

SOME CONCLUSIONS AND SUGGESTIONS REGARDING THE POLYNESIAN PROBLEM

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IN view of the organized attack on Polynesian problems, anthropological and otherwise, which is on the eve of being launched at this time, it is perhaps the duty of those who feel that they have conclusions and theories which may possibly be useful or stimulating to others who are working or thinking in the same field, to put before their co-workers these suggestions, even though the conclusions are necessarily of a tentative nature. The conclusions stated below are based on literary research into certain phases of Polynesian culture in which the writer has been engaged for several years. While it is felt that the information derived from these sources is sufficient to warrant the drawing of such conclusions, it is hoped that these will be clearly understood to be tentative suggestions based on the limited data now available. The information now at hand will probably dwindle into insignificance before the more plentiful and accurate data which it is hoped that the next few years' work in the area will place before the scientific world.

Unfortunately lack of time and space makes impossible the presentation of the evidence which it is believed supports the conclusions which follow. These conclusions are the outgrowth of a somewhat exhaustive study of the literary sources of information with regard to the area, in the course of which was accumulated a considerable amount of material which cannot even be referred to in an article of this kind. In most cases also it has been impossible to go into explanations of the lines of reasoning which have led to the conclusions. A few references chosen from a considerable number may aid those who are interested in judging for themselves as to whether the conclusions are justified.

I

The places of burial of sacred chiefs were places of public worship in Hawaii, the Society islands, the Marquesas, Tonga, and New Zealand. Information regarding this is lacking in the Cook group. In Easter island worship seems to have been conducted before the great image platforms which were used for burial. From Samoa evidence which would indicate that chiefs' tombs were places of public worship is lacking.¹

In historic times it appears that places of public worship, or temples, were frequently, though not always, used for burial purposes.

It is believed that the prototype of the stone tomb and temple forms of Hawaii, the Society group, the Marquesas, and Easter island was a tomb form. The rudimentary type of this tomb-temple is probably to be found in the tombs of the kings in Tonga, consisting of superimposed earth platforms faced with stone blocks.² These platforms may have originated in the simple earth mound used here for burial in historic times, or this earth mound may have represented a degeneration from a stone tomb.

The following temple and tomb forms, derived from this Tongan prototype, were found in those island groups which utilized stone construction, and concerning which we have adequate information.

¹ See for Hawaii: W. Ellis, *Polynesian Researches*, vol. iv, pp. 164-6, London, 1853. James Cook, *The Three Voyages of Captain James Cook Round the World*, pp. 882-3. London, 1842.

Society Group: Cook, *op. cit.*, p. 771.

Sir Joseph Banks, *Journal of the Right Honorable*, etc., p. 175. London, 1896.

J. A. Moorenhout, *Voyages aux Iles du Grand Ocean*, vol. I, p. 470. Paris, 1837.

Marquesas: A. Baessler, "Reise in östlichen Polynesien," *Verhandlungen der Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte*, 1896, p. 464.

Tonga: W. Mariner, *An Account of the Natives of The Tonga Islands in the Pacific Ocean*, compiled by John Martin, pp. 385-387.

New Zealand: R. Taylor, *Te Ika a Mawi; or, New Zealand and its Inhabitants*, pp. 98-9, 174, 183, 208. London and New Zealand, 1870.

Easter Island: Paymaster W. T. Thompson, "Te Pito Henua, or Easter Island," in *Report of the U. S. National Museum for the year ending June 30, 1889* (published 1891), pp. 470-1, 499.

² A *Missionary Voyage to the South Pacific Ocean . . . in the Ship Duff*, etc., pp. 278-9. London, 1799.

In the Society group there were early platform, and later pyramidal types of maraes; the pyramid growing out of the superposition of a number of platforms. In Hawaii were found early platform and pyramidal types, and later walled heiaus with inner compartments. In the Marquesas there developed the platform ma'ae, sometimes consisting of several terraces running up a hillside. And in Easter island there were the stone platforms on which the great images stood, the platforms being stepped on the landward side.¹

The variation in form of the tomb-temple in the several groups may be explained for the most part by local environment and political development. Thus, the influence of environment is to be seen best in the Marquesas where the necessity of accomodating the temples to the abrupt slopes of the valleys produced the terrace forms. The effect of political development may be seen in Hawaii, where the organization of state and cult had attained its greatest development. This led to the exclusion of commoners from temple ceremonial and to the development of the great walled heiaus.

