

## **THE PRESERVATION OF THE CEREMONIAL COMPLEXES OF EASTER ISLAND**

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### **PROBLEMS OF EASTER ISLAND**

It is only in the last twenty years that Easter Island's "old culture", its famous gigantic statues, ceremonial complex sites with their distinctive architecture, and archaeological remains, has been opened to the "new world" of tourism. The inhabitants have been rushed into the twentieth century as drastic changes to the lifestyles, settlement, and shelters of the inhabitants occurred. A new era began in 1965 when the island was connected with the outside world through the arrival of a large number of public officials from Chile, the establishment of a military base and a hospital, the introduction of consumer goods, electricity, and other modernizing developments (Cristino et al, 1984). Prior to the initiation of a weekly air service to this remote island in 1967, the infrequent visitors were mainly archaeologists, anthropologists and explorers. With the new developments environmental health and pollution concerns, social problems, cultural confrontations, and other issues arose, as well as damage to archaeological sites and monuments through the careless construction of roads.

It is estimated that the number of tourists to Easter Island is over five thousand visitors each year. As the numbers increase the fragile archeological sites and statues become more vulnerable to deterioration and destruction. Tourists arrive by air from Chile or Tahiti twice a week for a few days and stay in one of the five hotels or many guest houses. They also come on the now numerous cruise ships and in one call five hundred or more tourists at a time descend upon the small island for a visit of a few hours. The ships anchor offshore due to the lack of berthing facilities. In settlement and public work projects undertaken by outsiders in two major periods, the late nineteenth and mid-twentieth centuries, some of the ceremonial complexes have been destroyed or damaged. In the recently completed extension of the Mataverí airport runway by the United States' National Aeronautics and Space Administration the Governor of the island promised to save some petroglyph-bearing boulders in the path of the extension. Unfortunately, in a mountainside near the airport a huge, ugly hole has been left where material for the construction work was quarried. There appears to be no prospect for landscaping this environmental scar. The direct and indirect impacts of proposals for a breakwater and harbor, new hotels, and paving the existing dirt roads, are potential threats to the

monuments of Easter Island unless handled in the most sensitive and careful manner.

### **EASTER ISLAND MONUMENTS AS AN INTERNATIONAL RESOURCE**

Recognition of the significance and importance of the ceremonial complex monuments was accepted by the Chilean government when it declared the island an open air museum in 1935. Reports (Peterson 1967 & 1970) have stressed the damage that was occurring to the antiquities from modernization projects and the need for a master plan for the development of the island. The international importance of protecting the monuments and the need for a comprehensive archaeological investigation was also emphasized (Angelini 1968). The first international conference on Easter Island and East Polynesian issues, including the conservation and restoration of the archaeological heritage, was held on Easter Island in September 1984.

The pioneering excavations and restoration work of the Norwegian Expedition (Heyerdahl and Ferdon 1961), and others thereafter (see Ayres 1981) was followed by the Archaeological Exploration and Atlas project in 1968 (Cristino et al 1981). The project has continued with interruptions since then but has managed to cover over 60% of the island, mostly the southern half, to obtain detailed information on the exact location and specific characteristics of 3,552 sites to date. Included in the project's preliminary classification are 239 religious features. This compares to the 245 sites, religious sanctuaries or ahu, in a comprehensive inventory of the island as a whole by Englert (1948), and to Routledge's 260 (1919), Lavachery's 183 (1935), and Thomson's 113 (1889) counts.

Easter Island, or Rapa Nui as it is known locally, is of global significance as an instance of human genius. It is a prime example of how a culture in isolation can develop and produce artifacts of a complex, sophisticated, and unique nature. This is contrary to traditional theory that associates cultural complexity and development with crossroads, that is points of convergence, or with the results of exposure to external influences from location in the path of diffusion movements. Significant and inimitable features of the monuments of Easter Island are the large and stylized stone statues, and the architecture of the ceremonial complexes which have masonry of an elegance matched only by the ancient walls in the Andes of Peru.

