Ahu Tongariki, Easter Island: Chronological and Sociopolitical Significance

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Hanga Nui Bay, on the eastern end of the southeast coast of Easter Island, is currently the focal point of research in an intensively studied archaeological area that extends from the plains at the foot of the southwest slopes of the Poike Peninsula. The study area is a transect which crosses the island from coast to coast in a north-south axis from Hanga Nui to Mahatua on the east and from Motu Nao to an area close to Te Peka Peka on the west.

This transect, included within quadrangles 13, 14, 20, 21 and 31 of the island's general survey, has a maximum linear distance of approximately seven kilometers and a total area of twelve square kilometers, occupying most of the historically known territory of the Tupahotu mata or 'tribe'. Within this transect are the highest densities of prehistoric sites and features and some of the largest and most specialized activity areas and ceremonial architecture. Among these are Ahu Tongariki, the moai quarries of Rano Raraku, and the most important ceremonial centers of the northeast coast: Mahatua, Ra'ai, Heki'i and Te Pito Kura (Paro).

Close to three hundred ceremonial or burial structures, classed in several distinctive types, are known and recognized as ahu on the whole island. Of these, a smaller number are large, complex, raised, rectangular platforms, with or without wings, sloping ramps and associated 'plazas'. Most of these structures supported multi-ton monolithic statues of volcanic tuff. Ahu and moai, symbols of the prestige and status of a given group, were raised to worship deified ancestors, and are the most conspicuous features of the archaeological landscape.

A typological analysis of radiocarbon-dated structures indicates that the ahu and the statues represent an "unbroken chronological progression such as might be expected from the architectural reflection of the activities of a single continuously developing society." Based upon these data, the final structure at Ahu Tongariki represents the type of monuments built during the mid- to late part of the ahu-moai sequence.

A combination of archaeological data, oral traditions, ethnography, historical documents and other sources, suggest that ahu were destroyed and/or significantly modified as the result of profound socio-political and religious changes that occurred in late prehistoric times. These may have been a pan-island revolution triggered by a generalized degradation of the environment, critical maximum levels of population, and a complex set of 'negative' variables that altered the delicate equilibrium of the whole system and resulted in cultural collapse. Several other specialists indicate that most ahu and moai were seriously altered as a direct consequence of intertribal warfare. Most scholars support the idea that the destruction, toppling of the statues and important changes in function of the ceremonial and religious centers, occurred after AD 1500 and continued well into the post-contact period. After the toppling of the statues, most of these ruins continued to be used as burial sites, greatly altering the original structure, until the conversion of the population to Catholicism in the second half of the 19th century, when they were deserted.

Europeans first saw Easter Island in 1722. Roggeveen's expedition described some monuments (ahu) and statues still standing near his anchorage off the north coast, probably at Hanga Ho'onu. Cook, at Hanga Roa in 1774, and La Pérouse in 1786 gave similar accounts. As stated elsewhere by explorers and visitors during the 18th and early 19th centuries, most ahu in other sections of the island looked like "old" ruins and few statues were seen standing. All of them were down by the mid-19th century.

The reduction of the pre-contact population, including the dramatic post-contact depopulation as a consequence of slave raids; introduced diseases in the 1860s; the influence of Catholicism; the installation of European and Chilean settlers in late 19th century; and the concentration of the remaining population on the west coast of the island, all provoked the definitive abandonment of many of the ancient tribal territories, including the Hanga Nui area.

Ahu Tongariki was the largest ceremonial structure ever built on Easter Island. In terms of size, plan and the number of statues, it represents the apogee in the development of the so-called 'image ahu', most of which were built in a period of approximately five or six hundred years between ca. AD 1000-1500. This monument is one of the most spectacular expressions of prehistoric megalithic ceremonial architecture in the entire Polynesian cultural area.

With a central platform close to 100 meters long and two lateral extensions, or wings, associated with frontal access ramps, this ahu originally had a total length of approximately 220 meters. The average height of the massive seaward wall was four meters and used more than 800 irregular, unworked, crudely fitted basalt blocks.

During its final phase of construction and function as a ceremonial altar, the central platform of Ahu Tongariki supported fifteen monolithic statues of volcanic tuff (moai), carved at and transported from the Rano Raraku quarries, about one kilometer to the northwest. These statues had heights that ranged from 5.6 to 8.7 meters. Average weight was over 40 metric tons; the largest statue placed near the central section of the platform weighed 88 metric tons. With the statues erected on top of the platform and crowned by large cylinders of red scoria (pukao), the monument had the impressive height of close to fourteen meters.

In 1770 the Spaniards under González circumnavigated the island using small craft and described and mapped several coves.
and bays, while looking for safe anchoring and landing places. One of these groups, headed by Langara, entered Hanga Nui close to the coast and did not describe inhabitants, monuments or erected statues in that bay. If Ahu Tongariki was in ruins and presumably abandoned by 1770 and probably well before Roggeveen’s discovery of the island. The site continued to be used for burial well into the 19th century.