The use of large stone construction in tombs and temples seems scarcely to have touched the Cook group, and not to have influenced New Zealand at all. Thus, large stone construction was found to have been confined to the northern and central part of the area.

Certain important features connected with tomb-temples occurred pretty generally over the whole area, including New Zealand. The first of these was the association of the places of worship and places of burial which was discussed above.² Other features of importance were the following.

¹ Society Group: Paul Huguenin, "Raiatea la Sacrée," *Bulletin de la Société Neuchateloise de Géographie*, Tome XIV, p. 164. Neuchatel, 1902. *Duff's Voyage*, p. 304.

D. Tyerman, and G. Bennett, *Journal of the Voyages and Travels*, etc., compiled by James Montgomery, pp. 176, 194-5. Boston and New York, 1832.

Hawaii: Cook, *op. cit.*, p. 968.

A. Fornander, *An Account of the Polynesian Race*, vol. II, p. 6. London, 1878-1885.

Ellis, *op. cit.*, vol. IV, pp. 97-8, 116.

Marquesas: Dr. Tautain, "Notes sur les Constructions et les Monuments des Marquises," *l'Anthropologie*, VIII, pp. 667-71.

Easter Island: Thompson, *op. cit.*, pp. 499, 502.

² This was, of course a natural concomitant of the ancestral cult which constituted a fundamental element in the worship everywhere.

In all the groups there was found to be a sacred area, which was in front of, or around, the sacred place. The sacred place usually consisted of a mound, platform, or pyramid. A sacred enclosure was formed by surrounding this area with a fence or stone wall in all the groups concerning which we have information, viz., Hawaii, the Society group, the Marquesas (apparently only sometimes here), Easter island, Tonga, and New Zealand.¹

Within and without the sacred enclosure were sometimes one, sometimes a number of sacred houses used for different purposes: protecting the tomb, sacred relics, images or other representations of deity, paraphernalia; for housing priests; and so on.

Sacred groves were associated with places of burial and worship in Tonga, Samoa, the Society and Cook groups, the Marquesas, and New Zealand.² The fact that these sacred groves were not found in Hawaii may be due to environment. This would certainly be capable of explaining the lack of them in Easter island.

At the back of the sacred place in Hawaii, the Society group, the Marquesas, and the Cook group was a sacrifice pit into which remains of offerings were thrown.³ A ditch at the back of the

¹ Hawaii: D. Malo, *Hawaiian Antiquities*, pp. 211-14. Honolulu, 1903.

Society Group: *Duff's Voyage*, p. 304.

Marquesas: Pedro Fernandez de Quiros, "The Voyages of . . . 1595 to 1606," *The Hakluyt Society*, Series II, vol. XIV, p. 60. London, 1804.

H. Melville, *Typee*, p. 59. London, 1904.

Easter Island: Don Felipe Gonzalez, "The Cruise of . . . to Easter Island," 1770-1771. *The Hakluyt Society*, Series II, No. XIII, p. 136. Cambridge, England, 1808.

Tonga: *Duff's Voyage*, pp. 278-9.

New Zealand: S. Percy Smith, "The Lore of the Whare-wananga," etc., *Memoirs of the Polynesian Society*, vol. III, p. 89. New Plymouth, N. Z., 1913.

See also Taylor, *loc. cit.*

² Tonga: Cook, *op. cit.*, p. 419.

Samoa: G. Turner, *Nineteen Years in Polynesia*, p. 240. London, 1861.

Society Group: Ellis, *op. cit.*, vol. I, pp. 341-2.

Cook Group: W. W. Gill, *Historical Sketches of Savage Life in Polynesia*, p. 195. Wellington, 1880.

Marquesas: Melville, *op. cit.*, p. 147.

New Zealand: Taylor, *op. cit.*, pp. 98-9.

³ Hawaii: Malo, *op. cit.*, pp. 211-14.

Society Group: M. de Bovis, "État de la Société Tahitienne a l'Arrivée des Européens," *Revue Coloniale*, 1855, pp. 44-7.

tomb of a Tongan chief, which is described by Cook, probably corresponds to this sacrifice pit elsewhere.¹ There is interesting indirect evidence which suggests that the sacred latrine in New Zealand² may also correspond to these pits.