### **SIGNIFICANCE OF THE MONUMENTS OF EASTER ISLAND**

Moai are the statues made of tuff that mean Easter Island for most of us. As the ochre colored tuff is a relatively soft stone this has meant that many moai have eroded badly over time. Many of the statues are still to be found at the quarry where they were carved in situ, while many others have lain face down

on the ground during the last three centuries or more after the civil wars that resulted in their toppling. Another one of the many enigmas of Easter Island is how the statues, some weighing up to eighty tons, were moved from the quarry at Rano Raraku to ceremonial complex sites some fifteen or more kilometers away. There are currently three theories on the transportation of the statues but none has general acceptance.

The moai, not gods as would be expected but images of guardian ancestors, stood on elevated masonry platforms and formed the focal point of many ahu or ceremonial complexes. The number of statues always seem to be an odd number of one, three, or seven, and even in one case fifteen moai. Over the centuries they became more stylized, often with the addition of a red scoria topknot, and increased in height from about two meters to ten meters as a result, probably, of clan and family competitiveness for status and prestige. In virtually every complex the statues faced away from the sea and towards the land of the clans that erected them.

A notable feature is that the ahu were all, with few exceptions, located around the periphery of the island close to the seashore. In many cases they were the focal point of a settlement pattern consisting of the ceremonial center itself, large communal stone houses inland, and a clan or family hamlets. What is significant is the different combinations of architectural elements in the spatial arrangement of the ceremonial complexes. In addition to moai these elements include rectangular, elevated, rubble filled, basalt walled central platforms from three to thirty meters in length, and associated stone features, such as lateral wings, landward side ramps, burial mounds, and cists (prepared chambers within platforms or wings in which human bones have been found), level and sometimes paved plazas for assembly, and special enclosures and structures. The wall on the seaward side of platforms, when they did not consist of precisely worked and fitted masonry of dressed upright slab stones, were constructed of large, selected regularly shaped boulders. In the earlier ahu it would appear that the seaward side of platforms were oriented to the rising sun at the time either of the summer solstice or of the equinox. Altars and crematoria were often to be found on the seaward side of the platforms.

The ahu are believed to have been constructed from about A.D. 400 to before 1700. The statues are associated only with later complexes, from about A.D. 1000 to 1680, when the decisive battle in the ongoing clan war culminated in the legendary annihilation of the ahu builders and moai sculptors, the destruction or conversion of platforms, and the continued toppling of statues, begun sometime after A.D. 1500.

The main function of the ahu was for the disposal of the dead. Very little is known about the ceremonies that took place there. What is known is that as earth burials were not permitted by the religion of the inhabitants the stone platforms were used for the natural defleshing of bodies which were wrapped in ritual sage mats. Bones were then buried in cists or cairns. It is possible that the level plazas on the inland side of the platforms were used for commemorative feasts, spring festivals, and the crowning of new clan chiefs.

The earlier ahu studies were of a general nature but were followed later by archaeological studies (see Stevenson 1984). There have been different opinions on the time sequence of architectural periods as well as ahu typology and characteristics (McCoy, 1976). In January and February of 1987 we organized an expedition of 37 volunteers to Easter Island to attempt to reach some understanding of the design principles of the complex and sophisticated ceremonial centers, spectacular work produced under conditions of extreme isolation. The research expedition was sponsored by EARTHWATCH, a non-profit organization of scholars and citizens working together to expand our knowledge of the earth and its inhabitants.

This expedition studied in detail nineteen ceremonial complex sites. The sites, 30-200 to 30-219, are on the northern coast of the island stretching from Ovahe towards Poike and have not been previously studied. Most of the sites on the island that have been researched to date are on the southern coast and there obviously remains still many sites that need to be investigated and recorded. The expedition's completed drawings, along with a descriptive text and photographs for each site, will be a significant contribution to the knowledge of Easter Island. From the descriptions and photographs, as well as the drawings, architects, archaeologists and others can learn much about the sites without having to go into the field.