Between ca. 1870 and 1960 the ruined Ahu Tongariki remained relatively intact, although the ranching operations of this century used the area to concentrate sheep, destroying one of the evidence of successive construction phases over time. Expansions of former ahu, recycling of earlier types of statues and architectural components and other evidence indicate continuous occupation and ceremonial religious, mortuary and sociopolitical activities at the site for approximately 700 to 800 years. In the opinion of several contemporary researchers, this evidence probably encompasses most of the prehistoric evolution of the island’s culture.

As a result of the devastating destruction by the tsunami, it was reasonable to believe that this great monument was lost forever. Since 1960, many colleagues had the dream of “restoring” the monument, but the complexity, time, effort and cost of such a project labeled the idea as impossible. In 1979, the authors systematically surveyed that section of the island, mapped the ruins of the area with great detail and also thought that a restoration was not feasible with the means, experience, personal knowledge of the materials and levels of information available at that time.

An early phase of the reconstruction of Ahu Tongariki in 1992. Note the wood frame indicating the location of the ahu platform.

In 1991, this situation changed radically, and even though it was not a research priority and other important work was under way, we started to consider the extraordinary possibility of rebuilding Tongariki. The donation, by the Tadano Corporation of funds and equipment, in particular a large, modern crane capable of handling some of the largest statues, allowed serious consideration of this project.

The feasibility of a viable and realistic re-assemblage of the ruins was based upon a detailed analysis of late 19th century
and 1960 source data, the study of the *post-tsunami* ruins. A computer-based reconstruction strategy was designed using precision cartography and geomorphological data, digital analysis, correction of historical photographs and drawings, and three-dimensional modeling.

The main goal of this project was the *reconstruction* of an almost completely destroyed architectural monument. A significant finding of the archaeological work at Tongariki was that the whole *ahu* site and archaeological deposits contained within the matrix of the main structures, most of them by definition secondarily deposited, were completely destroyed to *ground level* by the tsunami of 1960. Sub-surface archaeological deposits were minimal.

The archaeological remains of the structure below the plaza’s surface showed a complex sequence of architectural expansion and ubiquitous recycling of structural components of several platforms and pavements and the use of earlier types of statues as foundation building blocks or fill material. Except for a few artifacts, undoubtedly intrusive, very little was found in the trenches that were excavated down to the natural, pre-occupation surface through the massive fill (large rocks) of the *ahu* foundations and the interface of artificially leveled area in front of the *ahu*. Only scant evidence came from a shallow layer (<30 cm) at the interface of the fill and the natural surface, indicating occupation or some human activity before the fill and leveling occurred. These remains pre-date most construction activity in the area. Thus, our current understanding of the chronology of the site, at this time, can only be postulated from dated occupations before the first *ahu* construction and the completed final stage *ahu* placed within the existing dated, typological sequence of *ahu* on Easter Island.

We postulate that the remains identified under the foundations of Abu Tongariki *architecturally* reflect processes of initial fission and territorial expansion of the founding population and a later fusion of sociopolitical units that parallel a significant demographic peak. The monument, as such, is not only the material expression of that process, but also reflects the growing complexity of the sociopolitical organization of one of two major segments of the island’s population. Several lineage *ahu* were rebuilt and joined together to form a larger, but irregular, altar, which was subsequently recycled. A larger, well planned, unfinished platform was being built on top to receive fifteen or more statues, as a final expression of the power, importance and size of the group that occupied the area. Abu Tongariki probably became the sociopolitical and religious center of the eastern confederacy of ‘tribes’ described in the ethnographic record of this period.

Research at Tongariki between 1992 and 1996 is the largest salvage and reconstruction effort carried out in Polynesia. The pertinence and accuracy of the reconstruction of the ruins of the *ahu* and restoration of the fifteen monolithic statues of volcanic tuff (*moai*), documented in historic times, will be reported elsewhere. The condition of *post-tsunami* remains posed serious difficulties to the precise archaeological control of the reconstruction effort. Nevertheless, as is the demonstrated case with most of other monuments of its kind on the island, the whole site is clearly indicative of an ‘unbroken cultural progression’. The first human occupation of the area probably occurred ca. AD 900-1000, and pre-dates the first of at least three main *ahu* constructions. The final monument was the result of a major late architectural expansion that was probably unfinished as a result of social unrest that characterized the final stages of Easter Island prehistory.

FOOTNOTES
1Resident Archaeologist
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4Previous estimations of statue weight were determined by using average values of specific weight for the Rano Raraku tuff and volume calculations. At Tongariki we were able to use a large crane that could lift a whole or parts of large statues and weight them with great precision. The estimated error was in the order of 1%.