There was definite orientation in the Cook group³ and New Zealand,⁴ temples or sacred buildings facing the east. In Hawaii temple enclosures seem to have been orientated to different cardinal points in those instances in which we have information regarding this.⁵

There was too much variation with regard to houses, altars, images, drums, ovens, certain boards erected in memory of chiefs, and some other features associated with places of worship, to allow of a discussion of these here. The oracle tower in Hawaii appears to have had no correspondence elsewhere in the area.⁶ The mere mention of these as features which were associated with places of worship in various parts of Polynesia may, however, be suggestive.

II

Stone slab seats associated with sacred places, sacred chiefhood, and the ancestral cult,⁷ were found in New Zealand, on Rarotonga

Marquesas: Tautain, *op. cit.*, p. 688.

Cook Group: W. W. Gill, *Myths and Songs, from the South Seas*, p. 295. London, 1876.

¹ Cook, *op. cit.*, p. 716.

² Smith, *op. cit.*, p. 88, note.

³ Gill, *Historical Sketches*, etc., p. 32.

⁴ White, John, *The Ancient History of the Maori*, vol. 1, p. 5. Wellington, 18-- to 1890.

⁵ Malo, *op. cit.*, p. 214.

A. Kraemer, *Hawaii, Ostmikronesien, und Samoa*, p. 106. Stuttgart, 1906.

C. Wilkes, *Narrative of the U. S. Exploring Expedition*, vol. IV, p. 100. Philadelphia, 1885.

Ellis, *op. cit.*, vol. IV, pp. 97, 116.

⁶ Malo, *op. cit.*, pp. 211, 222.

⁷ It will be of importance to determine whether these stone slabs used as seats were identified with the slabs which lined the graves of chiefs in Tonga and Samoa. Dr. Tozzer has made the interesting suggestion that the platform which it has been supposed was the prototype of the temple forms may itself have been in origin an elaborated seat of sacred chiefs. There is evidence to support this suggestion. This is a very important point: the proof of the identity of origin of the slab seats and the platform would, as is easily to be seen, necessitate a total abandonment of most of the conclusions stated in the second part of this paper.

(Cook group), Niue, Samoa, the Society group, and the Marquesas.¹ We know of no evidence of the use of such seats in Tonga or Hawaii. This usage was, therefore, of importance in the southern groups where stone construction was not found, *viz.*, New Zealand and the Cook group. Furthermore, stone seats were not found in association with chiefs or sacred places in Tonga or Hawaii where large stone construction was of great importance. Hence it was concluded that this use of stone slab seats belonged to one cultural stratum, while the utilization of large stone in temple construction belonged to another.

In connection with this there is some interesting and very suggestive evidence with regard to Hawaii. The Pohaku o Kane, or stones of Kane, were here upright stones of varying sizes which were venerated by the lower classes.² It seems possible that the Pohaku o Kane originally corresponded to the stone seats under discussion. If this proves to be so, will it not indicate the submergence in Hawaii of that cultural stratum of which the veneration of such slabs as seats of sacred chiefs was typical? A number of other bits of evidence lend support to this theory. It is impossible, however, to enter into a discussion of these here, because they have grown out of the study of certain phases of the religion of Polynesia as a whole, which would have to be described with more thoroughness than space allows at this time. But it may be said in passing that careful study of certain matters in Hawaii would be expected to throw much light on this question. Some of these features in Hawaiian culture are the use of face tattooing by the Kauwa, or lowest class, exclusively; the fact that these Kauwa were also called

¹ New Zealand: S. Percy Smith, *Memoirs of the Polynesian Society*, vol. III, pp. 88-9. Cook Group: S. Percy Smith, "Arai-te-Tonga, the ancient Marae of Rarotonga," *Journal of the Polynesian Society*, vol. XI, p. 174; vol. XII, pp. 218-20.

Niue: S. Percy Smith, "Niue Island and its People," Part II, *Journal of the Polynesian Society*, vol. XI, p. 174.

Samoa: G. Turner, *Somoa, a Hundred Years Ago and Long Before*, p. 23. London, 1884.

Society Group: A. Baessler, *Neue Südsee Bilder*, pp. 119-20. Berlin, 1900.

Marquesas: LeP. Mathias Garcia, *Letters sur les Iles Marquises*, p. 72. Paris, 1843.

² W. D. Alexander, *A Brief History of the Hawaiian People*, pp. 37, 44. New York, 1892.