New insights that the expedition data and as yet uncompleted analysis can contribute include architectural design principles of composition, masonry construction, solar orientation, aesthetics, and the achievement of variety with a limited number of elements. The complexity and sophistication achieved in the architecture of the ceremonial complexes are significant evidence of human creativity, imagination, and skill.

A very brief and preliminary analysis of the data reveals the complexity and sophistication of the architecture of the ceremonial complexes. Although all the ahu studied were found to have been demolished to varying degrees, it is apparent that the diversity of forms reflects complexes that are different both in time and design. Some ahu had toppled moai, while others had no statues at all. Some of the early ahu, which did not have moai, had a large triangular shaped boulder that was used as a focal

point in the seawall of the central platform. The ahu platforms were found to vary in length, in the use of boulders, stones, and pebbles, and in the type of stonework used to construct the seawall. Mortar was not used in any masonry on the island. Measurements that require further investigation are the very limited number of angles from magnetic north that were found, which when corrected will no doubt reflect the solar orientation of central platforms. It is evident that the platforms were converted to the use of garden enclosures (*manavai*) or burial mounds. A clear case of a transformation from a rectangular type to a semi-pyramidal form of ahu is site 30-207. Cists tended to be of a small size, sometimes lined with vertical stone slabs, and occasionally with some form of covering stone slab. Besides the "classical" form of symmetrical platform with wings and moai the complexes studied included a *poepoe* (boat-shaped) form of ahu at site 30-210. Plazas were found to be either paved with small pebbles, or unpaved, but in all cases were levelled areas although they varied in area. Outlying features that were found included small circular earth ovens (*umu*) made of embedded stones, the remains of oval and circular enclosures and cairns, and worked foundation stones (*paengas*) from former, nearby houses.

Major highlights of the expedition included the discovery of a previously unknown moai head, face upwards, by Dr. Patricios about fifty meters behind the central platform on the landside of site 30-201. Team members also discovered octopus and tuna fish petroglyphs at sites 30-204 and 30-206 respectively, and measured and drew each stone of a *kaunga* at site 30-202. The *kaunga*, used during initiation rites, consisted of two parallel lines over ninety meters long and made of small embedded stones about fifty centimeters apart. As only ten *kaungas* are known to exist on the island, and none drawn in detail before, the expedition's drawing will be a significant contribution to our knowledge of the ceremonial complex architecture of Easter Island.

#### PROTECTION OF THE CEREMONIAL COMPLEXES OF EASTER ISLAND

While previous individual archaeological studies have provided specific data what is still required, however, is funding to complete the inventory of the Archaeological Exploration and Atlas project. This should be complemented by a comprehensive plan with policies and programs for the balanced protection of the monuments and the economic development of the island. Previous official plans have been ineffective. The inhabitants have come to rely on tourism as their main, and sometimes only, source of employment. Thus the conflict between the desire for additional tourist facilities, more hotels and docks for berthing cruise and other ships, and the need to protect the valuable and international resource of the island's ceremonial complexes has to be resolved. A consensus plan to

protect the unique cultural heritage should be prepared by a team that includes international representatives, and local inhabitants so as to ensure that their needs are incorporated. The preparation of a Physical Development Plan that identifies the location of current and potential private and public projects and the criteria and standards for their development, tourism projections, and the means for protecting the ceremonial complexes and other significant archaeological sites, should have the highest priority and is of the utmost urgency.

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### ABSTRACT

Easter Island in the southeast Pacific Ocean is both a national and an international resource. In 1935 the Chilean government declared the island an open air museum in recognition of the significance and importance of its extensive archaeological monuments. These include the ceremonial complexes. In the 1960s studies of the archaeological remains were sponsored by UNESCO and the International Fund for Monuments. In the reports from these studies concern was expressed over the need to protect the monuments of the "Old World" from major construction works. Threats from modernization projects and the increasing number of tourists continue. Urgent measures to manage development and protect the precious heritage are thus called for to preserve the monuments for posterity.

