culture elements by borrowing the conclusion from Landon (op. cit: 336) : ". . . now that the long-concealed evidence of manioc on Easter Island has been brought to light, the notion that the island was the point of entry into eastern



Polynesia for a sizable array of American plants must be seriously considered along with all that that might imply."

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