Aumakua, the term used for ancestral deities of the private cult; the apparent use of flexed burial by the lower classes only; the use of the kuahu shrine and employment of shamanistic workers exclusively, and the use of the oven largely, in private ceremonial; evidences of former cannibalism; and so on.

To sum up, therefore, the hypothesis is presented that the cultural stratum, of which the use of stone slab seats was characteristic and which was represented by the chiefs in New Zealand and elsewhere in the southern and central part of the area, was submerged in Hawaii, being represented there by commoners; and that another cultural stratum, of which the use of large stone construction was characteristic, was spread over the central region and Hawaii but influenced the Cook group and New Zealand only to a very slight extent.

III

An analysis of the elements constituting the religion of Polynesia and a study of these with regard to their distribution led to the following grouping of these in association with the use of stone slab seats and large stone construction. Unfortunately time and space do not allow me to give my reasons for this classification, to present my evidence, or even to give adequate references. How much of this classification will stand, how much of it will be found erroneous in the light of future information, is unknown. It is offered at this time, however, in the hope that it may be suggestive and perhaps stimulating to others interested in the Polynesian problem, and in the problems of the other related areas to the westward where lie the routes by which the Polynesians must have migrated.

Simply for the sake of having some designation for the peoples to whom belonged these several cultural strata, those who brought the use of stone slab seats have been called Slab Users, and those who utilized stone construction, the Stone Builders. The Slab User elements are to be found most clearly defined in New Zealand, while the Stone Builder elements are dominant in Hawaii. In the central region they are combined in various ways.

It may be pointed out that certain important elements stand

out in very distinct contrast as characteristic of the religions of the northern and southern extremes of the Polynesian area. Around these as nuclei were grouped other elements which seemed to be associated. Thus we find:

In Hawaii: stone construction, seasonal ceremonial in which a sacred king takes a priestly part, the ceremonial taboo, in general a thoroughly organized and ordered worship. These are totally lacking in New Zealand.

In New Zealand: stone slab seats, sacred groves, the veneration of skulls, shamans, the use of coercive spells in connection with public enterprise, planting and harvest a ritual performance, the Hawaiiki belief. These are totally lacking or entirely secondary in Hawaii.

Elements typical of the Slab Users are the following:

- (1) The veneration of slabs associated with ancestors and sacred chiefs, these slabs being generally used as seats by chiefs.
- (2) Sacred groves.
- (3) Sacred chiefs functioning in the public ancestral cult.
- (4) Ancestral deities, both public and private. The veneration of skulls and other ancestral relics.
- (5) Methods of disposal of the dead: exposure, flexed inhumation in a sitting posture, use of canoe coffins, secondary disposal of skeletal remains in caves. The placing of offerings of food and weapons with dead bodies.
- (6) Funerary feasts.
- (7) Survival of head hunting in the preservation of enemy skulls and heads.
- (8) The belief in incarnation of ancestral spirits in animate and inanimate objects.
- (9) Omens from animal movements.
- (10) Divination by gazing into liquids, by possession, and in trance.
- (11) Shamans: inspirational diviners, necromancers, magic workers. A great use of witchcraft in public and private application, employing coercive spells.
- (12) The use of genealogies as religious formulae.
- (13) The belief in the similarity of spirits of natural objects to man's spirit.

- (14) A more primitive form and use of the dance: war dances, paddle dances, spear dances, dances by widows of warriors.
- (15) The work of planting and harvest a ritual performance.
- (16) Those types of taboo which are particularly associated with the ancestral cult.
- (17) Rahui, prohibition or restriction by means of badges or signs.
- (18) The use of water in purification ceremonies.
- (19) The use of the oven in public and private rites.
- (20) The belief in Hawaiki, an origin-land to which the spirits of men returned.
- (21) Stratified heavens of myth.
- (22) Tattooing.
- (23) Cannibalism.