The significance and importance of Easter Island arises mainly out of its location. On a small island, over 3200 kilometers from the nearest land, a society in virtually complete isolation evolved a relatively sophisticated and unique ceremonial complex architecture. This is contrary to conventional theory that associates cultural complexity and development with "crossroads", or points of convergence. The island is internationally famous for its gigantic stone statues that originally sat on bases on elevated stone platforms. The platforms were the focal points of a complex that usually included a fairly large plaza. Nearly all the ceremonial complexes were located near the shoreline and ringed the periphery of the island. In the paper the characteristics and the function of the complexes are briefly described, and the preliminary results from a recent expedition to study the architecture of the ceremonial complexes are outlined.

The threats to the monuments of Easter Island and the conflicts deriving from the "New World" warrant immediate attention. This paper calls for the management of the monuments that will require the completion of a comprehensive inventory and further analyses to uncover the architectural design principles that underly the spatial arrangement of the ceremonial complexes. A Physical Development Plan should be prepared by all parties involved and based on a policy plan that balances local economic development needs and the protection of the monuments. The Plan, which should include criteria and standards for physical development, and aim at the preservation of the island's unique and distinctive ceremonial complexes, is of the utmost urgency.

## **PRESERVACION DE COMPLEJOS CEREMONIALES EN ISLA DE PASCUA**

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### **ABSTRACTO**

La Isla de Pascua en el Sud-este del Oceano Pacifico es tanto un recurso nacional como internacional. En 1935 el gobierno Chileno declaro la isla museo al aire libre, reconociendo de esta manera la importancia y significacion de sus numerosos monumentos arqueologicos. Estos monumentos incluyen los Complejos Ceremoniales. Durante los años sesenta la UNESCO y el Fondo Internacional para los Monumentos patrocinaron una serie de estudios sobre restos arqueologicos. Entre las conclusiones de dichos estudios se expresaba la necesidad de proteger los monumentos del "Viejo Mundo" de las grandes obras de contruccion. Los proyectos de modernizacion asi como el creciente numero de turistas constituyen amenazas todavia existentes, medidas urgentes para administrar el desarrollo y proteger esta herencia preciosa son entonces necesarias para preservar estos monumentos para la posteridad.

La significacion e importancia de la Isla de Pascua parte principalmente de su localizacion. Sobre una pequena isla a mas de 3200 kilometros de tierra firme, una sociedad en aislacion casi total desarrollo una arquitectura para sus complejos ceremoniales relativamente sofisticada y unica. Esto es contrario a la teoria convencional que asocia complejidad cultural y desarrollo con cruces y puntos de convergencia. La isla es internacionalmente famosa por sus estatuas gigantes de piedra, originariamente estas se apoyaban sobre bases, y estas sobre plataformas elevadas tambien de piedra. Las plataformas eran puntos centrales de complejos que usualmente incluian una plaza de dimensiones considerables. La gran mayoria de los complejos ceremoniales estaban localizados cerca de la costa y constituian un anillo sobre la periferia de la isla. En el ensayo, las características y funciones de los complejos son brevemente descritas presentandose tambien un esbozo de los resultados preliminares de una expedicion de estudio de los complejos ceremoniales.

Las amenazas sobre los monumentos de la Isla de Pascua y los conflictos que derivan del "Nuevo Mundo" demandan atencion inmediata. Esta ensayo convoca a una gestion de los monumentos que requiere en el futuro completar un inventario comprehensivo asi como tambien de un analisis mas completo que permita descubrir los principios de diseno arquitectonico que subyacen bajo la organizacion espacial de los complejos ceremoniales. Un Plan de Desarrollo Fisico debe ser preparado por todas las partes interesadas basado en un plan de desarrollo economico y la proteccion de los monumentos. El Plan que debe incluir criterios y standars para el desarrollo fisico, asi como aspirar a la preservacion de los unicos y distintivos complejos ceremoniales es de la mayor urgencia.