Elements typical of the Stone Builders:

- (a) The use of large stone in the construction of tombs and temples. (See No. 1 above.)
- (b) Embalming.(?) The use of tombs. (See No. 5 above.)
- (c) Violent mourning, dissipation after a sacred king's or chief's death, hired weepers, the singing of eulogies. (See No. 6 above.)
- (d) Special rites for deifying great men.
- (e) General or ceremonial taboo. (See No. 16 and No. 17 above.)
- (f) The worship of the great gods of myth in the public cult. (See No. 4 above.)
- (g) Divining by breaking objects and observing the scattering of fragments. (See No. 9 above.)
- (h) Haruspication. (See No. 10 above.)
- (i) An organized priesthood, the temple priests or directors of ceremonial being allied to the chiefs or kings. Inspirational diviners, necromancers, and magic workers relegated to a secondary position. (See No. 11 above.)
- (j) Craftsmanship: the development of trades in the hands of master-craftsmen who were priests of the rituals of their trades.
- (k) True prayers, supplications, associated with the offering of sacrifices. Human sacrifice. (See No. 11 and 12 above.)

- (l) The belief in man's possessing a soul peculiar to himself, and in nature's being animated by nature spirits differing from men's souls. (See No. 13 above.)
- (m) A generation or fertilization cult expressed in seasonal ceremonial; dancing in which sexual abandon played a part; the functioning of sacred chiefs or kings in a priestly capacity in first fruits rites, and a belief in the intimate connection between the sacred chief or king and the growth of things and prosperity. (See No. 15 above.)
- (n) Organized dancing and singing as part of public ceremonial. (See No. 14 above.)
- (o) The belief in a lower hades for the unfortunate, and an upper paradise for the fortunate. (See No. 20 above.)
- (p) In general this stratum was represented by a better organized and higher type of worship.

It may be remarked in connection with recent discussion of the occurrence of sun worship in Polynesia¹ that no evidence was found which would, in the opinion of the writer, warrant the assumption that a sun cult was ever a basic element in Polynesian worship.

We must leave untouched for the present the questions as to whether the Slab Users or Stone Builders were the first to colonize the area; whence they came, and when; and with which of the waves of colonization outlined by other students of the area they would probably be identified. It may be found as our store of accurate knowledge increases that many of the elements mentioned above are wrongly classified. But it is my belief that the work of the next few years will prove at least the general conclusions which underlie this tentative grouping of elements; that the greater part of the culture of Polynesia was made up of the combination of the elements of two great cultural infusions; that it will be possible to resolve the cultural complexes of the various island groups into constituent elements which will be found to have been originally characteristic of these two strata; and that these groups of elements will be capable of being traced back through the regions to the west-

¹ See W. H. R., Rivers "Sun Cult and Megaliths in Oceania," *American Anthropologist*, N. S., vol. XVII, pp. 431-445.

ward to the cultural sources whence they were derived. Mention should be made in connection with this statement that there is evidence in Tonga and Samoa of the presence of a later infusion, and that there occur here and there in the area sporadic intrusive elements.

It is felt that all these questions must be left more or less in the balance until the promised harvest of facts is reaped and garnered. Until then, when theory and discussion will be on firmer ground, may the gathering of the harvest prosper!

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THE FOSSA PHARYNGEA IN AMERICAN INDIAN CRANIA

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THE fossa pharyngea, fovea bursae, or medio-basial fossa is a small oval depression in the ventral surface of the basilar part of the occipital bone. The major axis lies in the antero-posterior direction in the median line. It varies in depth from 2 millimeters to 7 millimeters. The width is approximately 4 millimeters on the average while the length varies from 5 to 11 millimeters.

The function or purpose of the fossa is not altogether clear. Anatomical text-books dismiss it with a sentence. Thompson¹ writing in Cunningham says: "An oval pit, the fovea bursae or pharyngeal fossa, is sometimes seen in front of the tuberculum pharyngeum. This marks the site of the bursa pharyngea. . . . The origin and morphological significance of this pouch are not yet solved." Romiti² and Agostino³ claim that the fossa pharyngea is produced by a pharyngeal diverticulum either abnormal or accessory. This is in agreement with the opinion stated above. Perna⁴ concludes that the fossa pharyngea can be explained as a survival of that part of the median basilar canal which passes below the perichondrium on the ventral surface of the basilar portion of the occipital bone. The basilar part of the occipital bone ossifies like a vertebra and the fossa is the result of the non-ossification of the hypochordal bow element due to the position of the notochordal element in this region. I am not in a position to state the relative merits of the two opinions nor am I altogether certain that they are necessarily contradictory.

¹ Arthur Thompson and David Waterson in *Cunningham's Text-book of Anatomy*. New York, 1917.

² Romiti, 1891.

³ Agostino, 1901.

⁴ Perna, 1906.